



GOVERNMENT OF ANDHRA PRADESH

* * * * *

Web Site : <https://tender.apecurement.gov.in>

TENDER DOCUMENT

FOR

**Erection of Modular Operation Theaters at various Govt. Hospitals in AP
(e- Procurement)**

**Short Tender Notice No. : 12.9/APMSIDC/Equipment/2018-19
Dt: 10.10.2018**

**Name of the Work : Erection of Modular Operation Theaters at
various Govt. Hospitals in Andhra Pradesh.**

Name of the Agency :
.....
and Address
.....
.....

Implementing Agency :
**ANDHRA PRADESH MEDICAL SERVICES & INFRASTRUCTURE
DEVELOPMENT CORPORATION
(Formerly APMHIDC)
(AN ENTERPRISE OF GOVT. OF A.P.)**
2nd Floor, Plot No:09, survey number: 49, IT Park, Mangalagiri, Guntur District- 522503.

INDEX

| S. No. | DESCRIPTION | | Page. No. |
|--------|---------------------|--|------------|
| | Introduction | | 3-4 |
| 1 | SECTION - I | INVITATION FOR BIDS (IFB) | 5 - 8 |
| 2 | SECTION - II | INSTRUCTIONS TO BIDDERS | 09 - 21 |
| 3 | SECTION - III | GENERAL CONDITIONS OF CONTRACT | 22-31 |
| 4 | SECTION - IV | SPECIAL CONDITIONS OF CONTRACT | 32 -36 |
| 5 | SECTION - V | SCHEDULE OF REQUIREMENTS AND TECHNICAL SPECIFICATIONS | 37-235 |
| 6 | SECTION - VI | PRE - QUALIFICATION CRITERIA | 236-237 |
| 7 | SECTION - VII (A) | BID FORM | 238 |
| 8 | SECTION - VII (B) | Model PRICE Schedules (available on e-procurement Platform) | 239 |
| 9 | SECTION - VIII | BID SECURITY FORM | 240 |
| 10 | SECTION - IX | CONTRACT FORM | 241-242 |
| 11 | SECTION - X | PERFORMANCE SECURITY FORM | 243 |
| 12 | SECTION - XI | FORMAT B1: PROFORMA FOR PERFORMANCE (for a period of last three years) | 244 |
| | | FORMAT B2: FINANCIAL CAPACITY OF THE BIDDER | 245 |
| 14 | SECTION - XII | DECLARATION FORM | 246 |
| 15 | SECTION – XIII | Check List : Documents to be Uploaded as part of the Bid and Notes to Bidders I. Documents with the Technical Bid | 247-248 |
| 16 | Annexure - I | Proforma: Installation Certificate | 249-250 |
| 17 | Annexure - II | Proforma : Satisfactory Performance Certificate after 3 months from Installation Date | 251-252 |
| 18 | Annexure - III | GENERAL INFORMATION ABOUT THE TENDERER | 253 |

INTRODUCTION

- 1.1. The Andhra Pradesh Medical Services & Infrastructure Development Corporation – APMSIDC (formerly APMHIDC) (Tender Inviting Authority) is a fully owned Government of Andhra Pradesh for providing services to the various health care institutions under the Department of Family Welfare and Health. One of the key objectives of the APMSIDC is to act as the central procurement agency for all essential drugs and equipments for all health care institutions (hereinafter referred to as user institutions) under the department. The corporation has also been entrusted with the setting up and running of all kinds of modern Medical and Paramedical or medical based ancillary facilities such as hospitals, pathological labs, diagnostic centres, x-ray/scanning facilities.
- 1.2. Over the last decades, several equipments have been procured and installed in the various health care institutions under the government under different schemes. One of the major problems encountered is the maintenance of the equipments. Site preparation, timely replacement of consumables, calibration of sensitive equipments, up gradation of technology, training to the doctors and paramedical staff- all poses problems. The corporation has been formed by the government to fill in these grey areas and to act as total service providers to the all the government health care institutions. Of course, this mammoth task could be achieved only with the active involvement and support of the manufacturers/dealers of the equipments.
- 1.3. In this tender, the lowest price is the sole criteria for selecting the equipment/supplier. The two bid system, which is followed, has been designed to eliminate those equipments which do not match the technical specifications, or not having the proven technology and to eliminate firms that do not have the financial or technical capability to supply, install and maintain the equipments. i.e., to provide after sales support for a period of minimum 5 years from the date of installation and to ensure 98 % uptime in performance/operation of the equipment.
- 1.4. The payment to the successful tenders will be settled after obtaining a 'two month performance certificate' from the head of the user institution - two month period is a period of trail run- during which the performance of the equipments will be keenly observed. At the same time, it may be noted that the Corporation is not the agency finalizing the requirements of equipments and their technical specifications. These parameters are finalized by the user institutions and funding agencies and forwarded to the corporation for procurement. On our side, we ensure that the technical specifications are not biased towards a particular equipment/firm, through consultations during the pre-tender meetings

with the prospective tenderers. Amendments in the terms and conditions of the tender documents may be resorted to on the basis of expert advice to see that more than one firm qualifies for the final round. Technology specific specifications/conditions and entertaining direct purchase will be undertaken, if and only if , the user agency certifies the equipment required is of proprietary nature. Since the equipments procured are dealing with precious human life in government hospitals, depended by the poor and downtrodden of the society, it is our endeavor to ensure that most modern, but proven and durable equipments are procured and supplied. The tender documents are prepared after assessing the market to meet such objectives.

- 1.5. Every paisa spend by the corporation is public money and hence accountable. Therefore, after sales service and up-time guarantee on the performance of the equipment purchased by the Corporation have to be given paramount importance. Corporation will be dealing with defaulters in these fronts with a firm hand, which may lead to black listing and recovery of damages. We request our valuable suppliers to avoid such unpleasant situations.
- 1.6. It is also essential while dealing with public money that utmost transparency has to be maintained in the procurements of the corporation. All decisions will be published from time to time on our website www.msfdc.ap.nic.in. The corporation will not wait for the mandatory 30 days period to provide any information under Right to Information Act and will provide the information within the minimum possible time. The Corporation will uphold the fundamental "right to be heard" enshrined under the Constitution of India and will take harsh decisions only after providing opportunity for hearing/submission of facts. Tenderers could prefer appeal to the government against all decisions of the corporation.

SECTION - I: INVITATION FOR BIDS (IFB)

GOVERNMENT OF ANDHRA PRADESH

ANDHRA PRADESH MEDICAL SERVICES & INFRASTRUCTURE DEVELOPMENT CORPORATION (APMSIDC)

Tender Notice No. **12.9/APMSIDC/Equipment/2018-19** Dt: **10.10.2018**.

1. Bids are invited on the e-procurement platform for Erection of Modular Operation Theaters as described in the Section V- Schedule of Requirements from the eligible Bidders*. The details of bidding conditions and other terms can be downloaded from the electronic procurement platform of Government of Andhra Pradesh i.e. <https://tender.apecurement.gov.in>.
2. Bidders would be required to register on the e-Procurement market place "www.eprocurement.gov.in" and submit their bids online. On registration with the e-Procurement market place they will be provided with a user id and password by the system through which they can submit their bids online.
3. The bidders need to scan and upload the required documents as per the Check list given in **Annexure XIV**. Such uploaded documents pertaining to technical bid need to be attached to the tender while submitting the bids on line. The attested copies of all these uploaded documents of technical bid, signed undertaking of tenderer should be submitted off line to Managing Director, APMSIDC, Mangalagiri, Guntur on or before the next day of the last date of submission of bids. The Corporation will consider only the bids submitted through on-line over the copies of the paper based bids.
4. a) The participating bidder/s will have to pay tender processing fee (non-refundable) for the amounts specified in the Schedule of Requirements (Section – V), in the form of Demand Draft drawn in favour of Managing Director, APMSIDC, Guntur.

b) Further the bidder/s shall furnish, as part of the bid, the Bid security for the amounts specified in the Schedule of Requirements (Section –V) to be paid in the form of crossed Demand Draft drawn in favour of Managing Director, APMSIDC, Guntur along with bids. The bidders should note that the local MSME units are exempted from payment of E.M.D, subject to the production of necessary documentation to that extent by them.

c) Further all the participating bidders have to electronically pay a non-refundable transaction fee to M/s. APTS, the service provider through "Payment Gateway Service on E-Procurement platform", as per the Government Orders placed on the e-procurement website.

d) APMSIDC will not accept the tenders from blacklisted companies or undependable Suppliers whose past performance with APMSIDC was found poor due to delayed and/or erratic supplies and those with frequent product failures, and also against whom there have been adverse reports of **Sub-Standard**

Quality / Poor Service of Equipment supplies, as defined in the other parts of the Bidding document.

e) **“Complaint/s:** Any complaints/representation regarding tender will be entertained only after depositing of Rs. 25,000/- in form of Demand Draft in the name of Managing director, APMSIDC, Mangalagiri, Guntur. Subsequently necessary action will be taken by the Managing Director and decision of Managing Director will be binding upon the complainant. If the complaint turns out to be false or invalid the amount will be forfeited. The amount shall be refunded, only if, after scrutiny the complaint is found to be true. No further complaint/representation from the same complainant for the same tender will be entertained. If the complaint or allegation made is found to be false or baseless and without any valid point, the tender inviting authority in its discretion, can prevent / blacklist / declare ineligible, such bidder from participating in its procurement process, either indefinitely or for a stated period of time.”

5. **Period of Delivery: 90 Days** from the date of receipt of the Notification of Award (Purchase Order) of Contract. The delivery terms include the total time given for Erection of Modular operation Theaters.

Time Limits prescribed

| Sl. No | Activity | Time Limit |
|--------|---|---|
| 5.1.1. | Installation & Delivery period | 90 days from date of issuance of Supply Order |
| 5.1.4 | Submission of Performance Security and entering into contract | 15 days from the date of issuance of Supply Order |
| 5.1.5 | Payment Installments of Price of equipments and ratio | Two Installments and in the ratio 90:10 |
| 5.1.6 | Time for making payments by Tender Inviting Authority | <i>Within 60 days from the date of submission of proper documents</i> |
| 5.1.7. | Maximum time to attend any Repair call | <i>Within 48 hours</i> |
| 5.1.8 | Uptime in a year | 95% |

6. **Bidders eligibility and qualifications: Defined at Clause 13 of Instructions to Bidders (Section II) and Qualification Criteria (Section-VI)**

7. Details of Tender Process:

| | | |
|----|--|--|
| 1. | Downloading of documents | From 23-10-2018 to 06-11-2018 up to 11.00 AM |
| 2. | Due date for Receipt of tenders | 06-11-2018 up to 3.00 P.M |
| 3. | Time and date of opening of technical Bids | 06-11-2018 @ 3.30 PM |
| 4. | Time and date of opening of financial bids | 06-11-2018 @ 5.00 PM |

Note: The dates stipulated above are firm and under no circumstances they will be relaxed unless otherwise extended by an official notification or happen to be Public Holidays. For the assistance in the online submission issues, the bidder may contact the help desk of M/s Vupadhi Techno Services Pvt. Ltd. (e-procurement) at their e-mail address: eprocsupport@vupadhi.com or on the mobile nos. +91 40-39999700, 39999701

8. Procedure for Bid Submission

- a. The Bidders who are desirous of participating in e-procurement shall submit their Technical bids, price bids etc., in the Standard formats prescribed in the Tender documents, displayed at e-procurement market place.
- b. The bidders shall sign on all the statements, documents, certificates, uploaded by them, owning responsibility for their correctness / authenticity.
- c. The hard copies of all the uploaded Technical / Price bid, to be attested by a Gazetted Officer or properly notarized.
- d. The Corporation shall not hold any risk on account of postal delay. Similarly, if any of the certificates, documents, etc., furnished by the tenderer are found to be false / fabricated / bogus, the bidder will be disqualified, blacklisted, action will be initiated as deemed fit and the EMD will be forfeited.
- e. The Corporation will not hold any risk and responsibility for the loss in transit during uploading of the scanned document, for the invisibility of the scanned document online, and any other problem(s) encountered by the Tenderers while submitting his bids online.

9. Important Instructions to the Bidders:

9.1 Quality of Modular Operation Theatres throughout its life cycle period, timely erection and prompt maintenance support without default are being given

paramount importance by the Corporation. The Corporation will be dealing with the defaulters with firm hand, which may lead to blacklisting for a specified period in addition to levying penalties.

9.2 In case of complaints on the quality and poor maintenance support of the products supplied, bills will be withheld till receipt of Satisfactory reports. Further:

- If one item of any Supplier is found of 'Sub-Standard Quality' during the Contract period, then that particular item will be blacklisted for a period of (3) three years immediately succeeding the Contract year
- If two items of any Supplier are found of 'Sub-standard Quality' during the Contract period, then Supplier will be blacklisted for a period of (3) three years immediately succeeding the Contract year

9.3 The Corporation will blacklist the Supplier, who is declared as 'Undependable for two (2) items or in two (2) instances during the Contract period, for a period of one year immediately succeeding the Contract year apart from taking other penal actions under the Contract.

9.4 The decision of the Managing Director, APMSIDC, or any officer authorized by him in respect of the quality of the supplied Equipment and other goods etc., shall be final and binding.

9.5 No claims shall be allowed against the APMSIDC in respect of interest on Earnest Money Deposit or on Security Deposit or late payments.

9.6 Savings Clause: No suit, prosecution or any legal proceedings shall lie against APMSIDC or any person for anything, which is done in good faith or intended to be done in pursuance of bid.

SECTION - II : INSTRUCTIONS TO BIDDERS

TABLE OF CLAUSES

| Clause Number | Topic | Clause Number | Topic |
|----------------------|--|----------------------|---|
| | A. Introduction | | D. Submission of Bids |
| 1 | Source of funds | 18 | Sealing & Marking of Bids |
| 2 | Eligible Bidders | 19 | Dead line for submission of Bids |
| 3 | Eligible Goods & Services | 20 | Late Bids |
| 4 | Cost of Bidding | 21 | Modification & Withdrawal of Bids |
| | B. Bidding Documents | | E. Bid Opening & Evaluation |
| 5 | Content of Bidding Document | 22 | Opening of Bids |
| 6 | Clarification of Bidding Documents | 23 | Clarification of Bids. |
| 7 | Amendment of Bidding Documents | 24 | Preliminary Examination. |
| | C. Preparation of Bids | 25 | Conversion to single currency. |
| 8 | Language of Bid | 26 | Evaluation & comparison of Bids |
| 9 | Documents comprising the Bid | 27 | Margin of Preference |
| 10 | Bid form | 28 | Contacting the purchaser. |
| 11 | Bid prices | | |
| 12 | Bid currencies | | F. Award of contract |
| 13 | Documents establishing , Bidders Eligibility & qualifications | 29 | Post qualification |
| 14 | Documents establishing goods, eligibility & conformity to bid documents. | 30 | Award criteria |
| 15 | Bid security | 31 | Purchasers right to vary quantities at time to award |
| 16 | Period of validity of Bids | 32 | Purchasers right to accept any bid or reject any or all bids. |
| 17 | Format & signing of Bid Bids. | 33 | Notification of award |
| | | 34 | Signing of contract |
| | | 35 | Performance security. |
| | | 36 | Fraud and Corruption |

A. Introduction

1. Source of funds:

The funds are made available by the State Government of Andhra Pradesh, to the Managing Director, APMSIDC Scheme wise towards the procurement processed under this tender notification.

2. Eligible Bidder

2.1 This invitation for Bids is open to all the Bidders, who fulfill the eligibility criteria mentioned in the Clause 13 and who meet qualification criteria mentioned in the Section VI.

3 Eligible Goods and services

3.1 All goods and ancillary services to be supplied under the contract shall have their origin in eligible source country. The goods shall meet the requirements as specified in the Technical Specifications. And meet the eligibility criteria as given at Clause 14 of ITB.

3.2. For purpose of this clause, "origin" means the place where the goods are mined, grown, or produced or from which the ancillary services are supplied. Goods are produced, through manufacturing processing or substantial and major assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

3.3 The origin of goods and services is distinct from the nationality of the Bidder.

4. Cost of bidding.

4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Managing Director, APMSIDC, Mangalagiri, Guntur here in after referred to as " the purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

B. The Bidding Documents

5. Content of Bidding Documents

5.1 In addition to the Invitation for Bids, the bidding documents include:

- (a) Instruction to Bidders;
- (b) General conditions of contract;
- (c) Special conditions of contract;
- (d) Schedule of requirements;
- (e) Technical specifications;
- (f) Bid form and price schedules;
- (g) Bid security form;
- (h) Performance security form.
- (i) Firm Registration/manufacturer license
- (j) Performance statement form.
- (k) Declaration Form
- (l) Check List of the documents uploaded on e-platform as part of the bid

5.2 The bidder is expected to examine all instructions, forms, terms and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the bidders risk and may result in rejection of its bid.

6. Clarification of bidding documents

6.1 A prospective Bidder requiring any clarification of the bidding documents may notify the purchaser in writing at the purchasers mailing address indicated in the Invitation for bids. The purchaser will respond in writing to any request for clarification of the Bidding documents if the same is received in the first week of the tender notice prescribed by the purchaser. Written copies of the purchaser's response (including an explanation of the query but without identifying the source or inquiry) will be sent to all prospective bidders which have received the bidding documents.

7. Amendment of bidding documents

7.1 At any time prior to the deadline for submission of bids, the purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by prospective bidder, modify the bidding documents by amendment.

7.2 The amendment will be notified online.

7.3 In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bid, the purchaser may, at its discretion, extend the deadline for the submission of bids.

C. Preparation of Bids

8. Language of Bid.

8.1. The Bid prepared by the Bidder and all correspondence and documents relating to the bid exchanged by the bidder and the purchaser, shall be written in the English language, provided that any printed literature furnished by the Bidder may be written in another language so long as accompanied by an English translation of its pertinent passages in which case, for purposes of interpretation of the bid, the English translation shall govern.

9. Documents comprising the bid

9.1 The bid prepared by the bidder shall comprise the following components:

1. Technical Bid:

- (a) A Bid form completed in accordance with clause 10
- (b) Documentary evidence established in accordance with clause 13 that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted.
- (c) Documentary evidence established in accordance with clause 14 that the goods and ancillary services to be supplied by the Bidder are eligible goods and services confirm to the Bidding Documents; and
- (d) Bid security furnished in accordance with clause 15.

2. The Price Bid completed in accordance with clauses 11 and 12.

10. Bid Form

10.1 The Bidder shall complete the bid form provided in the Bidding documents, indicating for the goods to be supplied, brief description of the goods, their country of origin and quantity and other declaration statements.

11. Bid prices.

11.1 The Bidder shall indicate on the appropriate price schedule, made available in the e-procurement platform and a model format is also attached to these documents, the unit prices and total bid prices of the goods it proposes to supply under the contract, for each item separately. The unit prices shall be rounded off to nearest Indian rupee. The bidder may quote for one or more locations for which copy of necessary documents, wherever necessary have to be produced along with the bid.

11.2. Prices indicated on the price schedule shall be entered separately in the following manner:

(i) The price of the goods, quoted ex-factory, ex-showroom, ex-warehouse, or off-the-shelf, or delivered, as applicable, including all duties and sales and other taxes including transportation, installation, commissioning at site and all incidental charges associated with the contract.

(ii) Deleted

11.3 The Bidder's separation of the price components in accordance with para 11.2 above will be solely for the purpose of facilitating the comparison of bids by the purchaser and will not in any way limit the purchaser's right to contract on any of the terms offered.

11.4 Fixed Price. Price quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation except for any changes made by the Statute in respect of local taxes. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to clause 24.

12. Bid currencies.

12.1 Prices shall be quoted in Indian Rupees; Bids quoted other than Indian currency will be rejected.

13. Documents Establishing Bidder's Eligibility and Qualifications.

13.1 Pursuant to clause 9, the bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted

13.2 The documentary evidence of the Bidder's eligibility to bid shall establish to the purchaser's satisfaction that the bidder, at the time of submission of the bid, is an eligible bidder as defined under clause 2.

13.3 The documentary evidence of the Bidders qualifications to perform the contract if its bid is accepted, shall establish to the purchaser satisfaction;

- (i) Details of experience and past performance of the bidder on specified item offered in the bid within the past three years and details of current contracts in hand and other commitments (suggested proforma given in section XI);
- (ii) Copy of the GST Certificate and Details of IT Returns- PAN / TIN copies
- (iii) The details in compliance to the Qualification Criteria (Section VI).

13.4 The check list for the details of documents to be submitted is given at Annexure XIV

14. Documents Establishing Eligibility and conformity to bidding documents.

14.1 Pursuant to clause 9 the bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the bidding document of all services which the bidder proposes to supply under the contract.

14.2 Deleted.

14.3 The documentary evidence of the services conformity to the bidding documents may be in the form of literature, drawings and data, and shall furnish:

- (a) a detailed description of the essential services, technical and performance characteristics of the services.
- (b) A clause by clause commentary on the purchaser's technical specifications demonstrating the services substantial responsiveness to those specifications or statement of deviations and exceptions of the Technical specifications.

14.4 For purpose of the commentary to be furnished pursuant to clause 14.3 above, the bidder shall note that standards for workmanship, material and goods, and references to brand names or catalogue numbers designated by the purchaser in its technical specifications are intended to be descriptive only and not restrictive. The bidder may substitute alternative standards, brand name and / or catalogue numbers in its bid, provided that it demonstrates to the purchasers satisfaction that the substitutes are substantially equivalent or superior to those designated in the Technical specifications.

15. Bid security

15.1 Pursuant to Clause 9, the Bidder shall furnish, as part of it bid, the Bid security for the amounts specified in the Invitation for Bids (Section -1)

15.2 The bid security is required to protect the purchaser against risk of bidders conduct which would warrant the security forfeiture, pursuant to clause 15.7

15.3 The bid security shall be in Indian Rupees and shall be in the following form:

A Demand Draft in favour of Managing Director, APMSIDC, Guntur payable at Guntur.

15.4 Any bid not secured in accordance with para 15.1 and 15.3 above will be rejected by the purchaser as non-responsive pursuant to clause 24.

15.5 Unsuccessful Bidder's bid security will be discharged/ returned as promptly as possible but not later than 30 days after the expiration of the period of bid validity prescribed by the purchaser pursuant to clause 16.

15.6 The successful Bidder's bid security will be discharged upon the Bidders executing the contract, pursuant to clause 34 and furnishing the performance security pursuant to clause 35.

15.7 The bid security may be forfeited;

- (a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid form ; or
- (b) In case of successful Bidder, if the Bidder fails;

- (i) to sign the contract in accordance with clause 34; or
 - (ii) to furnish performance security in accordance with clause 35.
- (c) If the Bidder does not accept the corrected amount the Bid will be rejected, and the Bid security may be forfeited.

16. Period of validity of Bids.

- 16.1 Bids shall remain valid for 90 days after the date of bid opening prescribed by the purchaser pursuant to Clause 19.1. A bid valid for shorter period may be rejected by the purchaser as non-responsive.
- 16.2 In exceptional circumstances, the Purchaser may solicit the Bidders consent to an extension of the period of validity the request and the responses thereto shall be made in writing (or by mail). The bid security provided under clause 15 shall also be suitably extended. A bidder may refuse the request without forfeiting its bid security.

17. Format and signing of Bid.

- 17.1 The bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the bidder to the contract. The latter authorization shall be indicated by written power-of-attorney accompanying the bid. All pages of the bid, except for unammended printed literature, shall be initialed by the person or persons signing the bid.
- 17.2 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors and made by the bidder in which case such corrections shall be initialed by the person or persons signing the bid.

D. Submission of Bids

18. Sealing and Marking of bids.

- 18.1 The bids shall be uploaded (submitted) electronically, as described in the Invitation for Bids (Section –I). The hard copies of the bids in sealed covers must be received by the Purchaser at the address specified above on or before the due date of submission of bids (Section –I).
- 18.2 The Bids shall be addressed to the purchaser at the following address:

The Managing Director, APMSIDC, 2nd Floor, Plot No:09, survey number: 49, IT Park, Mangalagiri, Guntur District- 522503.

- 18.3 The Bids shall bear the name of the invitation for bids (IFB) and Number and also the words "Do not open before 15.00 Hrs on 06-11-2018". The envelopes shall indicate the name and address of the Bidder to enable the bid to be returned unopened in case it declared "late".
- 18.4 If the envelope is not sealed and marked as required by Para 18.2 and 18.3 above, the purchaser will assume no responsibility for the bids misplacement or premature opening.
- 19. Deadline, for submission of bids.**
- 19.1 The Bids (both electronic and Hard copies) must be received by the purchaser, no later than the time and date specified in the Invitation for Bids (Section I). In the event of the specified date for the submission of Bids being declared a holiday for the purchaser, the Bids will be received up to the appointed time on the next working day.
- 19.2 The purchaser may, at its discretion, extend this deadline for submission of bids by amending the bid documents in accordance with clause 7, in which case all rights and obligations of the purchaser and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.
- 20. Late Bids.**
- 20.1 Any bid received by the purchaser after the deadline for submission of bids prescribed by the purchaser, pursuant to clause 19, will be rejected and/ or returned unopened to the Bidder.
- 21. Modification and Withdrawal of Bids.**
- 21.1 No bid may be modified subsequent to the deadline for submission of bids.
- 21.2 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid form. Withdrawal of bid during this interval may result in the Bidders forfeiture of its bid security, pursuant to Clause 15.7

E. Bid Opening and Evaluation

- 22. Opening of Bids by Purchaser**
- 22.1 The Purchaser/or his authorized representative will download the technical bids on 06-11-2018 at 3.30 PM.
- 22.2 The Financial Bids of the Technically responsive bidder would be downloaded subsequently from the e-platform, once the technical evaluation is completed.
- 23. Clarification of Bids.**

23.1 To assist in the examination, evaluation and comparison of bids the purchaser may at his discretion, ask the Bidder for clarification of his bid. The request for clarification and the response shall be in writing and no change in price or substance of the bid shall be sought, offered or permitted.

24. Technical Evaluation (Preliminary Examination and Pre-Qualification)

24.1 The purchaser will examine the bids to determine whether they are complete, whether required securities have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

24.2 Prior to the financial evaluation, pursuant to clause 26, the purchaser will determine the responsiveness of each bid to the bidding documents. For purposes of these clauses, a responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. The purchaser's determination of bids responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

24.3 Further the purchaser will determine to his satisfaction whether the Bidder is qualified to satisfactorily perform the contract. The determination will take into account the Bidder's financial and technical capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder pursuant to clause 13 as well as such other information as the purchaser deems necessary and appropriate.

24.4 An affirmative determination will be prerequisite for the opening of the financial bids. A negative determination will result in rejection of the Bidder's bid.

24.5 A bid determined as not substantially responsive will be rejected by the purchaser.

24.6 The Purchaser may waive any minor informality or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any bidder.

25. Deleted.

26. Evaluation and comparison of Bids.

26.1 The Purchaser will evaluate and compare bids previously determined to be substantially responsive, pursuant to clause 24 for each schedule separately.

26.2 The purchasers evaluation of a bid will take into account; in addition to the bid price (ex-factory/ex-warehouse/off-the-shelf price of the goods offered from within India, such price to include all costs as well as duties and taxes paid or payable on components and raw material incorporated or to be incorporated in the goods, on the finished goods and cost of incidental services required. The following costs to the extent specified:

- a. cost of inland transportation and other costs within India incidental to the erection of modular Operation theatres at their final destination;

27. Deleted

28. Contacting the purchaser.

28.1 Subject to clause 23, no Bidder shall contact the purchaser on any matter relating to the bid, from the time of the bid opening to the time, the contract is awarded.

28.2 Any effort by a Bidder to influence the Purchaser in the purchaser's bid evaluation, bid comparison or contract award decisions may result in rejection of the Bidders bid.

F. Award of Contract

29. Post - Qualification

Not Applicable

30. Award Criteria

30.1 Subject to clause 32, the purchaser will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.

31. Purchaser's right to vary quantities at Time of Award

31.1 The purchaser reserves the right, at the time of award of contract to increase or decrease to any extent of the quantity of goods and services specified in the schedule of requirements without any change in price or other terms and conditions.

32. Purchaser's right to accept any Bid and to reject any or all Bids.

32.1 The purchaser reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to award of contract, without there by incurring any liabilities to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Purchaser's action.

33. Notification of Award.

33.1 Prior to the expiry of the period of the bid validity, the purchaser will notify the successful Bidder in writing by registered letter or cable or telex, duly confirming that the bid has been accepted.

33.2 The notification of award will constitute the formation of the contract.

33.3 Upon the successful Bidder's furnishing of performance security, pursuant to clause 34, the purchaser will promptly notify each unsuccessful Bidder and will discharge their bid security, pursuant to clause 15.

34. Signing of contract

34.1. Within 15 days of receipt of the notification of award the successful Bidder shall sign the contract.

35. Performance security

35.1 Within 15 days of the receipt of notification of award from the purchaser, the successful Bidder shall furnish the performance security in accordance with the conditions of contract, in the performance security form provided in the Bidding documents or another form acceptable to the purchaser and signs the agreement.

35.2 Failure of the successful Bidder to comply with the requirement of clause 34 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the purchaser may make the award to the next lowest evaluated bidder or call for new bids.

36 Fraud and corruption

36.1 It is the **purchaser's** policy that requires that the bidders, suppliers and contractors and their subcontractor observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the **purchaser**;

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) "**corrupt practice**" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

(ii) "**fraudulent practice**" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) "**collusive practice**" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

(iv) "**coercive practice**" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(v) "**obstructive practice**" is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or

intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
(bb) acts intended to materially impede the exercise of the purchaser's inspection and audit rights provided for under sub-clause 36.2 (d) below.

36.2 The purchaser may, without prejudice to other terms of the bidding:

(a) will reject a proposal for award if it determines that the bidder considered for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;

(b) will cancel the contract if the purchaser determines at any time that the bidder, supplier and contractors and their sub contractors engaged in corrupt, fraudulent, collusive, or coercive practices.

(c) will sanction a firm or individual, including declaring ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a contract; and

(d) will have the right to inspect the accounts and records of the bidders, supplier, and contractors and their subcontractors and to have them audited by auditors appointed by the Purchaser.

SECTION - III : GENERAL CONDITIONS OF CONTRACT

TABLE OF CLAUSES

| <u>Clause Number</u> | <u>Topic</u> |
|-----------------------------|---|
| 1. | Definitions |
| 2. | Application |
| 3. | Country of Origin |
| 4. | Standards |
| 5. | Use of contract Documents and Information |
| 6. | Patent Rights |
| 7. | Performance Security |
| 8. | Inspection and Tests |
| 9. | Packing. |
| 10. | Delivery and Documents |
| 11. | Insurance |
| 12. | Transportation |
| 13. | Incidental services |
| 14. | Spare Parts |
| 15. | Warranty |
| 16. | Payment |
| 17. | Prices |
| 18. | Change Orders |
| 19. | Contract Amendments |
| 20. | Assignment |
| 21. | Subcontracts |
| 22. | Delays in suppliers Performance |
| 23. | Liquidated Damages |
| 24. | Termination for Default |
| 25. | Force Majeure |
| 26. | Termination for Insolvency |
| 27. | Termination for convenience |
| 28. | Resolution of Disputes |
| 29. | Governing Languages |
| 30. | Applicable Law. |
| 31. | Notices |
| 32. | Taxes and Duties. |

Section III: General Conditions Of Contract

1. Definitions

1.1 In this contract, the following terms shall be interpreted as indicated;

- (a) "The contract" means the agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by references therein.
- (b) "The Contract Price" means the price payable to the supplier under the contract for the full and proper performance of its contractual obligations.
- (c) "The Goods" means all the equipment and / or other materials required for erection of Modular Operation Theatre, which the supplier is required to execute for the purchaser under the contract.
- (d) "Services" means services ancillary to the erection of Modular Operation Theatre, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the supplier covered under the contract.
- (e) "An undependable Supplier/s' under contract means any Supplier who do not accept the purchase order or who delays the erection of Modular Operation Theatre beyond the permitted delays with liquidated damages
- (f) "The Purchaser or Corporation" means the APMSIDC, the purchasing agency
- (g) "The Supplier" means the individual or firm supplying the goods under this contract.
- (h) "The Government" means the Government of Andhra Pradesh or its authorized representatives
- (i) "The Project Site", where applicable means the place or places named in Schedule of Requirements
- (j) "The End-User" means the authorized user of the equipment/the Medical Superintendent/Head of the Department of the concerned specialty.
- (k) "Day" means calendar day
- (l) "Delivery period" means the period applicable up to completion of supply, Installation and testing of the equipment and the training of the staff on the equipment, by the supplier at the Project site and accepted by the Purchaser or its representative

2. Application

- 2.1. These General conditions shall apply to the extent that they are not superseded by provisions in other parts of the contract.

3. Country of Origin: Deleted.

4. Standards

- 4.1 The erection of Modular Operation Theatre under this contract shall conform to the standards mentioned in the Technical specifications and when no applicable standard is mentioned the authoritative standard appropriate to the goods country of origin shall be followed and such standard shall be the latest issued by the concerned institution.

5. Use of contract documents and Information

- 5.1 The supplier shall not without the purchaser's prior written consent, disclose the contract or any provision thereof or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the purchaser in connection therewith to any person other than a person employed by the supplier in performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 5.2 The supplier shall not, without the purchaser's prior written consent make use of any document or information enumerated in para 5.1 except for purposes of performing the contract.
- 5.3 Any document other than the contract itself enumerated in para 5.1 shall remain the property of the purchaser and shall be returned (in all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.

6. Patent Rights

- 6.1 The supplier shall indemnify the purchaser against all third party claims of infringement of patent, trademark for industrial design rights arising from use of the goods or any part thereof in India..

7. Performance Security

- 7.1 Within 15 days after the supplier's receipt of notification of award of the contract, the supplier shall furnish performance security to the purchaser for the amount specified in the special conditions of contract.
- 7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete its obligations under the contract

7.3 The performance security shall be denominated in Indian Rupees and shall be in one of the following forms:

(a) A bank guarantee [in favour of Managing Director, APMSIDC, Guntur] issued by any scheduled commercial bank located in India acceptable to the purchaser and in the form provided in the Bidding documents or in any other form acceptable to the purchaser: or.

(b) A Banker's cheque or Demand Draft in favour of Managing Director, APMSIDC, Guntur.

7.4 The performance security will be discharged by the *Purchaser* on submission of reports as mentioned in (Clause 15.7 Pg.no 25) and returned to the supplier not later than 60 days following the date of completion of the supplier's performance obligations, including any warranty obligations.

7.5 Deleted

8. Inspections and Tests.

8.1 The purchaser or his representatives shall have the right to inspect and / or to test the Goods to confirm their conformity to the contract. The special conditions of contract and / or the Technical specifications shall specify what inspections and tests the purchaser requires and where they are to be conducted. The purchaser shall notify the supplier in writing of the identity of any representatives retained for these purposes.

8.2 The inspections and tests may be conducted in the premises of the supplier or its subcontractor(s) at point of delivery and/or at the goods final destination. Where conducted on the premises of the supplier or its subcontractor(s) all reasonable facilities and assistance including access to drawings and production data shall be furnished to the inspectors at no charge to the purchaser.

8.3 Should any inspected or tested goods fail to conform to the specifications the purchaser may reject them and the supplier shall either replace the rejected goods or make alternatives necessary to meet specifications, requirements free of cost to the purchaser.

8.4 The purchaser's right to inspect test and where necessary reject the goods after the goods arrival at site and shall in no way be limited or waived by reason of the goods having previously been inspected, tested and passed by the purchaser or its representative prior to the goods shipment from the country of origin.

8.5 Nothing in clause 8 shall in any way release the supplier from any warranty or other obligations under this contract.

9. Packing

- 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration where appropriated the remoteness of the Goods final destination and the absence of heavy handling facilities at all points in transit.
- 9.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements, as shall be provided for in the contract and subject to clause 18 and any subsequent instructions ordered by the purchaser.

10. Delivery and Documents

- 10.1 Delivery of the Goods shall be made by the supplier in accordance with the terms specified by the purchaser in the Notification of Award.

11. Insurance

Deleted.

12. Transportation

- 12.1 The supplier is required to deliver the goods to the destinations specified in the contract and the cost thereof shall be included in the contract price.
- 12.2 The transportation of the Goods after the delivery at the final destination shall be the responsibility of the Purchaser.

13. Incidental services.

- 13.1 The supplier is required to provide the following services, including additional services, if any, specified in SCC:
- (a) Performance of the on-site assembly and start-up of the supplied Goods;
 - (b) Furnishing of tools required for assembly and maintenance of the supplied Goods;
 - (c) Furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods;
 - (d) Deleted and

(e) Training of the users and maintenance personnel, in operation, maintenance and repair of the Modular Operation Theatres.

13.2 Prices charged by the Supplier for incidental services, if not included in the contract price of the erection of Modular Operation Theatre, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

14. Spare Parts: Deleted.

15. Warranty: Deleted.

16. Payment

16.1 The method and conditions of payment to be made to supplier under the contract shall be specified in the special conditions

16.2 The Suppliers request (s) for payment shall be made to the purchaser in writing accompanied by an invoice describing as appropriate the goods delivered and the services performed and by shipping document, submitted pursuant to clause 10, and upon fulfillment of other obligations stipulated in the contract.

16.3 Payments shall be made promptly by the purchaser within sixty (60) days of submission of the invoices / claims by the supplier duly furnishing the certificate specified in the bid document from the competent authority.

16.4 Payment shall be made in Indian Rupees.

17. Prices

17.1 Prices charged by the supplier for the erection of Modular Operation Theatre performed under the contract shall not with the exception of any price adjustments authorized by the special conditions of contract, vary from the prices quoted by the supplier in its bid.

18. Change Orders

18.1 The Purchaser may at any time by written orders given to the supplier pursuant to clause 31 , make changes within the general scope of the contract in any one or more of the following;

- (a) drawings, designs or specifications, where goods to be furnishing under the contract are to be specifically manufactured for the purchaser;
- (b) the method of shipping or packing;
- (c) the place of delivery; or
- (d) the services to be provided by the supplier;

18.2 If any such changes causes an increase or decrease in the cost of or the time required for the suppliers performance of any part of the work under the contract, whether changed or not changed by the order, an equitable

adjustment shall be made in the contract price or delivery schedule or both and the contract shall accordingly be amended. Any claims by the supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the suppliers receipt of the purchasers change order.

19. Contract Amendments

19.1 Subject to clause 18, no variation in an modification of the terms of the contract shall be made except by written amendment signed by the parties.

20. Assignment

19.2 The supplier shall not assign in whole or in part, its obligations to perform under the contract, except with the purchasers prior written consent.

21. Sub-contracts

21.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under the contract if not already specified in his bid. Such notification, in his original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

22. Delays in the suppliers performance

22.1 The erection of Modular Opration Theatre and performance of the services shall be made by the supplier in accordance with the time schedule specified by the purchaser in its schedule of requirements.

22.2 Any unexcused delay by the supplier in the performance of its delivery obligations shall render the supplier liable for any or all of the following; i.e. forfeiture of its performance security, imposition of liquidation damages and or termination of the contract for default.

22.3 If at any time during the performance of the contract, the supplier or its subcontractor (s) should encounter performance of the services the supplier shall promptly notify the purchaser in writing of the fact of the delay its likely duration and its causes. As soon as practicable after receipt of the suppliers notice, the purchaser shall evaluate the situation and may at its discretion extend the suppliers time for performance, in which case the extension shall be ratified by the parties by amendment of the contract.

23. Liquidated Damages

23.1 Subject to clause 25, if the supplier fails to erect any or all of the Modular Opration Theatre within the time period specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price as liquidated damages, an amount as specified in the SCC for the period of delay, until actual delivery or performance, up to a maximum deduction of **10 percent of the total contract value**. Once the maximum is reached, the purchaser may consider termination of the contract.

24. Termination for Default

24.1 The purchaser may, without prejudice to any other remedy for breach of contract by written notice of default sent to the supplier, terminate the contract in whole or part:

- (a) if the supplier fails to erect any or all of the Modular Operation Theatre within the time periods specified in the contract or any extension thereof granted by the purchaser pursuant to clause 22; or
- (b) if the supplier fails to perform any other obligations under the contract.

24.2 In the event the purchaser terminates the contract in whole or in part, 24.1 the purchaser may hire, upon such terms and in such manner as it deems appropriate, services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar services. However, the supplier shall continue the performance of the contract to the extent not terminated.

25. Force Majeure

25.1 Notwithstanding the provisions of clauses 22,23,24, the supplier shall not be liable for forfeiture of its performance security liquidated damages or termination or default, if and to the extent that, its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.

25.2 For purposes of this clause "Force Majeure" means an event beyond the control of the supplier and not involving the suppliers fault or negligence and not foreseeable. Such events may include but are not limited to, acts of the purchaser either in its sovereign or contractual capacity, wars or revolutions, floods, epidemics, quarantine restrictions and freight embargoes.

25.3 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the purchaser in writing the supplier shall continue to perform its obligations under the contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

26. Termination for Insolvency.

26.1 The purchaser may at any time terminate the contract by giving written notice to the supplier, if the supplier becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

27. Termination for convenience.

- 27.1 The purchaser, may by written notice sent to the supplier terminate the contract, in whole or in part at any time for its convenience. The notice of termination shall specify that termination is for the purchasers convenience the extent to which performance of work under the contract is terminated and the date upon which such termination becomes effective.
- 27.2 The goods that are complete and ready for shipment within 30 days after the suppliers receipt for notice of termination shall be purchased by the purchaser and the contract terms and prices. For the remaining goods the purchaser may elect.
- (a) to have completed and delivered at the contract terms and prices; and / or
 - (b) to cancel the remainder and pay to the supplier and agreed amount for partially completed goods and for materials and parts previously procured by the supplier.

28. Resolution of Disputes

- 28.1 The purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the contract.
- 28.2 If after thirty (30) days from the commencement of such informal negotiations the purchaser and the supplier have been unable to resolve amicably contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in the special conditions of contract. These mechanisms may include but are not limited to conciliation, mediation by third party justification in an agreed national or international forum and / or international arbitration. The mechanism shall be specified in the special conditions of contract.

29. Governing Language

- 29.1 The contract shall be written in English language, as specified by the purchaser in the instructions to bidders. Subject to clause 30, English language version of the contract shall govern

30. Applicable law

- 30.1 The contract shall be interpreted in accordance with the laws of the union of India and the legal jurisdiction is Hyderabad

31. Notices

- 31.1 Any notices given by one party to the other pursuant to the contract shall be sent in writing and confirmed in writing to the address specified for that purpose in the special conditions of the contract. A notice shall be effective when delivered or on the notices effective date, whichever is later.

32. Taxes and duties

- 32.1 The rates quoted by the bidder shall be deemed to be inclusive of the sales and other taxes that the bidder will have to pay for the performance of this contract, at the prevailing rates notified by the Government. The purchaser will perform such duties in regard to the deduction of such taxes at source as per applicable law.

SECTION - IV: SPECIAL CONDITIONS OF CONTRACT

TABLE OF CLAUSES

(The corresponding clause number of the General condition is in parenthesis)

| <u>Item. No.</u> | <u>Topic.</u> |
|-------------------------|--|
| 2. | Definitions (Clause - 1) |
| 3. | Country of Origin (Clause -3) |
| 4. | Performance security (Clause 7) |
| 5. | Inspection and Tests (Clause 8) |
| 6. | Packing (Clause-9) |
| 7. | Delivery and Documents (Clause 10) |
| 8. | Insurance (Clause 11) |
| 9. | Incidental services (Clauses 13) |
| 10. | Spare Parts (Clause 14) |
| 11. | Warranty (Clause 15) |
| 12. | Payment (Clause 16) |
| 13. | Prices (Clause 17) |
| 14. | sub-contracts (Clause 21) |
| 15. | Liquidated Damages (Clauses 23) |
| 16. | Resolution of Disputes (Clauses 28) |
| 17. | Notices (Clauses 31) |
| 18. | Comprehensive Maintenance Contract |
| 19. | Actions against Misconduct of the Supplier |
| 20. | Progress of Supplies |

Section IV: Special Conditions of the Contract

1. The following special conditions of contract shall supplement the general Conditions of contract. Whenever there is conflict, the provisions herein shall prevail over those of the general conditions of contract the corresponding clause number of the general conditions in parentheses.

2. Definitions (Clause 1)

(a) The Purchaser is : The Managing Director, APMSIDC, Mangalagiri, Guntur.

(b) The Supplier is : -----

3. Country of origin (Clause 3): All goods and related services to be supplied under the contract / agreement shall have their origin in India or any other country with which India has not banned trade relations.

4. Performance security (Clause 7)

4.1 Performance security is 5% of the contract value and shall be valid up to 60 days after the date of completion of performance obligations, as applicable.

4.2 Add clause 7.5 to the GCC as the following:

In the event of any contract amendment, the supplier shall within 7 days of receipt of such amendment furnish the amendment to the performance security rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter

5. Inspection and Tests (clause 8)

The following inspection procedures and tests are required by the Purchaser:

5.1 The Supplier shall get each erection of the Modular Operation Theatre inspected by a competent authority and also provide a certificate that the Modular Operation Theatre conforms to all specifications contained in the contract.

5.2 The *Purchaser* or its representative may inspect and/or test any or all the Modular Operation Theatres to confirm their conformity to the Contract specifications.

If the Modular Operation Theatre or its performance is not as per specified conditions, deficiency or rectify the Modular Operation Theatre (s) to the satisfaction of the purchasers representative.

1. Packing (Clause 9)

Deleted.

2. Delivery and Documents (Clause 10)

- (i) Three copies of the Supplier invoice showing Modular Operation Theatres description, quantity, unit price, total amount;
- (ii) Acknowledgement of work done certificate of Modular Operation Theatres from the Consignee
- (iii) Acceptance Certificate issued by the End-User and concerned EE, APMSIDC.
- (iv) Inspection Certificate issued by the nominated inspection agency, as applicable

3. Insurance (Clause 11)

Deleted.

4. Incidental Services (Clause 13)

No additional services are required to be provided over the services already covered under clause 13 of GCC.

5. Spare parts: (Clause 14)

Deleted

6. Warranty (Clause 15)

11.1 Deleted.

7. Payment (Clause 16)

12.1 Payment for goods and services shall be made in Indian Rupees as follows:

- a) 90% of payment will be paid on submission of original invoice with stock entries, delivery challan and Installation Certificates (Annexure 1), after completion of all the performance obligations duly certified by the Head of the institute or concerned authorities and concerned EE of APMSIDC.
- b) The balance 10% will be paid after three months from the date of completion of Modular Operation Theatre on submission of performance satisfactory report (Annexure-II), obtained from the Head of the institute or concerned authorities and concerned EE of APMSIDC.
- c) In case any difficulty is experienced by the successful tenderer in obtaining three month performance certificate from any of the User Institution after the installation of the equipment, the same shall be brought to the notice of the Tender Inviting Authority immediately in writing. In such event(s), if the Tender Inviting Authority is convinced, the reasons are beyond the control of the successful tenderer, the Tender Inviting Authority, in case of supply orders placed by it, shall release payments at its discretion. In such case the

letter sent to the Tender Inviting Authority shall be submitted along with the invoices while claiming payment

8. **Prices (Clause 17)**

Prices payable to the Supplier as stated in the Contract shall not be subject to adjustment during performance of the Contract.

9. **Sub-contracts (Clause 21)**

Add at the end of sub-clause 21.1 of the GCC the following. "Sub-contract shall be only for bought-out items and sub-assemblies".

10. **Liquidated Damages (Clause 23)**

15.1 **For delays**

Substitute Clause 23.1 of the GCC by the following:

Subject to clause 25 of GCC, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to 0.5 percent of the delivered price of the delayed Goods or unperformed Services for each week of delay or part thereof until actual delivery or performance, up to a maximum deduction of **10% of the total Contract value**. Once the maximum deduction is reached, the Purchaser may consider termination of the Contract.

15.2 For Short fall in Equipment Maintenance services

Deleted.

11. **Resolution of Disputes (Clause 28)**

Add as Clauses 28.3 and 28.4 of the GCC the following:

28.3 The dispute resolution mechanism to be applied pursuant to clause 28 of the General Conditions shall be as follows:

- (a) In the case of dispute or difference arising between the Purchaser and a Domestic Supplier relating to any matter arising out of or connected with this agreement, such dispute or difference shall be referred to the award of two Arbitrators, one Arbitrator to be nominated by the Purchaser and the other to be nominated by the Supplier or in the case of the said Arbitrators not agreeing, then at the award of an Umpire to be appointed by the Arbitrators in writing before proceeding with the reference, and in case the Arbitrators cannot agree to the Umpire, he may be nominated by the Arbitration committee of the Indian Council of Arbitration, India. The award of the Arbitrators, and in the event of their not agreeing, of the Umpire appointed by them or by the Arbitration Council of India, India, shall be final and binding on the parties.

- (b) The Indian Arbitration Act 1996, the rules there under and any statutory modification or re-enactments thereof, shall apply to the arbitration proceedings.

28.4 The venue of arbitration shall be the place from where the Contract is issued.

12. Notices (Clause 31)

For the purpose of all notices, the following shall be the address of the purchaser and supplier.

Purchaser: The Managing Director, APMSIDC, 2nd Floor, Plot No:09, survey number: 49, IT Park, Mangalagiri, Guntur District- 522503

Supplier: (To be filled in at the time of Contract Signature)

13. Comprehensive Maintenance Contract (CMC)

Deleted

14. Actions Against the Misconduct of the Supplier

- .1 A Supplier found being supplied similar items with similar tender conditions to any other agency in the country during the validity of the contract with the APMSIDC, at a rate lower than the rate at which they supplied under this tender, the difference amount is liable to be recovered apart from blacklisting the firm for a minimum period of 3 years. The Supplier should furnish undertaking (Annexure-XIII) that they will remit the differential cost, if they quote lower rate than the rate quoted to the APMSIDC to any other agency or department or state, during the period of contract
- .2 Any substandard supplies without meeting the quality specifications made under the contract shall also entail blacklisting of the firm for a minimum period of three years for that particular product.
- .3 If the bidder fails to demonstrate on asked to do so, of the products quoted with their bid, without any valid or convincing reason to the satisfaction of the Purchaser, the bids for other items offered against the bid notice will not be considered and he may be debarred for a certain period as decided by the Purchaser.

15. Progress of Supply

Supplier shall intimate progress of work, in writing, to the Purchaser as under :

BIDDER

35

MANAGING DIRECTOR

- Qty offered for inspection and date;
- Qty. accepted/rejected by inspecting agency and date;
- Qty. dispatched/delivered to consignees and date;
- Qty. where incidental services have been satisfactorily completed with date;
- Quantity where rectification/repair/replacement effected/completed, on receipt of any communication from consignee/Purchaser with date;
- Date of completion of entire Contract including incidental services, if any; and
- Date of receipt of entire payments under the Contract.

SECTION V

SCHEDULE OF REQUIREMENTS AND TECHNICAL SPECIFICATIONS

| SI No | Description | Qty | EMD in Rs. |
|--------------|---|------------|-------------------|
| 1. | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at SVRRGGH, Tirupathi | 1 | 2,00,000 |
| 2. | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Ananthapur | 1 | 2,00,000 |
| 3. | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at RIMS, Kadapa | 1 | 2,00,000 |
| 4. | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Kurnool | 1 | 2,00,000 |
| 5. | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Nellore | 1 | 2,00,000 |
| 6. | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at RIMS, Ongole | 1 | 2,00,000 |
| 7. | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Vijayawada | 1 | 2,00,000 |
| 8. | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at Victoria Hospital, Visakhapatnam | 1 | 2,00,000 |
| 9. | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at Govt. Chest Hospital, Visakhapatnam | 1 | 2,00,000 |
| 10 | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Guntur | 1 | 2,00,000 |
| 11 | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Kakinada | 1 | 2,00,000 |
| 12 | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at KGH, Visakhapatnam | 1 | 2,00,000 |
| 13 | Providing Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at RIMS, Srikakulam | 1 | 2,00,000 |

Processing fee: The participating bidders will have to pay tender processing fee (non-refundable) of **Rs. 28,650/-** in the form of Demand Draft drawn in favour of Managing Director, APMSIDC, Guntur.

1. EMD shall be furnished in the form of **DD** only.
2. The bidder may quote for either one destination or all the destinations. The lowest quote within the destination will be considered L1 based on the price quoted by the bidder for that specific destination. In case of one bidder, being the lowest in more than one destination, the bidder will be awarded contract based on the rates quoted for the respective destinations. For financial evaluation, each destination will be independent of the other destination.

Technical Specifications

General Information

1. Bidders are requested to offer the erection of the Modular Operation Theatres as per the specifications attached.
2. For the erection of the Modular Operation Theatre, at each location, the bidder should include all the cost associated with fixing, cables, connectors, accessories and ancillary items necessary for the satisfactory operation of that Modular Operation Theatre.
3. (i) Bidders are requested to provide, referenced by given specifications and item name, with their tender offer, the following information for the items, if applicable, of Modular Operation Theatre offered.
 - Name of the Manufacturer
 - Brand Name & Model Number
 - Country of Origin(ii) Catalogue, Pamphlet, descriptive literature and technical specifications for each unit of Modular Operation Theatre must be forwarded with the offer.
5. Operating Environment:

Electrical Supply: The Modular Operation Theatre shall be suitable in all respect for use on the local electricity supply of 200- 270 Volts, 50 Cycles. A suitable stabilizer/CVT to be offered, in case of specific Voltage requirement for the Modular Operation Theatre. Resettable over current breaker shall be fitted for protection wherever applicable.

Humidity: The unit shall be capable of operating continuously in ambient temperature of 30⁰C and relative humidity of around 80%.
7. Deleted.
8. All items should be of high quality, durable, and suitable for use in a Hospital. The technical specification and standards of each item delivered shall be that currently in use at the time of delivery.
 - a) Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450.
- 10 The Manufacturer, must have necessary quality certifications for processes such as ISO 9001 Quality Management System for Organization or ISO 13485 Quality Management System for Medical Device, wherever applicable.

Product Specifications:

| | | |
|---|--|------------|
| 1. Name of work : Upgradation of Infrastructure for NABH accreditation at SVRRGGH, Tirupati | | |
| Sub work : Modification of existing OT's (8 Nos)as per NABH Standards and Civil works in (2 Modular and 6 non-modular) | | |
| Sl. No | Description of item | Qty |
| Condensing units | | |
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| Nominal Capacities: | | |
| | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 8 No's |
| Air handling Units | | |
| 2 | SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar/voltas/ Thosibha/Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. | |

| | | |
|---|--|--------|
| | <p>Fan section should be SISW direct driven plug fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Motor drive should be VFD. VFD drive should be included in AHU supply. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHu package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE:</p> <ol style="list-style-type: none"> 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| | 4000 cfm 4.5" static | 2 No's |
| 3 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations.</p> | |
| | <p>Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHu package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE :</p> <ol style="list-style-type: none"> 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| | 4000 cfm 2.5" static | 6 No's |

| | | |
|----|--|---------------|
| 4 | Ceiling suspended laminar flow work space / discharge plenum for operation rooms comprising as standard feature with HEPA filter efficiency not less than 99.97% at 0.3 Microns (Factory DOP tested), per operation room shall not be less than 3.1 sqm area with appropriate depth to accomodate absolute filters, with air flow at approx. 90-100 Fpm velocity. Size 8ft X 6ft Material of construction Shall be 1.2mm thick S S 304 Plenum with S S Perforated sheet at the bottom. Each air inlet should be supplied with Aluminium opposed blade damper . The entire plenum should be insulated with 19mm thick Al faced nitrile rubber. Bottom discharge should be perforated SS Sheet of 1.6mm with reinforcement to avoid waviness APPROVED MAKE : Dyna / American Air Filter / M.K Precesion | |
| | Laminar flow plenum chamber | 2 No's |
| 5 | supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent | 12.00 SQM |
| 6 | supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 12.00 SQM |
| 7 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 24.00 SQM |
| 8 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 12.00 SQM |
| 9 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 240.00 RM |
| b | 1/2 inches OD | 240.00 RM |
| 9 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 240.00 SQM |
| b | 20 Gauge | 240.00 SQM |
| 10 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 240.00 SQM |

| | | |
|----|---|----------------|
| 11 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foiled with suitable adhesives as recommended by manufacturers. APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 240.00 SQM |
| 12 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 8.00 SQM |
| 13 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 40 mm Dia | 160.00 RM |
| 14 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 200.00 RM |
| 15 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice (ELEC-9.5.45) | 1600.00 Kgs |
| 16 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 440.00 SQM |
| 17 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 264.00 Rm |
| 18 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make :Cipy/SIKHA/ARDEX/STRIDEX/TARGET) | 216.00 RM |
| 19 | Supply and Fixing of Epoxy Flooring: Seamless with perfectly curved resistance and dynamic loads and having conductive protection characteristics, 3 mm thick, washable Epoxy flooring and Before apply epoxy apply ESD self leveling - eletrotape copper foil / Copper grounding strips (0.05 mm thick, 50mm width) is used to create ground grids for peel and stic ESD flooring and ESD matting also ESD primer,screading and topping for self leveling (Make :SIKHA/ARDEX/STRIDEX/TARGET) | 72.00 SQM |

| | | |
|----|--|---------------|
| 20 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyance of all materials and all labour charges etc., complete for finished item of work. Make : SIKHA/ARDEX/STRIDEX/TARGET) | 216.00 SQM |
| 21 | Supply and application of poly urethane (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 432.00 SQM |
| 22 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 26.00 SQM |
| 23 | Supply and Fixing of Surgical Scrub: Surgical scrub sink should be designed for use in OT complex providing Surgeons with a convenient sink for pre – OT scrub up. Each fixture should be fabricated with 18 SWG gauge type 304 stainless steel and should be seamless welded construction, polished to a stain finish. The scrub sink should be provided with a water controlled valve, waste connections, stoppers and strainers. 4 Feet Length and 3 Feet High with 2 Foot operated and 2 elbow taps should be there. Make : Zindal/ Tata | 2.00 No's |
| 24 | Supply and Fixing of Pass Box SS 304 (Size: 2'x2') can be provided in operation theatre to remove waste materials from the operation theatres to Dirty linen area just adjacent to Operation Theatre. Pass Box is equipped with two doors and the door shall operate electronically. The Pass Box is designed in such a way that only one door should be opened at one time. The UV light shall be installed in chamber. Make: CZS /BLS / SS 304 Zindal | 2.00 No's |
| 25 | Supply and Fixing of Two Plate X-Ray Viewing Screen designed to provide a high level of control luminance without flicker. Size - 950 x 650 x 115 mm (Make : Mediconz International - Country of Origin - India , Srimodular / CZS / Altos) | 2.00 No's |

| | | |
|----|--|-----------|
| 26 | Supply and Fixing of Writing Board of size 950 x 650 x 75 mm with 50 mm thick and consealed in wall panelling (Make : CZS /BLS / Altos / Srimodular / Mediconz or equvalent) | 2.00 No's |
| 27 | Supply and Fixing of Surgeon Double Arm Pendant - Comprising of- 1 x Arm 800 & 1 x Arm 800 having a- 1 x drop tube having a carrying capacity of maximumload of 80 kg-Rotation of 330 deg.- 1 x Basic Console - 750 mm- 1 x Fixed shelf (350x350x50 mm)- 1 x Adjustable shelf (350x350x50mm)- 6 x Mains Socket (5/15Amp)- 6 x Medical Gas Terminal & Hose Assembly(2 x Oxy, 2xVac, 1xAir(4bar), 1xAir(7bar), 1xN2O, 1xCO2,Provision for CO2 Data & A/V 2 nos.)Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 2.00 No's |
| 28 | Supply and Fixing of Anesthesia Single Arm Pendant - Comprising of - 1 x Arm 800 mm having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 600 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar),1xAir 7 Bar,1x N20 , Provision for AGSS, Data & A/V 2 nos.) (Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 2.00 No's |
| | V - FIRE EXTINGUISHERS | |
| 29 | Supply and fixing of ISI mark (IS:15683) Mono ammonium phosphate powder 90 (MAP) 6 Kg Fire extinguisher, stored pressure type, pressure gauge, gross wt. 9.4 kg, empty wt.3.4 kg, Discharge time minimum 13 sec, controllable discharge mechanism, range min. 4 mts applicable on classes A,B, C & electrically started fire, A rating - 4 A, B rating -34 B, can construction: Deep drawn and Co2 mig welding, Valve construction: Forging & Machining, internal coating of can: Epoxy powder coating, External coating of Can:Epoxy polyster powder coating, sheet metal thickness:1.60mm, Helium leak detection tested with 5 years warranty Including transportation, all taxes and all labour charges etc complete. Makes: Safex / Kenex / Bharat / Reliance. (SSR - 17-18 - 9.4.8) | 0.00 No's |
| 30 | OT Distribution Board: DB for controlling Inside OT Surgeon Panel,X-Ray View Panel,Writing Board and LED Lights and its consisting of: 2 Pole - Incomer MCB - 32A - 1 No Single Pole MCB-16A-14 Nos Transfarmer 0-18V/3A - 1 Nos Earth Connectrors for Earth (10Nos),Nutral (10Nos) and Control Panel Supply(14Nos) Relays for on - Off Switch - 1 Nos Make: Siemens/ BLS / CZS | 2.00 No's |

| | | |
|----|--|------------|
| 31 | Supply and Fixing of Surgeon Control Panel mounted flush in the theatre wall, comprising of the following: 1 No. Day Time Clock 1 No. Elapse Time Clock 1 Set dimmer for peripheral/ planair lights 1 No. hands free telephone 1 No. Medical Gas status/ alarm 1 set indicator only for temperature and humidity display Size - 650 x 650 x 115 mm (Make :Altos/Mercury/Arivali/ Digiline) | 2.00 No's |
| 32 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equavalent | 24.00 SQM |
| 33 | Supply Instalation, testing and commissioning of 60 to 100 degrees F heat Thermostat including making connections and soldering etc, complete.Make: Honey Well / Johnson / Siemanes | 6.00 Lot |
| 34 | Supply, Instalation, testing and commissioning of 0 to 100 RH pressure guage Humidistate including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 6.00 Lot |
| 35 | Supply, Instalation, testing and commissioning of Pressure sensor for VDF including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 8.00 Lot |
| 36 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast alluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV,THD<10%, with high power LED's having efficacy of > 120 lumins/watt,CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. | |
| | In side OT's | 48.00 No's |
| | ELECTRICAL ITEMS | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS regid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all ccessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 1200.00 RM |
| 2 | Supply of ISI 32mm width and 12.5mm height Casing and Caping. Makes: Any ISI make | 600.00 Rm |

| | | |
|---|---|---------------|
| 3 | Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building) Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM-Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 120.00 Pts |
| 4 | Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 20.00 No's |
| 5 | Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 85.00 No's |
| 6 | Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 80.00 No's |

| | | |
|----|---|---------------|
| 7 | Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 1200.00 RM |
| 8 | Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 800.00 RM |
| 9 | Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 800.00 RM |
| 10 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 1600.00 RM |
| 11 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 400.00 RM |
| 12 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 500.00 RM |

| | | |
|----|---|---------------|
| 13 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 8.00 No's |
| 14 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 8.00 No's |
| 15 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 8.00 No's |
| 16 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 8.00 No's |
| 17 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / CMI | 600.00 RM |
| 18 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangments such as saddles, clamps, wooden separators etc., (as directed by departmental official) for eath connections for the cables. | 600.00 RM |
| 19 | Supply and installation of 5KVA, 180/192V DC true on line UPS system IGBT technology pure sine wave out put, double conversion with auto and manual static by pass switch single phase input / single phase output .tMakes: CONSUL / power one / Numeric / Emerson / APC . | 8.00 No's |
| 20 | Supply and providing of UPS cum battery rack upto 11 to20 batteries | 8.00 No's |
| 21 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. | 80.00 No's |
| | Oxygen Pipe lines systems | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work. Make : Mexflow | 360.00 RM |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 360.00 RM |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 360.00 RM |

| | | |
|---|---|--------------|
| 4 | SSupply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360.00 RM |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360.00 RM |

Sub work : Modification of existing OT's (8 Nos)as per NABH Standards and Civil works in (2 Modular and 6 non-modular)

| Sl. No | Description of item | Quantity |
|---------------|--|-----------------|
| | Civil items | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 300.00 Sqm |
| b | Old cement mortar plaster | 300.00 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 15.00 Cum |
| 2 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 300.00 Sqm |
| 3 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 440.00 Sqm |
| 4 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 440.00 Sqm |

| | | |
|---|--|---------------|
| 5 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, overheads & contractor profit etc., complete for finished item of work in all floor in all floors. | 200.00 Sqm |
| 6 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors.. | 800.00 Sqm |
| 7 | Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc.,and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707) | 200.00 Sqm |
| 8 | Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., and overheads & contractors profit complete for finished item of work. | 200.00 Sqm |

| | | |
|---|---|--------------|
| 9 | Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors | |
| | and SS cover plates with brass pivot and sigle piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., including overheads & contractors profit complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | 85.00 Sqm |

| 2. Name of work : Upgradation of Infrastructure for NABH accreditation at Anantapur | | |
|---|--|----------|
| Sub work : Modification of existing OT's (8 Nos)as per NABH Standards and Civil works in (1 Modular and 2 non-modular) | | |
| Sl. No | Description of item | Quantity |
| Condensing units | | |
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| Nominal Capacities: | | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 3 No's |

| | | |
|---|--|--------|
| b | 20HP (12TR actual capacity at 45 deg. C) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 0 No's |
| | Air handling Units | |
| 2 | SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar/voltas/ Thosibha/Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. | |
| | Fan section should be SISW direct driven plug fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Motor drive should be VFD. VFD drive should be included in AHU supply. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHu package should include Electronic expansion valves compatable to condensing units, Temperature sensor/controller compatable to inverter drive, communication cables from AHU to condensing unit APPROVED MAKE: 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 4.5" static | 1 No's |

| | | |
|---|---|--------|
| 3 | SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. | |
| | Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit APPROVED MAKE : 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 2.5" static | 2 No's |
| 4 | Ceiling suspended laminar flow work space / discharge plenum for operation rooms comprising as standard feature with HEPA filter efficiency not less than 99.97% at 0.3 Microns (Factory DOP tested), per operation room shall not be less than 3.1 sqm area with appropriate depth to accommodate absolute filters, with air flow at approx. 90-100 Fpm velocity. Size 8ft X 6ft Material of construction Shall be 1.2mm thick S S 304 Plenum with S S Perforated sheet at the bottom. Each air inlet should be supplied with Aluminium opposed blade damper . The entire plenum should be insulated with 19mm thick Al faced nitrile rubber. Bottom discharge should be perforated SS Sheet of 1.6mm with reinforcement to avoid waviness APPROVED MAKE : Dyna / American Air Filter / M.K Precesion | |
| | Laminar flow plenum chamber | 1 No's |

| | | |
|----|--|--------|
| 5 | supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent | 5 Sqm |
| 6 | supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 5 Sqm |
| 7 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 10 Sqm |
| 8 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 10 Sqm |
| 9 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 90 RM |
| b | 1/2 inches OD | 90 RM |
| 9 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 90 Sqm |
| b | 20 Gauge | 90 Sqm |
| 10 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 90 Sqm |
| 11 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foileds with suitable adhesives as recommended by manufacturers. APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 90 Sqm |
| 12 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 3 Sqm |
| 13 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |

| | | |
|----|--|------------|
| | 25 mm Dia | 0.00 Rmt |
| | 32 mm Dia | 0.00 Rmt |
| | 40 mm Dia | 60.00 Rmt |
| 14 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 75 Rme |
| 15 | Supply, Installation of Fresh air package consists Louvers, GI volume control damper including Bird Cowl with wiremesh along with 20 microns filter. | 0 No's |
| 16 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice | 600 Kgs |
| 17 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 180 Sqm |
| 18 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 110 Rmt |
| | wall to wall and wall to ceiling | |
| 19 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 75 Rmt |
| | | |
| 20 | Supply and Fixing of Epoxy Flooring: Seamless with perfectly curved resistance and dynamic loads and having conductive protection characteristics, 3 mm thick, washable Epoxy flooring and Before apply epoxy apply ESD self leveling - eletrotape copper foil / Copper grounding strips (0.05 mm thick, 50mm width) is used to create ground grids for peel and stic ESD flooring and ESD matting also ESD primer,screading and topping for self leveling (Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 45.914 Sqm |

| | | |
|----|--|---------|
| 21 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyance of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 80 Sqm |
| 22 | Supply and Fixing of Pass Box SS 304 (Size: 2'*2') can be provided in operation theatre to remove waste materials from the operation theatres to Dirty linen area just adjacent to Operation Theatre. Pass Box is equipped with two doors and the door shall operate electronically. The Pass Box is designed in such a way that only one door should be opened at one time. The UV light shall be installed in chamber. Make: CZS /BLS / SS 304 Zindal | 1 No's |
| 23 | Supply and Fixing of Two Plate X-Ray Viewing Screen designed to provide a high level of control luminance without flicker. Size - 950 x 650 x 115 mm (Make : Mediconz International - Country of Origin - India , Srimodular / CZS / Altos) | 1 No's |
| 24 | Supply and Fixing of Writing Board of size 950 x 650 x 75 mm with 50 mm thick and consealed in wall panelling (Make : CZS /BLS / Altos / Srimodular / Mediconz or equavalent) | 1 No's |
| 25 | Supply and application of poly urethane (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 150 Sqm |
| 26 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 10 Sqm |

| | | |
|------------------------|--|--------|
| 27 | Supply and Fixing of Surgical Scrub: Surgical scrub sink should be designed for use in OT complex providing Surgeons with a convenient sink for pre – OT scrub up. Each fixture should be fabricated with 18 SWG gauge type 304 stainless steel and should be seamless welded construction, polished to a stain finish. The scrub sink should be provided with a water controlled value, waste connections, stoppers and strainers. 4 Feet Length and 3 Feet High with 2 Foot operated and 2 elbow taps should be there. Make : Zindal/ Tata | 1 No's |
| 28 | Supply and Fixing of Surgeon Double Arm Pendant - Comprising of - 1 x Arm 800 & 1 x Arm 800 having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 750 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar), 1xAir(7bar), 1xN2O, 1xCO2, Provision for CO2 Data & A/V 2 nos.) Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 1 No's |
| 29 | Supply and Fixing of Anesthesia Single Arm Pendant - Comprising of - 1 x Arm 800 mm having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 600 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar), 1xAir 7 Bar, 1x N20 , Provision for AGSS, Data & A/V 2 nos.) (Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 1 No's |
| V - FIRE EXTINGUISHERS | | |

| | | |
|----|---|--------|
| 28 | Supply and fixing of ISI mark (IS:15683) Mono ammonium phosphate powder 90 (MAP) 6 Kg Fire extinguisher, stored pressure type, pressure gauge, gross wt. 9.4 kg, empty wt.3.4 kg, Discharge time minimum 13 sec, controllable discharge mechanism, range min. 4 mts applicable on classes A,B, C & electrically started fire, A rating - 4 A, B rating -34 B, can construction: Deep drawn and Co2 mig welding, Valve construction: Forging & Machining, internal coating of can: Epoxy powder coating, External coating of Can:Epoxy polyester powder coating, sheet metal thickness:1.60mm, Helium leak detection tested with 5 years warranty Including transportation, all taxes and all labour charges etc complete. Makes: Safex / Kenex / Bharat / Reliance. (SSR - 17-18 - 9.4.8) | 0 No's |
| 29 | OT Distribution Board: DB for controlling Inside OT Surgeon Panel,X-Ray View Panel,Writing Board and LED Lights and its consisting of: 2 Pole - Incomer MCB - 32A - 1 No Single Pole MCB-16A-14 Nos Transformer 0-18V/3A - 1 Nos Earth Connectrors for Earth (10Nos),Nutral (10Nos) and Control Panel Supply(14Nos) Relays for on - Off Switch - 1 Nos Make: Siemens/ BLS / CZS | 1 No's |
| 30 | Supply and Fixing of Surgeon Control Panel mounted flush in the theatre wall, comprising of the following: 1 No. Day Time Clock 1 No. Elapse Time Clock 1 Set dimmer for peripheral/ planair lights 1 No. hands free telephone 1 No. Medical Gas status/ alarm 1 set indicator only for temperature and humidity display Size - 650 x 650 x 115 mm (Make :Altos/Mercury/Arivali/ Digiline) | 1 No's |
| 31 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | 10 Sqm |
| 32 | Supply Instalation, testing and commissioning of 60 to 100 degrees F heat Thermostat including making connections and soldering etc, complete. Make: Honey Well / Johnson / Siemanes | 2 lot |
| 33 | Supply, Instalation, testing and commissioning of 0 to 100 RH pressure guage Humidistate including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 2 Lot |
| 34 | Supply, Instalation, testing and commissioning of Pressure sensor for VDF including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 3 Lot |

| | | |
|----|--|---------------|
| 35 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast aluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV, THD<10%, with high power LED's having efficacy of > 120 lumens/watt, CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| | Civil items | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 150.00 Sqm |
| b | Old cement mortar plaster | 150.00 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 5.00 Cum |
| 2 | Conveyance of un-useful excavated earth to a distance of 5 KM for disposal including hire charges of T & P, labour charges etc., complete for finished item of work. | 0 Cum |
| 3 | Plain Cement Concrete (1:5:10) (cement: fine aggregate: Coarse aggregate) for foundations and under flooring bed using coarse aggregate 20mm size hard , machine crushed granite from approved quarry including cost and conveyance of all materials like cement, sand, coarse aggregate, water etc. to site, sales & other taxes on all materials and including all charges for machine mixing, laying concrete in foundations and under flooring bed, ramming in 15 cm layers finishing top surface to the required level curing etc.,and complete for finished item of work. (APSS No. 402) | 0 Cum |
| 4 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 110 Sqm |

| | | |
|---|---|---------------|
| 5 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 100 Sqm |
| 6 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 150 Sqm |
| 7 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, overheads & contractor profit etc., complete for finished item of work in all floor in all floors. | |
| | Corridors | 75.00 Sqm |
| 8 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors.. | |
| | Corridors | 300.00 Sqm |

| | | |
|----|---|--------------|
| 9 | <p>Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc.,and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707)</p> | |
| | Corridors | 75.00 Sqm |
| 10 | <p>Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., and overheads & contractors profit complete for finished item of work.</p> | |
| | Corridors | 75.00 Sqm |
| 11 | <p>Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors</p> | |

| | | |
|---|--|--------------|
| | and SS cover plates with brass pivot and single piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., including overheads & contractors profit complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | |
| | Corridors | 32.00 Sqm |
| | Electrical items | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS rigid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all ccessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 60 Rmt |
| 2 | Supply of ISI 32mm width and 12.5mm height Casing and Capping. Makes: Any ISI make | 0 Rmt |
| 3 | Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building) Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM-Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 30 Pts |
| 4 | Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specificationflexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 6 No's |

| | | |
|---|--|---------|
| 5 | <p>Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> <p>Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 12 No's |
| 6 | <p>Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 6 No's |
| 7 | <p>Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> | 100 Rmt |
| 8 | <p>Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> | 60 Rmt |
| 9 | <p>Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> | 60 Rmt |

| | | |
|----|---|--------|
| 10 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 11 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 12 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 13 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 1 No's |
| 14 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 3 No's |

| | | |
|----|--|---------|
| 15 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 3 No's |
| 16 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 1 No's |
| 17 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / CMI | 100 Rmt |
| 18 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangements such as saddles, clamps, wooden separators etc., (as directed by departmental official) for eath connections for the cables. | 100 Rmt |
| 19 | Supply and installation of 5KVA, 180/192V DC true on line UPS system IGBT technology pure sine wave out put, double conversion with auto and manual static by pass switch single phase input / single phase output .tMakes: CONSUL / power one / Numeric / Emerson / APC . | 3 No's |
| 20 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries | 3 No's |
| 21 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. | 60 No's |
| | Oxygen Pipe lines systems | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work. Make : Mexflow | 135 Rmt |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 135 Rmt |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 135 Rmt |
| 4 | SSupply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 135 Rmt |

| | | |
|---|--|---------|
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 135 Rmt |
|---|--|---------|

| 3. Name of work : Upgradation of Infrastructure for NABH accreditation at Kadapa | | |
|--|--|----------|
| Sub work : Modification of existing OT's (8 Nos) as per NABH Standards and Civil works in (2 Modular and 6 non-modular) | | |
| Sl. No | Description of item | Quantity |
| Condensing units | | |
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| Nominal Capacities: | | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 8 No's |
| Air handling Units | | |
| 2 | SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar/voltas/ Thosibha/Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. | |

| | | |
|---|--|--------|
| | <p>Fan section should be SISW direct driven plug fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Motor drive should be VFD. VFD drive should be included in AHU supply. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHu package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE:</p> <ol style="list-style-type: none"> 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 4.5" static | 2 No's |
| 3 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations.</p> | |
| | <p>Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHu package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE :</p> <ol style="list-style-type: none"> 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 2.5" static | 6 No's |

| | | |
|----|--|---------------|
| 4 | Ceiling suspended laminar flow work space / discharge plenum for operation rooms comprising as standard feature with HEPA filter efficiency not less than 99.97% at 0.3 Microns (Factory DOP tested), per operation room shall not be less than 3.1 sqm area with appropriate depth to accomodate absolute filters, with air flow at approx. 90-100 Fpm velocity. Size 8ft X 6ft Material of construction Shall be 1.2mm thick S S 304 Plenum with S S Perforated sheet at the bottom. Each air inlet should be supplied with Aluminium opposed blade damper . The entire plenum should be insulated with 19mm thick Al faced nitrile rubber. Bottom discharge should be perforated SS Sheet of 1.6mm with reinforcement to avoid waviness APPROVED MAKE : Dyna / American Air Filter / M.K Precesion | |
| | Laminar flow plenum chamber | 2 No's |
| 5 | Supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent | 12 Sqm |
| 6 | Supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 12 Sqm |
| 7 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 24 Sqm |
| 8 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 12 Sqm |
| 9 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 250 RM |
| b | 1/2 inches OD | 250 Rm |
| 10 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 500 Sqm |
| b | 20 Gauge | 500 Sqm |
| 11 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 500 Sqm |
| 12 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foiledcs with suitable adhesives as recommended by manufacturers.APROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 500 Sqm |

| | | |
|----|---|-------------|
| 13 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 8 Sqm |
| 14 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 40 mm Dia | 160.00 Rmt |
| 15 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 200 Rmt |
| 16 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice (ELEC-9.5.45) | 1200 Kgs |
| 17 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 440 Sqm |
| 18 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 349.046 Rmt |
| | wall to wall and wall to ceiling | |
| 19 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make :Cipy/SIKHA/ARDEX/STRIDEX/TARGET) | 216 Rmt |
| 20 | Supply and Fixing of Epoxy Flooring: Seamless with perfectly curved resistance and dynamic loads and having conductive protection characteristics, 3 mm thick, washable Epoxy flooring and Before apply epoxy apply ESD self leveling - eletrotape copper foil / Copper grounding strips (0.05 mm thick, 50mm width) is used to create ground grids for peel and stic ESD flooring and ESD matting also ESD primer,screading and topping for self leveling (Make :SIKHA/ARDEX/STRIDEX/TARGET) | 72 Sqm |

| | | |
|----|--|---------|
| 21 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyance of all materials and all labour charges etc., complete for finished item of work. Make : SIKHA/ARDEX/STRIDEX/TARGET) | 216 Sqm |
| 22 | Supply and Fixing of Pass Box SS 304 (Size: 2'x2') can be provided in operation theatre to remove waste materials from the operation theatres to Dirty linen area just adjacent to Operation Theatre. Pass Box is equipped with two doors and the door shall operate electronically. The Pass Box is designed in such a way that only one door should be opened at one time. The UV light shall be installed in chamber. Make: CZS /BLS / SS 304 Zindal | 2 No's |
| 23 | Supply and Fixing of Two Plate X-Ray Viewing Screen designed to provide a high level of control luminance without flicker. Size - 950 x 650 x 115 mm (Make : Mediconz International - Country of Origin - India , Srimodular / CZS / Altos) | 2 No's |
| 24 | Supply and Fixing of Writing Board of size 950 x 650 x 75 mm with 50 mm thick and consealed in wall panelling (Make : CZS /BLS / Altos / Srimodular / Mediconz or equavalent) | 2 No's |
| 25 | Supply and application of poly urethane (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 432 Sqm |
| 26 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 26 Sqm |

| | | |
|----|---|--------|
| 27 | <p>Supply and Fixing of Surgucal Scrub: Surgical scrub sink should be designed for use in OT complex providing Surgeons with a convenient sink for pre – OT scrub up. Each fixture should be fabricated with 18 SWG gauge type 304 stainless steel and should be seamless welded construction, polished to a stain finish. The scrub sink should be provided with a water controlled value, waste connections, stoppers and strainers. 4 Feet Length and 3 Feet Hight with 2 Foot operated and 2 elbow taps should be there.</p> <p>Make : Zindal/ Tata</p> | 2 No's |
| 28 | <p>Supply and Fixing of Surgeon Double Arm Pendant - Comprising of</p> <ul style="list-style-type: none"> - 1 x Arm 800 & 1 x Arm 800 having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 750 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar), 1xAir(7bar), 1xN2O, 1xCO2, Provision for CO2 Data & A/V 2 nos.) <p>Make : Meditech / Altos / Aravali / Digiline or Equqalent)</p> | 2 No's |
| 29 | <p>Supply and Fixing of Anesthesia Single Arm Pendant - Comprising of</p> <ul style="list-style-type: none"> - 1 x Arm 800 mm having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 600 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar),1xAir 7 Bar,1x N20 , Provision for AGSS, Data & A/V 2 nos.) <p>(Make : Meditech / Altos / Aravali / Digiline or Equqalent)</p> | 2 No's |
| 30 | <p>OT Distribution Board:DB for controlling Inside OT Surgeon Panel,X-Ray View Panel,Writing Board and LED Lights and its consisting of:2 Pole - Incomer MCB - 32A - 1 NoSingle Pole MCB-16A-14 NosTransformer 0-18V/3A - 1 NosEarth Connectrors for Earth (10Nos),Nutral (10Nos) and Control Panel Supply(14Nos)Relays for on - Off Switch - 1 NosMake: Siemens/ BLS / CZS</p> | 2 No's |

| | | |
|--------------------|--|---------------|
| 31 | Supply and Fixing of Surgeon Control Panel mounted flush in the theatre wall, comprising of the following: 1 No. Day Time Clock 1 No. Elapse Time Clock 1 Set dimmer for peripheral/ planair lights 1 No. hands free telephone 1 No. Medical Gas status/ alarm 1 set indicator only for temperature and humidity display Size - 650 x 650 x 115 mm (Make :Altos/Mercury/Arivali/ Digiline) | 2 No's |
| 32 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | 24 Sqm |
| 33 | Supply Instalation, testing and commissioning of 60 to 100 degrees F heat Thermostat including making connections and soldering etc, complete. Make: Honey Well / Johnson / Siemanes | 6 Lot |
| 34 | Supply, Instalation, testing and commissioning of 0 to 100 RH pressure guage Humidistate including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 6 Lot |
| 35 | Supply, Instalation, testing and commissioning of Pressure sensor for VDF including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 8 Lot |
| 36 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast aluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV,THD<10%, with high power LED's having efficacy of > 120 lumens/watt,CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| Civil items | | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 650.00 Sqm |
| b | Old cement mortar plaster | 550.00 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 15.00 Cum |

| | | |
|---|---|---------------|
| 2 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 300 Sqm |
| 3 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 350 Sqm |
| 4 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 432 Sqm |
| 5 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, overheads & contractor profit etc., complete for finished item of work in all floor in all floors. | |
| | Corridors | 400.00 Sqm |
| 6 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors.. | |
| | Corridors | 800.00 Sqm |

| | | |
|---|---|---------------|
| 7 | <p>Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc.,and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707)</p> | |
| | Corridors | 400.00 Sqm |
| 8 | <p>Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., and overheads & contractors profit complete for finished item of work.</p> | |
| | Corridors | 400.00 Sqm |
| 9 | <p>Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors</p> | |

| | | |
|---|--|--------------|
| | and SS cover plates with brass pivot and single piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., including overheads & contractors profit complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | |
| | Corridors | 85.00 Sqm |
| | Electrical items | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS rigid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all accessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 1200 Rmt |
| 2 | Supply of ISI 32mm width and 12.5mm height Casing and Capping. Makes: Any ISI make | 600 Rmt |
| 3 | Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building) Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM-Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 120 Pts |
| 4 | Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specificationflexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 20 No's |

| | | |
|---|--|----------|
| 5 | <p>Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> <p>Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 85 No's |
| 6 | <p>Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 80 No's |
| 7 | <p>Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> | 1200 Rmt |
| 8 | <p>Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> | 800 Rmt |
| 9 | <p>Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> | 800 Rmt |

| | | |
|----|---|----------|
| 10 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 1600 Rmt |
| 11 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 400 Rmt |
| 12 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 500 Rmt |
| 13 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 8 No's |
| 14 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 8 No's |
| 15 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 8 No's |
| 16 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 8 No's |
| 17 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / | 600 Rmt |

| | | |
|----------------------------------|---|---------|
| | CMI | |
| 18 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangements such as saddles, clamps, wooden separators etc., (as directed by departmental official) for each connections for the cables. | 600 Rmt |
| 19 | Supply and installation of 5KVA, 180/192V DC true on line UPS system IGBT technology pure sine wave out put, double conversion with auto and manual static by pass switch single phase input / single phase output .tMakes: CONSUL / power one / Numeric / Emerson / APC . | 8 No's |
| 20 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries | 8 No's |
| 21 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. | 80 No's |
| Oxygen Pipe lines systems | | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360 Rmt |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360 Rmt |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360 Rmt |
| 4 | Supply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360 Rmt |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360 Rmt |

| | | |
|--|----------------------------|-----------------|
| 4. Name of work : Upgradation of Infrastructure for NABH accreditation at Kurnool | | |
| Sub work : Modification of existing OT's (5 Nos) as per NABH Standards and Civil works in (3 Modular and 2 non-modular) | | |
| Sl. No | Description of item | Quantity |
| | Condensing units | |

| | | |
|---|--|--------|
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| | Nominal Capacities: | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 5 No's |
| | Air handling Units | |
| 2 | SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar/voltas/ Thosibha/Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. | |
| | Fan section should be SISW direct driven plug fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Motor drive should be VFD. VFD drive should be included in AHU supply. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHu package should include Electronic expansion valves compatable to condensing units, Temperature sensor/controller compatable to inverter drive, communication cables from AHU to condensing unit APPROVED MAKE: 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 4.5" static | 3 No's |

| | | |
|---|--|---------------|
| 3 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations.</p> | |
| | <p>Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE :</p> <ol style="list-style-type: none"> 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 2.5" static | 2 No's |
| 4 | <p>Ceiling suspended laminar flow work space / discharge plenum for operation rooms comprising as standard feature with HEPA filter efficiency not less than 99.97% at 0.3 Microns (Factory DOP tested), per operation room shall not be less than 3.1 sqm area with appropriate depth to accommodate absolute filters, with air flow at approx. 90-100 Fpm velocity. Size 8ft X 6ft Material of construction Shall be 1.2mm thick S S 304 Plenum with S S Perforated sheet at the bottom. Each air inlet should be supplied with Aluminium opposed blade damper . The entire plenum should be insulated with 19mm thick Al faced nitrile rubber. Bottom discharge should be perforated SS Sheet of 1.6mm with reinforcement to avoid waviness</p> <p>APPROVED MAKE : Dyna / American Air Filter / M.K Precesion</p> | |
| | Laminar flow plenum chamber | 3 No's |

| | | |
|----|--|---------|
| 5 | Supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent | 10 Sqm |
| 6 | Supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 10 Sqm |
| 7 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 15 Sqm |
| 8 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 10 Sqm |
| 9 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 150 RM |
| b | 1/2 inches OD | 150 RM |
| 10 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 150 Sqm |
| b | 20 Gauge | 150 Sqm |
| 11 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 150 Sqm |
| 12 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foiledcs with suitable adhesives as recommended by manufacturers. APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 150 Sqm |
| 13 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 5 Sqm |
| 14 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 40 mm Dia | 100 Rmt |

| | | |
|----|--|----------|
| 15 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 125 Rmt |
| 16 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice | 1000 Kgs |
| 17 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 400 Sqm |
| 18 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 270 Rmt |
| | wall to wall and wall to ceiling | |
| 19 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 75 Rmtt |
| 20 | Supply and Fixing of Epoxy Flooring: Seamless with perfectly curved resistance and dynamic loads and having conductive protection characteristics, 3 mm thick, washable Epoxy flooring and Before apply epoxy apply ESD self leveling - eletrotape copper foil / Copper grounding strips (0.05 mm thick, 50mm width) is used to create ground grids for peel and stic ESD flooring and ESD matting also ESD primer,screading and topping for self leveling (Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 110 Sqm |
| 21 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyence of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 75 Sqm |

| | | |
|----|--|---------|
| 22 | Supply and Fixing of Pass Box SS 304 (Size: 2'x2') can be provided in operation theatre to remove waste materials from the operation theatres to Dirty linen area just adjacent to Operation Theatre. Pass Box is equipped with two doors and the door shall operate electronically. The Pass Box is designed in such a way that only one door should be opened at one time. The UV light shall be installed in chamber. Make: CZS /BLS / SS 304 Zindal | 3 No's |
| 23 | Supply and Fixing of Two Plate X-Ray Viewing Screen designed to provide a high level of control luminance without flicker. Size - 950 x 650 x 115 mm (Make : Mediconz International - Country of Origin - India , Srimodular / CZS / Altos) | 3 No's |
| 24 | Supply and Fixing of Writing Board of size 950 x 650 x 75 mm with 50 mm thick and consealed in wall panelling (Make : CZS /BLS / Altos / Srimodular / Mediconz or equavalent) | 3 No's |
| 25 | Supply and application of poly urethene (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 150 sqm |
| 26 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 16 Sqm |
| 27 | Supply and Fixing of Surgucal Scrub: Surgical scrub sink should be designed for use in OT complex providing Surgeons with a convenient sink for pre – OT scrub up. Each fixture should be fabricated with 18 SWG gauge type 304 stainless steel and should be seamless welded construction, polished to a stain finish. The scrub sink should be provided with a water controlled value, waste connections, stoppers and strainers. 4 Feet Length and 3 Feet Hight with 2 Foot operated and 2 elbow taps should be there. Make : Zindal/ Tata | 3 No's |

| | | |
|----|---|--------|
| 28 | <p>Supply and Fixing of Surgeon Double Arm Pendant - Comprising of</p> <ul style="list-style-type: none"> - 1 x Arm 800 & 1 x Arm 800 having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 750 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar), 1xAir(7bar), 1xN2O, 1xCO2, Provision for CO2 Data & A/V 2 nos.) <p>Make : Meditech / Altos / Aravali / Digiline or Equqalent)</p> | 3 No's |
| 29 | <p>Supply and Fixing of Anesthesia Single Arm Pendant - Comprising of</p> <ul style="list-style-type: none"> - 1 x Arm 800 mm having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 600 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar),1xAir 7 Bar,1x N20 , Provision for AGSS, Data & A/V 2 nos.) <p>(Make : Meditech / Altos / Aravali / Digiline or Equqalent)</p> | 3 No's |
| 30 | <p>OT Distribution Board: DB for controlling Inside OT Surgeon Panel,X-Ray View Panel,Writiong Board and LED Lights and its consisting of:</p> <ul style="list-style-type: none"> 2 Pole - Incomer MCB - 32A - 1 No Single Pole MCB-16A-14 Nos Transfarmer 0-18V/3A - 1 Nos Earth Connectrors for Earth (10Nos),Nutral (10Nos) and Control Panel Supply(14Nos) Relays for on - Off Switch - 1 Nos <p>Make: Siemens/ BLS / CZS</p> | 3 No's |
| 31 | <p>Supply and Fixing of Surgeon Control Panel mounted flush in the theatre wall, comprising of the following:</p> <ul style="list-style-type: none"> 1 No. Day Time Clock 1 No. Elapse Time Clock 1 Set dimmer for peripheral/ planair lights 1 No. hands free telephone 1 No. Medical Gas status/ alarm 1 set indicator only for temperature and humidity display <p>Size - 650 x 650 x 115 mm (Make :Altos/Mercury/Arivali/ Digiline)</p> | 3 No's |

| | | |
|----|---|---------|
| 32 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | 15 Sqm |
| 32 | Supply Instalation, testing and commissioning of 60 to 100 degrees F heat Thermostat including making connections and soldering etc, complete. Make: Honey Well / Johnson / Siemanes | 2 Lot |
| 33 | Supply, Instalation, testing and commissioning of 0 to 100 RH pressure guage Humidistate including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 2 Lot |
| 34 | Supply, Instalation, testing and commissioning of Pressure sensor for VDF including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 5 Lot |
| 35 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast alluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV, THD<10%, with high power LED's having efficacy of > 120 lumens/watt, CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| | In side OT's | 30 No's |
| | Civil items | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 200 Sqm |
| b | Old cement mortar plaster | 200 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 10 Cum |
| 2 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 180 Sqm |

| | | |
|---|---|---------|
| 3 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 200 Sqm |
| 4 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 150 Sqm |
| 5 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, overheads & contractor profit etc., complete for finished item of work in all floor in all floors. | |
| | Corridors | 125 Sqm |
| 6 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors.. | |
| | Corridors | 500 Sqm |

| | | |
|---|---|---------|
| 7 | <p>Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc.,and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707)</p> | |
| | Corridors | 125 Sqm |
| 8 | <p>Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., and overheads & contractors profit complete for finished item of work.</p> | |
| | Corridors | 125 Sqm |
| 9 | <p>Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors</p> | |

| | | |
|---|--|---------|
| | and SS cover plates with brass pivot and single piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., including overheads & contractors profit complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | |
| | Corridors | 55 Sqm |
| | Electrical items | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS rigid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all ccessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 100 Rmt |
| 2 | Supply of ISI 32mm width and 12.5mm height Casing and Caping. Makes: Any ISI make | 0 Rmt |
| 3 | Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building) Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM-Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 50 Pts |
| 4 | Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specificationflexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 10 No's |

| | | |
|---|--|---------|
| 5 | <p>Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> <p>Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 20 No's |
| 6 | <p>Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 10 No's |
| 7 | <p>Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> | 150 Rmt |
| 8 | <p>Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> | 100 Rmt |
| 9 | <p>Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> | 100 Rmt |

| | | |
|----|---|--------|
| 10 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 40 Rmt |
| 11 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 75 Rmt |
| 12 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 80 Rmt |
| 13 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 1 No's |
| 14 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400mm x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 5 No's |
| 15 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 5 No's |
| 16 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 4 No's |

| | | |
|----------------------------------|---|----------|
| 17 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / CMI | 200 Rmt |
| 18 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangments such as saddles, clamps, wooden separators etc., (as directed by departmental official) for eath connections for the cables. | 200 Rmt |
| 19 | Supply and installation of 5KVA, 180/192V DC true on line UPS system IGBT technology pure sine wave out put, double conversion with auto and manual static by pass switch single phase input / single phase output .tMakes: CONSUL / power one / Numeric / Emerson / APC . | 5 No's |
| 20 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries | 5 No's |
| 21 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. | 100 No's |
| Oxygen Pipe lines systems | | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 225 Rmt |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work.Make : Mexflow | 225 Rmt |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work.Make : Mexflow | 225 Rmt |
| 4 | SSupply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work.Make : Mexflow | 225 Rmt |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 225 Rmt |

| | | |
|---|----------------------------|-----------------|
| 5. Name of work : Upgradation of Infrastructure for NABH accreditation at GGH, Nellore | | |
| Sub work : Modification of existing OT's (4 Nos Non-modular) | | |
| Sl. No | Description of item | Quantity |
| | Condensing units | |

| | | |
|---|---|--------|
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| | Nominal Capacities: | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 4 No's |
| | Air handling Units | |
| 2 | SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. | |
| | Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers.The AHu package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit APPROVED MAKE :1. FAN – KRUGER / ZIEHL-ABEGG2. MOTORS – ABB/SIEMENS/BBL3. FILTERS – CAMFIL/THERMADYNE4. VFD DRIVE - DANFOSS / ABB5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| A | 4000 cfm 2.5" static | 4 No's |

| | | |
|----|---|---------|
| 3 | Supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box APPROVED MAKE : Cosmic / System air / carry air /Equivalent | 6 Sqm |
| 4 | Supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 6 Sqm |
| 5 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 12 Sqm |
| 6 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 6 Sqm |
| 7 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 120 RM |
| b | 1/2 inches OD | 120 RM |
| 8 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 120 Sqm |
| b | 20 Gauge | 120 Sqm |
| 9 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 120 Sqm |
| 10 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foiledcs with suitable adhesives as recommended by manufacturers. APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 120 Sqm |
| 11 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 4 Sqm |

| | | |
|----|---|-----------|
| 12 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 40 mm Dia | 80 RM |
| 13 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) (ELEC-4.1.22) | 100 RM |
| 14 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice (ELEC-9.5.45) | 800 Kg |
| 15 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 150 Sqm |
| 16 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 148.96 RM |
| | wall to wall and wall to ceiling | |
| 17 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 150 RM |
| 18 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyance of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 150 Sqm |

| | | |
|----|--|---------|
| 19 | Supply and application of poly urethane (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 300 Sqm |
| 20 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 13 Sqm |
| 21 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | 12 Sqm |
| 22 | Supply, instalation, testing and commissioning of 60 to 100 degrees F Heat Thermostat including making connections and soldering etc., complete Make: Honey Well / Johnson / Siemanes | 4 Lots |
| 23 | Supply, instalation, testing and commissioning of 0 to 100 RH presure guage Humidistate including making connections and soldering etc., complete Make: Honey Well / Johnson / Siemanes | 4 Lots |
| 24 | Supply, instalation, testing and commissioning of Pressure sensor for VFD including making connections etc., complete Make: Honey Well / Johnson / Siemanes | 4 Lots |

| | | |
|----|---|---------|
| 25 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast aluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV, THD<10%, with high power LED's having efficacy of > 120 lumens/watt, CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| | In side OT's | 24 No's |
| | Civil items | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 200 Sqm |
| b | Old cement mortar plaster | 200 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 10 Cum |
| 2 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 150 Sqm |
| 3 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 350 Sqm |
| 4 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 300 Sqm |

| | | |
|---|--|---------|
| 5 | <p>Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, etc., complete for finished item of work in all floor in all floors.</p> | |
| | Corridors | 100 Sqm |
| 6 | <p>Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, incidental, operational and all labour charges etc., complete for finished item of work in all floors..</p> | |
| | Corridors | 400 Sqm |
| 7 | <p>Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc., complete for finished item of work. (APSS No.701 & 707)</p> | |
| | Corridors | 100 Sqm |

| | | |
|---|--|--------|
| 8 | Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., complete for finished item of work. | |
| | Corridors | 100.00 |
| 9 | Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors | |
| | and SS cover plates with brass pivot and sigle piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | |
| | Corridors | 42 Sqm |
| | Electrical items | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS regid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all ccessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 200 RM |

| | | |
|---|---|---------|
| 2 | <p>Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete.</p> <p>Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> <p>Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 16 No's |
| 3 | <p>Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> <p>Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 20 No's |
| 4 | <p>Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 10 No's |
| 5 | <p>Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> | 250 RM |

| | | |
|----|--|--------|
| 6 | Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 RM |
| 7 | Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 RM |
| 8 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 RM |
| | | |
| 9 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 160 RM |
| 10 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 RM |

| | | |
|----|--|---------|
| 11 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 1 No's |
| 12 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 4 No's |
| 13 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 4 No's |
| 14 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 4 No's |
| 15 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured aluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / CMI SSR 2017-18 (ELEC-4.1.25) | 200 RM |
| 16 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangments such as saddles, clamps, wooden separators etc., (as directed by departmental official) for eath connections for the cables. | 200 RM |
| 17 | Supply and installation of 10KVA, 312V DC true on line UPS system IGBT based rectifier with input power factor correction, 32 bit micro processor based with isolation transformers , double conversion , SNMP controls, LCD Display ,Pure Sine wave output , with auto static switch, 3 phase input / 3 phase output and modular structure for better thermal technology with warranty upto 3 years.tMakes: CONSUL / Numeric / Emerson / APC . SSR 2017-18 (ELEC-11.1.9) | 4 No's |
| 18 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries 2017-18 (ELEC-11.1.13) | 4 No's |
| 19 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. 2017-18 (ELEC-11.1.15) | 80 No's |
| | Oxygen Gas Pipe lines system | |

| | | |
|---|---|--------|
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 180 RM |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 180 RM |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 180 RM |
| 4 | Supply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 180 RM |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 180 RM |

| | | |
|--|--|------------|
| 6. Name of work : Upgradation of Infrastructure for NABH accreditation at Ongole | | |
| Sub work : Modification of existing OT's (6 Nos) as per NABH Standards and Civil works in (2 Modular and 4 non-Modular) | | |
| Sl. No | Description of item | Qty |
| | Condensing units | |
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| | Nominal Capacities: | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 6 No's |
| | Air handling Units | |

| | | |
|---|---|--------|
| 2 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar/voltas/ Thosibha/Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks.</p> | |
| | <p>Fan section should be SISW direct driven plug fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Motor drive should be VFD. VFD drive should be included in AHU supply. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit APPROVED MAKE: 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY</p> | |
| a | 4000 cfm 4.5" static | 2 No's |
| 3 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber</p> | |

| | | |
|---|--|--------|
| | insulations. | |
| | <p>Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE :1. FAN – KRUGER / ZIEHL-ABEGG2. MOTORS – ABB/SIEMENS/BBL3. FILTERS – CAMFIL/THERMADYNE4. VFD DRIVE - DANFOSS / ABB5. AHU - EDGE TECH / ZRSCO/ CITIZEN/ BOOPATHY</p> | |
| a | 4000 cfm 2.5" static | 4 No's |
| 4 | <p>Ceiling suspended laminar flow work space / discharge plenum for operation rooms comprising as standard feature with HEPA filter efficiency not less than 99.97% at 0.3 Microns (Factory DOP tested), per operation room shall not be less than 3.1 sqm area with appropriate depth to accommodate absolute filters, with air flow at approx. 90-100 Fpm velocity. Size 8ft X 6ft Material of construction Shall be 1.2mm thick S S 304 Plenum with S S Perforated sheet at the bottom. Each air inlet should be supplied with Aluminium opposed blade damper . The entire plenum should be insulated with 19mm thick Al faced nitrile rubber. Bottom discharge should be perforated SS Sheet of 1.6mm with reinforcement to avoid waveviness</p> <p>APPROVED MAKE : Dyna / American Air Filter / M.K Precesion</p> | |
| | Laminar flow plenum chamber | 2 No's |
| 5 | supply and installation of powder coated linear supply air grilles/Perforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent | 8 Sqm |
| 6 | supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 8 Sqm |
| 7 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 18 Sqm |

| | | |
|----|--|----------|
| 8 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 8 Sqm |
| 9 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 200 RM |
| b | 1/2 inches OD | 200 RM |
| 9 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 450 Sqm |
| b | 20 Gauge | 450 Sqm |
| 10 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 450 Sqm |
| 11 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foileds with suitable adhesives as recommended by manufacturers.APROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 450 Sqm |
| 12 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 6 Sqm |
| 13 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 40 mm Dia | 140 Rmt |
| 14 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 180 Rmt |
| 15 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice | 1000 Kgs |
| 16 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 400 Sqm |

| | | |
|----|--|---------|
| 17 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 320 Rmt |
| | wall to wall and wall to ceiling | |
| 18 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make : Cipy / SIKHA/ARDEX/ STRIDEX /TARKET) | 200 Rmt |
| 19 | Supply and Fixing of Epoxy Flooring: Seamless with perfectly curved resistance and dynamic loads and having conductive protection characteristics, 3 mm thick, washable Epoxy flooring and Before apply epoxy apply ESD self leveling - eletrotape copper foil / Copper grounding strips (0.05 mm thick, 50mm width) is used to create ground grids for peel and stic ESD flooring and ESD matting also ESD primer,screading and topping for self leveling (Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 65 Sqm |
| 20 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyence of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 200 Sqm |
| 21 | Supply and Fixing of Pass Box SS 304 (Size: 2'*2') can be provided in operation theatre to remove waste materials from the operation theatres to Dirty linen area just adjacent to Operation Theatre. Pass Box is equipped with two doors and the door shall operate electronically. The Pass Box is designed in such a way that only one door should be opened at one time. The UV light shall be installed in chamber. Make: CZS /BLS / SS 304 Zindal | 2 No's |
| 22 | Supply and Fixing of Two Plate X-Ray Viewing Screen designed to provide a high level of control luminance without flicker. Size - 950 x 650 x 115 mm (Make : Mediconz International - Country of Origin -India , Srimodular / CZS / Altos) | 2 No's |
| 23 | Supply and Fixing of Writing Board of size 950 x 650 x 75 mm with 50 mm thick and consealed in wall panelling (Make : CZS /BLS / Altos / Srimodular / Mediconz or equavalent) | 2 No's |
| 24 | Supply and application of poly urethene (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 410 Sqm |

| | | |
|----|---|--------|
| 25 | <p>Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door</p> | 20 Sqm |
| 26 | <p>Supply and Fixing of Surgucal Scrub: Surgical scrub sink should be designed for use in OT complex providing Surgeons with a convenient sink for pre – OT scrub up. Each fixture should be fabricated with 18 SWG gauge type 304 stainless steel and should be seamless welded construction, polished to a stain finish. The scrub sink should be provided with a water controlled value, waste connections, stoppers and strainers. 4 Feet Length and 3 Feet High with 2 Foot operated and 2 elbow taps should be there. Make : Zindal/ Tata</p> | 2 No's |
| 27 | <p>Supply and Fixing of Surgeon Double Arm Pendant - Comprising of</p> <ul style="list-style-type: none"> - 1 x Arm 800 & 1 x Arm 800 having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 750 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar), 1xAir(7bar), 1xN2O, 1xCO2, Provision for CO2 Data & A/V 2 nos.) <p>Make : Meditech / Altos / Aravali / Digiline or Equqalent)</p> | 2 No's |

| | | |
|------------------------|---|--------|
| 28 | Supply and Fixing of Anesthesia Single Arm Pendant - Comprising of - 1 x Arm 800 mm having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 600 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar),1xAir 7 Bar,1x N20 , Provision for AGSS, Data & A/V 2 nos.) (Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 2 No's |
| V - FIRE EXTINGUISHERS | | |
| 29 | OT Distribution Board:DB for controlling Inside OT Surgeon Panel,X-Ray View Panel,Writiong Board and LED Lights and its consisting of:2 Pole - Incomer MCB - 32A - 1 NoSingle Pole MCB-16A-14 NosTransformer 0-18V/3A - 1 NosEarth Connectrors for Earth (10Nos),Nutral (10Nos) and Control Panel Supply(14Nos)Relays for on - Off Switch - 1 NosMake: Siemens/ BLS / CZS | 2 No's |
| 30 | Supply and Fixing of Surgeon Control Panel mounted flush in the theatre wall, comprising of the following: 1 No. Day Time Clock 1 No. Elapse Time Clock 1 Set dimmer for peripheral/ planair lights 1 No. hands free telephone 1 No. Medical Gas status/ alarm 1 set indicator only for temperature and humidity display Size - 650 x 650 x 115 mm (Make :Altos/Mercury/Arivali/ Digiline) | 2 No's |
| 31 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | 24 Sqm |
| 32 | Supply Instalation, testing and commissioning of 60 to 100 degrees F heat Thermostat including making connections and soldering etc, complete. Make: Honey Well / Johnson / Siemanes | 4 Lot |
| 33 | Supply, Instalation, testing and commissioning of 0 to 100 RH pressure guage Humidistate including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 4 Lot |
| 34 | Supply, Instalation, testing and commissioning of Pressure sensor for VDF including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 6 Lot |

| | | |
|----|--|---------|
| 35 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast aluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV,THD<10%, with high power LED's having efficacy of > 120 lumens/watt,CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| | In side OT's | 42 No's |
| | Electrical items | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS rigid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all accessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 120 Rmt |
| 2 | Supply of ISI 32mm width and 12.5mm height Casing and Capping. Makes: Any ISI make | 600 Rmt |
| 3 | Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building) Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 120 Pts |
| 4 | Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 20 No's |

| | | |
|---|--|---------|
| 5 | Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 85 No's |
| 6 | Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 80 No's |
| 7 | Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 1200 |
| 8 | Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 800 Rmt |
| 9 | Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 800 Rmt |

| | | |
|----|---|----------|
| 10 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 1600 Rmt |
| 11 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 400 Rmt |
| 12 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 500 Rmt |
| 13 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 8 No's |
| 14 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 8 No's |
| 15 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 8 No's |
| 16 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 8 No's |

| | | |
|----------------------------------|--|---------|
| 17 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured aluminium cable as per specification conforming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI / Gloster / Polycab / CMI | 600 Rmt |
| 18 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangements such as saddles, clamps, wooden separators etc., (as directed by departmental official) for each connections for the cables. | 600 Rmt |
| 19 | Supply and installation of 5KVA, 180/192V DC true on line UPS system IGBT technology pure sine wave out put, double conversion with auto and manual static by pass switch single phase input / single phase output .tMakes: CONSUL / power one / Numeric / Emerson / APC . | 8 No's |
| 20 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries | 8 No's |
| 21 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. | 80 No's |
| Oxygen Pipe lines systems | | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360 Rmt |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360 Rmt |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360 Rmt |
| 4 | Supply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360 Rmt |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 360 Rmt |

| | | |
|--|---|-----------------|
| Name of work : Upgradation of Infrastructure for NABH accreditation at Ongole | | |
| Sub work : Modification of existing OT's (6 Nos) as per NABH Standards and Civil works in (2 Modular and 4 non-Modular) | | |
| Sl. No | Description of item | Quantity |
| Civil items | | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , | |

| | | |
|---|---|---------|
| | etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 650 Sqm |
| b | Old cement mortar plaster | 550 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 15 Cum |
| 2 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 300 Sqm |
| 3 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 350 Sqm |
| 4 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 432 Sqm |
| 7 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, complete for finished item of work in all floor in all floors. | 400 Sqm |

| | | |
|----|---|---------|
| 8 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, complete for finished item of work in all floors.. | 800 Sqm |
| 9 | Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc.,and complete for finished item of work. (APSS No.701 & 707) | 400 Sqm |
| 10 | Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., complete for finished item of work. | 400 Sqm |
| 11 | Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors | |

| | | |
|--|---|--------|
| | and SS cover plates with brass pivot and single piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | 85 Sqm |
|--|---|--------|

| 7. Name of work : Upgradation of Infrastructure for NABH accreditation at Vijayawada | | |
|--|--|-----------------|
| Sub work : Modification of existing OT's (2 Nos)as per NABH Standards and Civil works in (1 Modular and 1 non-Modular) in New GGH | | |
| Detailed Estimate | | |
| Sl. No | Description of item | Quantity |
| Condensing units | | |
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| Nominal Capacities: | | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 2 No's |
| Air handling Units | | |

| | | |
|---|---|--------|
| 2 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar/voltas/ Thosibha/Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks.</p> | |
| | <p>Fan section should be SISW direct driven plug fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Motor drive should be VFD. VFD drive should be included in AHU supply. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE:</p> <ol style="list-style-type: none"> 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 4.5" static | 1 No's |

| | | |
|---|--|--------|
| 3 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations.</p> | |
| | <p>Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE :</p> <ol style="list-style-type: none"> 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 2.5" static | 1 No's |
| 4 | <p>Ceiling suspended laminar flow work space / discharge plenum for operation rooms comprising as standard feature with HEPA filter efficiency not less than 99.97% at 0.3 Microns (Factory DOP tested), per operation room shall not be less than 3.1 sqm area with appropriate depth to accommodate absolute filters, with air flow at approx. 90-100 Fpm velocity. Size 8ft X 6ft Material of construction Shall be 1.2mm thick S S 304 Plenum with S S Perforated sheet at the bottom. Each air inlet should be supplied with Aluminium opposed blade damper . The entire plenum should be insulated with 19mm thick Al faced nitrile rubber. Bottom discharge should be perforated SS Sheet of 1.6mm with reinforcement to avoid waviness</p> <p>APPROVED MAKE : Dyna / American Air Filter / M.K Precesion</p> | |
| | Laminar flow plenum chamber | 1 No's |

| | | |
|----|--|--------|
| 5 | supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent | 5 No's |
| 6 | supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 5 Sqm |
| 7 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 6 Sqm |
| 8 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 5 Sqm |
| 9 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 60 RM |
| b | 1/2 inches OD | 60 RM |
| 10 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 60 Sqm |
| b | 20 Gauge | 60 Sqm |
| 11 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 60 Sqm |
| 12 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foilceds with suitable adhesives as recommended by manufacturers. APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 60 Sqm |
| 13 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 2 Sqm |
| 14 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 40 mm Dia | 60 Rmt |
| 15 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 50 Rmt |

| | | |
|----|--|---------|
| 16 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice | 400 Kgs |
| 17 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 150 Sqm |
| 18 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 90 Rmt |
| | wall to wall and wall to ceiling | |
| 19 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make : Cipy / SIKHA/ ARDEX/ STRIDEX /TARKET) | 40 Rmt |
| 20 | Supply and Fixing of Epoxy Flooring: Seamless with perfectly curved resistance and dynamic loads and having conductive protection characteristics, 3 mm thick, washable Epoxy flooring and Before apply epoxy apply ESD self leveling - eletrotape copper foil / Copper grounding strips (0.05 mm thick, 50mm width) is used to create ground grids for peel and stic ESD flooring and ESD matting also ESD primer,screading and topping for self leveling (Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 40 Sqm |
| 21 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyence of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 40 Sqm |
| 22 | Supply and Fixing of Pass Box SS 304 (Size: 2'*2') can be provided in operation theatre to remove waste materials from the operation theatres to Dirty linen area just adjacent to Operation Theatre. Pass Box is equipped with two doors and the door shall operate electronically. The Pass Box is designed in such a way that only one door should be opened at one time. The UV light shall be installed in chamber. Make: CZS /BLS / SS 304 Zindal | 1 No's |

| | | |
|----|--|--------|
| 23 | Supply and Fixing of Two Plate X-Ray Viewing Screen designed to provide a high level of control luminance without flicker. Size - 950 x 650 x 115 mm (Make : Mediconz International - Country of Origin - India , Srimodular / CZS / Altos) | 1 No's |
| 24 | Supply and Fixing of Writing Board of size 950 x 650 x 75 mm with 50 mm thick and consealed in wall panelling (Make : CZS /BLS / Altos / Srimodular / Mediconz or equavalent) | 1 No's |
| 25 | Supply and application of poly urethene (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 75 Sqm |
| 26 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 7 Sqm |
| 27 | Supply and Fixing of Surgucal Scrub: Surgical scrub sink should be designed for use in OT complex providing Surgeons with a convenient sink for pre – OT scrub up. Each fixture should be fabricated with 18 SWG gauge type 304 stainless steel and should be seamless welded construction, polished to a stain finish. The scrub sink should be provided with a water controlled value, waste connections, stoppers and strainers. 4 Feet Length and 3 Feet High with 2 Foot operated and 2 elbow taps should be there. Make : Zindal/ Tata | 1 No's |
| 28 | Supply and Fixing of Surgeon Double Arm Pendant - Comprising of- 1 x Arm 800 & 1 x Arm 800 having a- 1 x drop tube having a carrying capacity of maximumload of 80 kg-Rotation of 330 deg.- 1 x Basic Console - 750 mm- 1 x Fixed shelf (350x350x50 mm)- 1 x Adjustable shelf (350x350x50mm)- 6 x Mains Socket (5/15Amp)- 6 x Medical Gas Terminal & Hose Assembly(2 x Oxy, 2xVac, 1xAir(4bar), 1xAir(7bar), 1xN2O, 1xCO2,Provision for CO2 Data & A/V 2 nos.)Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 1 No's |

| | | |
|----|---|--------|
| 29 | Supply and Fixing of Anesthesia Single Arm Pendant - Comprising of - 1 x Arm 800 mm having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 600 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar),1xAir 7 Bar,1x N20 , Provision for AGSS, Data & A/V 2 nos.) (Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 1 No's |
| | V - FIRE EXTINGUISHERS | |
| 30 | OT Distribution Board: DB for controlling Inside OT Surgeon Panel,X-Ray View Panel,Writing Board and LED Lights and its consisting of: 2 Pole - Incomer MCB - 32A - 1 No Single Pole MCB-16A-14 Nos Transformer 0-18V/3A - 1 Nos Earth Connectrors for Earth (10Nos),Nutral (10Nos) and Control Panel Supply(14Nos) Relays for on - Off Switch - 1 Nos Make: Siemens/ BLS / CZS | 1 No's |
| 31 | Supply and Fixing of Surgeon Control Panel mounted flush in the theatre wall, comprising of the following: 1 No. Day Time Clock 1 No. Elapse Time Clock 1 Set dimmer for peripheral/ planair lights 1 No. hands free telephone 1 No. Medical Gas status/ alarm 1 set indicator only for temperature and humidity display Size - 650 x 650 x 115 mm (Make :Altos/Mercury/Arivali/ Digiline) | 1 No's |
| 32 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equavalent | 6 Sqm |
| 33 | Supply, instalaltion, testing and commissioning of 60 to 100 degrees F Heat Thermostat including making connections and soldering etc., completeMake: Honey Well / Johnson / Siemanes | 2 Lot |
| 34 | Supply, instalaltion, testing and commissioning of 0 to 100 RH presure guage Humidistate including making connections and soldering etc., complete Make: Honey Well / Johnson / Siemanes | 2 Lot |

| | | |
|----|--|---------|
| 35 | Supply, instalaltion, testing and commissioning of Pressure sensor for VFD including making connections etc., complete Make: Honey Well / Johnson / Siemanes | 2 Lot |
| 36 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast aluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV,THD<10%, with high power LED's having efficacy of > 120 lumens/watt,CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| | In side OT's | 12 No's |
| | Civil items | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 50 Sqm |
| b | Old cement mortar plaster | 50 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 5 Cum |
| 2 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) First Floor | 75 Sqm |
| 3 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) First Floor | 100 Sqm |

| | | |
|---|---|---------|
| 4 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 75 Sqm |
| 5 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, overheads & contractor profit etc., complete for finished item of work in all floor in all floors. | |
| | Corridors | 50 Sqm |
| 6 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors.. | |
| | Corridors | 200 Sqm |

| | | |
|---|--|--------|
| 7 | Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc.,and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707) : First floor | |
| | Corridors | 50 Sqm |
| 8 | Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., and overheads & contractors profit complete for finished item of work. First Floor | |
| | Corridors | 50 Sqm |
| 9 | Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors | |

| | | |
|---|--|--------|
| | and SS cover plates with brass pivot and sigle piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., including overheads & contractors profit complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | |
| | Corridors | 21 Sqm |
| | Electrical items | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS regid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all ccessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 40 Rmt |
| 2 | Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building) Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 20 Pts |
| 3 | Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specificationflexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 4 No's |

| | | |
|---|--|--------|
| 4 | Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 8 No's |
| 5 | Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 8 No's |
| 6 | Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 7 | Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 8 | Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |

| | | |
|----|---|--------|
| 9 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 10 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 11 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 12 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, masonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 1 No's |
| 13 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 2 No's |
| 14 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 2 No's |
| 15 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 1 No's |

| | | |
|----------------------------------|---|---------|
| 16 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / CMI | 100 Rmt |
| 17 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangments such as saddles, clamps, wooden separators etc., (as directed by departmental official) for eath connections for the cables. | 100 Rmt |
| 18 | Supply and installation of 5KVA, 180/192V DC true on line UPS system IGBT technology pure sine wave out put, double conversion with auto and manual static by pass switch single phase input / single phase output .tMakes: CONSUL / power one / Numeric / Emerson / APC . | 2 No's |
| 19 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries | 2 No's |
| 20 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. | 40 No's |
| Oxygen Pipe lines systems | | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work. Make : Mexflow | 90 Rmt |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 90 Rmt |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 90 Rmt |
| 4 | SSupply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 90 Rmt |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work. Make : Mexflow | 90 Rmt |

| | | |
|--|----------------------------|-----------------|
| 8. Name of the Work : Upgradation of Infrastructure of NABH Accreditation at Govt. Victoria Hospital, Visakhapatnam | | |
| Sub work : Modification of existing OT's (1 No) as per NABH Standards and Civil works in (1 No. Non-Modular) | | |
| Detailed Estimate | | |
| Sl. No | Description of item | Quantity |
| | Condensing units | |

| | | |
|---|---|------|
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| | Nominal Capacities: | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 1 No |
| | Air handling Units | |
| 2 | SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. | |
| | Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers.The AHu package should include Electronic expansion valves compatable to condensing units, Temperature sensor/controller compatable to inverter drive, communication cables from AHU to condensing unit APPROVED MAKE : 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 2.5" static | 1 No |

| | | |
|----|--|--------|
| 3 | supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box.APPROVED MAKE : Cosmic / System air / carry air /Equivalent | 2 Sqm |
| 4 | supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 2 Sqm |
| 5 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 3 Sqm |
| 6 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 2 Sqm |
| 7 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 30 Rm |
| b | 1/2 inches OD | 30 Rm |
| 8 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 30 Sqm |
| b | 20 Gauge | 30 Sqm |
| 9 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 30 Sqm |
| 10 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foiled with suitable adhesives as recommended by manufacturers. APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 30 Sqm |
| 11 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 1 Sqm |
| 12 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 40 mm Dia | 20 Rmt |

| | | |
|----|--|---------|
| 13 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 25 Rmt |
| 14 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice | 200 Kgs |
| 15 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 40 Sqm |
| 16 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 25 Rmt |
| | wall to wall and wall to ceiling | |
| 17 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make : Cipy / SIKHA/ ARDEX/ STRIDEX /TARKET) | 40 Rmt |
| 18 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyance of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 40 Sqm |
| 19 | Supply and application of poly urethane (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 80 Sqm |

| | | |
|-------------------------------|--|-------|
| 20 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 1 Sqm |
| V - FIRE EXTINGUISHERS | | |
| 21 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | 3 Sqm |
| 22 | Supply, installation, testing and commissioning of 60 to 100 degrees F Heat Thermostat including making connections and soldering etc., complete Make: Honey Well / Johnson / Siemanes | 1 Lot |
| 23 | Supply, installation, testing and commissioning of 0 to 100 RH pressure gauge Humidistat including making connections and soldering etc., complete Make: Honey Well / Johnson / Siemanes | 1 Lot |
| 24 | Supply, installation, testing and commissioning of Pressure sensor for VFD including making connections etc., complete Make: Honey Well / Johnson / Siemanes | 1 Lot |
| 25 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast aluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV, THD<10%, with high power LED's having efficacy of > 120 lumens/watt, CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| | In side OT's | 6 Nos |
| | | |
| | Civil items | |

| | | |
|---|--|---------|
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 50 Sqm |
| b | Old cement mortar plaster | 50 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 5 Cum |
| 2 | Conveyance of un-useful excavated earth to a distance of 5 KM for disposal including hire charges of T & P, labour charges etc., complete for finished item of work. | 100 Cum |
| 3 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 40 Sqm |
| 4 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 100 Sqm |
| 5 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 80 Sqm |

| | | |
|---|---|---------|
| 6 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, overheads & contractor profit etc., complete for finished item of work in all floor in all floors. | |
| | Corridors | 25 Sqm |
| 7 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors.. | |
| | Corridors | 100 Sqm |
| 8 | Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In - Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc.,and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707) | |
| | Corridors | 25 Sqm |

| | | |
|----|---|--------|
| 9 | Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., and overheads & contractors profit complete for finished item of work. | |
| | Corridors | 25 Sqm |
| 10 | Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors | |
| | and SS cover plates with brass pivot and sigle piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., including overheads & contractors profit complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | |
| | Corridors | 11 Sqm |
| | Electrical items | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS regid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all ccessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 40 Rmt |

| | | |
|---|---|--------|
| 2 | <p>Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building)</p> <p>Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> <p>Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 20 Pts |
| 3 | <p>Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete.</p> <p>Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> <p>Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 4 Nos |
| 4 | <p>Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete.</p> <p>Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> <p>Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 8 Nos |
| 5 | <p>Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete.</p> <p>Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> <p>Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | 8 Nos |

| | | |
|----|---|--------|
| 6 | Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 7 | Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 8 | Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 9 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 10 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |

| | | |
|----|---|---------|
| 11 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 12 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 1 Nos |
| 13 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 2 Nos |
| 14 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 2 Nos |
| 15 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 1 Nos |
| 16 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / CMI | 100 Rmt |
| 17 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangments such as saddles, clamps,wooden separators etc., (as directed by departmental official) for eath connections for the cables. | 100 Rmt |

| | | |
|----------------------------------|---|--------|
| 18 | Supply and installation of 5KVA, 180/192V DC true on line UPS system IGBT technology pure sine wave out put, double conversion with auto and manual static by pass switch single phase input / single phase output .tMakes: CONSUL / power one / Numeric / Emerson / APC . | 2 Nos |
| 19 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries | 2 Nos |
| 20 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. | 40 Nos |
| Oxygen Pipe lines systems | | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 90 Rmt |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 90 Rmt |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 90 Rmt |
| 4 | SSupply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 90 Rmt |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 90 Rmt |

| | | |
|---|----------------------------|-----------------|
| Name of the work : Upgradation of Infrastructure of NABH Accreditation at Govt. Chest & ID Hospital, Visakhapatnam | | |
| Sub work : Modification of existing OT's (1 No) as per NABH Standards and Civil works in (1 No. Non-Modular) | | |
| Detailed Estimate | | |
| Sl. No | Description of item | Quantity |
| | Condensing units | |

| | | |
|---|---|-------|
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| | Nominal Capacities: | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 1 Nos |
| | Air handling Units | |
| 2 | SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. | |
| | Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers.The AHu package should include Electronic expansion valves compatable to condensing units, Temperature sensor/controller compatable to inverter drive, communication cables from AHU to condensing unit APPROVED MAKE : 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 2.5" static | 1 Nos |

| | | |
|----|--|--------|
| 3 | supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent | 2 Sqm |
| 4 | supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 2 Sqm |
| 5 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 3 Sqm |
| 6 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 2 Sqm |
| 7 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 30 Rm |
| b | 1/2 inches OD | 30 Rm |
| 8 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 30 Sqm |
| b | 20 Gauge | 30 Sqm |
| 9 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 30 Sqm |
| 10 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foiledcs with suitable adhesives as recommended by manufacturers. APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 30 Sqm |
| 11 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 1 Sqm |

| | | |
|----|--|---------|
| 12 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 40 mm Dia | 20 Rmt |
| 13 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 25 Rmt |
| 14 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice | 200 Kgs |
| 15 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 40 Sqm |
| 16 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 25 Rmt |
| | wall to wall and wall to ceiling | |
| 17 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make : Cipy / SIKHA/ ARDEX/ STRIDEX /TARKET) | 40 Rmt |
| 18 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyance of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 40 Sqm |
| 19 | Supply and application of poly urethane (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 80 Sqm |

| | | |
|-------------------------------|--|--------|
| 20 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 1 Sqm |
| V - FIRE EXTINGUISHERS | | |
| 21 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | 3 Sqm |
| 22 | Supply, installation, testing and commissioning of 60 to 100 degrees F Heat Thermostat including making connections and soldering etc., complete Make: Honey Well / Johnson / Siemanes | 1 Lot |
| 23 | Supply, installation, testing and commissioning of 0 to 100 RH pressure gauge Humidistate including making connections and soldering etc., complete Make: Honey Well / Johnson / Siemanes | 1 Lot |
| 24 | Supply, installation, testing and commissioning of Pressure sensor for VFD including making connections etc., complete Make: Honey Well / Johnson / Siemanes | 1 Lot |
| 25 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast aluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV, THD<10%, with high power LED's having efficacy of > 120 lumens/watt, CCT: 3000K - 5700K, minimum CRI>70, etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| | In side OT's | 60 Nos |
| | Civil items | |

| | | |
|---|--|---------|
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 50 Sqm |
| b | Old cement mortar plaster | 50 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 50 Cum |
| 2 | Conveyance of un-useful excavated earth to a distance of 5 KM for disposal including hire charges of T & P, labour charges etc., complete for finished item of work. | 100 Cum |
| 3 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 40 Sqm |
| 4 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 100 Sqm |
| 5 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 80 Sqm |

| | | |
|---|--|---------|
| 6 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, overheads & contractor profit etc., complete for finished item of work in all floor in all floors. | |
| | Corridors | 25 Sqm |
| 7 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors.. | |
| | Corridors | 100 Sqm |
| 8 | Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc.,and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707) | |
| | Corridors | 25 Sqm |

| | | |
|----|---|--------|
| 9 | Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., and overheads & contractors profit complete for finished item of work. | |
| | Corridors | 25 Sqm |
| 10 | Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors | |
| | and SS cover plates with brass pivot and sigle piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., including overheads & contractors profit complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | |
| | Corridors | 11 Sqm |
| | Electrical items | |

| | | |
|---|--|--------|
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS rigid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all ccessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 40 Rmt |
| 2 | Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete. (for Non Residential Building) Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM-Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 20 Pts |
| 3 | Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 4 Nos |
| 4 | Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 8 Nos |

| | | |
|---|--|--------|
| 5 | Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 8 Nos |
| 6 | Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 7 | Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 8 | Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 9 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |

| | | |
|----|---|---------|
| 10 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 11 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rmt |
| 12 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 1 Nos |
| 13 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 2 Nos |
| 14 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 2 Nos |
| 15 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 1 Nos |
| 16 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / CMI | 100 Rmt |

| | | |
|----------------------------------|---|---------|
| 17 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangements such as saddles, clamps, wooden separators etc., (as directed by departmental official) for each connections for the cables. | 100 Rmt |
| 18 | Supply and installation of 5KVA, 180/192V DC true on line UPS system IGBT technology pure sine wave out put, double conversion with auto and manual static by pass switch single phase input / single phase output .tMakes: CONSUL / power one / Numeric / Emerson / APC . | 2 Nos |
| 19 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries | 2 Nos |
| 20 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. | 40 Nos |
| Oxygen Pipe lines systems | | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 90 Rmt |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 90 Rmt |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 90 Rmt |
| 4 | Supply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 90 Rmt |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 90 Rmt |

| | | |
|---|---------------------|----------|
| 10. Name of work : Upgradation of Infrastructure for NABH Accreditation at GGH, Guntur | | |
| Sub work : Modification of existing OT's (5 Nos) (3 Modular and 2 non-modular) | | |
| Detailed Estimate | | |
| Sl. No | Description of item | Quantity |
| | Condensing units | |

| | | |
|---|--|--------|
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| | Nominal Capacities: | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 5 Nos |
| | Air handling Units | |
| 2 | SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar/voltas/ Thosibha/Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. | |
| | Fan section should be SISW direct driven plug fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Motor drive should be VFD. VFD drive should be included in AHU supply. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit APPROVED MAKE:1. FAN – KRUGER / ZIEHL-ABEGG2. MOTORS – ABB/SIEMENS/BBL3. FILTERS – CAMFIL/THERMADYNE4. VFD DRIVE - DANFOSS / ABB5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 4.5" static | 3 No's |

| | | |
|---|---|--------|
| 3 | SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. | |
| | Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers.The AHu package should include Electronic expansion valves compatable to condensing units, Temperature sensor/controller compatable to inverter drive, communication cables from AHU to condensing unit APPROVED MAKE :1. FAN – KRUGER / ZIEHL-ABEGG2. MOTORS – ABB/SIEMENS/BBL3. FILTERS – CAMFIL/THERMADYNE4. VFD DRIVE - DANFOSS / ABB5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 2.5" static | 2 No's |
| 4 | Ceiling suspended laminar flow work space / discharge plenum for operation rooms comprising as standard feature with HEPA filter efficiency not less than 99.97% at 0.3 Microns (Factory DOP tested), per operation room shall not be less than 3.1 sqm area with appropriate depth to accomodate absolute filters, with air flow at approx. 90-100 Fpm velocity. Size 8ft X 6ft Material of construction Shall be 1.2mm thick S S 304 Plenum with S S Perforated sheet at the bottom. Each air inlet should be supplied with Aluminium opposed blade damper . The entire plenum should be insulated with 19mm thick Al faced nitrile rubber. Bottom discharge should be perforated SS Sheet of 1.6mm with reinforcement to avoid waveviness APPROVED MAKE : Dyna / American Air Filter / M.K Precesion | |
| | Laminar flow plenum chamber | 3 No's |
| 5 | Supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent | 10 Sqm |

| | | |
|----|--|----------|
| 6 | Supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 10 Sqm |
| 7 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 15 Sqm |
| 8 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 10 Sqm |
| 9 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 150 Rm |
| b | 1/2 inches OD | 150 Rm |
| 10 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 150 Sqm |
| b | 20 Gauge | 150 Sqm |
| 11 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 150 Sqm |
| 12 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foileds with suitable adhesives as recommended by manufacturers. APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 150 Sqm |
| 13 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 5 Sqm |
| 14 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 40 mm Dia | 100 Rmt |
| 15 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 125 Rmt |
| 16 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice | 1000 Kgs |

| | | |
|----|--|-------------|
| 17 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 400 Sqm |
| 18 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 230 Rmt |
| | wall to wall and wall to ceiling | |
| 19 | Supply and application of epoxy coving of light green or light blue colour with SIKHA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 123.052 Rmt |
| 20 | Supply and Fixing of Epoxy Flooring: Seamless with perfectly curved resistance and dynamic loads and having conductive protection characteristics, 3 mm thick, washable Epoxy flooring and Before apply epoxy apply ESD self leveling - eletrotape copper foil / Copper grounding strips (0.05 mm thick, 50mm width) is used to create ground grids for peel and stic ESD flooring and ESD matting also ESD primer,screading and topping for self leveling (Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 110 Sqm |
| 21 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyence of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 75 Sqm |
| 22 | Supply and Fixing of Pass Box SS 304 (Size: 2'*2') can be provided in operation theatre to remove waste materials from the operation theatres to Dirty linen area just adjacent to Operation Theatre. Pass Box is equipped with two doors and the door shall operate electronically. The Pass Box is designed in such a way that only one door should be opened at one time. The UV light shall be installed in chamber. Make: CZS /BLS / SS 304 Zindal | 3 No's |
| 23 | Supply and Fixing of Two Plate X-Ray Viewing Screen designed to provide a high level of control luminance without flicker. Size - 950 x 650 x 115 mm (Make : Mediconz International - Country of Origin - India , Srimodular / CZS / Altos) | 3 No's |

| | | |
|----|--|---------|
| 24 | Supply and Fixing of Writing Board of size 950 x 650 x 75 mm with 50 mm thick and consealed in wall panelling (Make : CZS /BLS / Altos / Srimodular / Mediconz or equivalent) | 3 No's |
| 25 | Supply and application of poly urethane (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 150 Sqm |
| 26 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 16 Sqm |
| 27 | Supply and Fixing of Surgucal Scrub: Surgical scrub sink should be designed for use in OT complex providing Surgeons with a convenient sink for pre – OT scrub up. Each fixture should be fabricated with 18 SWG gauge type 304 stainless steel and should be seamless welded construction, polished to a stain finish. The scrub sink should be provided with a water controlled value, waste connections, stoppers and strainers. 4 Feet Length and 3 Feet Hight with 2 Foot operated and 2 elbow taps should be there. Make : Zindal/ Tata | 3 Nos |
| 28 | Supply and Fixing of Surgeon Double Arm Pendant - Comprising of- 1 x Arm 800 & 1 x Arm 800 having a- 1 x drop tube having a carrying capacity of maximumload of 80 kg-Rotation of 330 deg.- 1 x Basic Console - 750 mm- 1 x Fixed shelf (350x350x50 mm)- 1 x Adjustable shelf (350x350x50mm)- 6 x Mains Socket (5/15Amp)- 6 x Medical Gas Terminal & Hose Assembly(2 x Oxy, 2xVac, 1xAir(4bar), 1xAir(7bar), 1xN2O, 1xCO2,Provision for CO2 Data & A/V 2 nos.)Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 3 Nos |

| | | |
|----|---|--------|
| 29 | Supply and Fixing of Anesthesia Single Arm Pendant - Comprising of - 1 x Arm 800 mm having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 600 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar),1xAir 7 Bar,1x N20 , Provision for AGSS, Data & A/V 2 nos.) (Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 3 No's |
| 30 | OT Distribution Board: DB for controlling Inside OT Surgeon Panel,X-Ray View Panel,Writing Board and LED Lights and its consisting of: 2 Pole - Incomer MCB - 32A - 1 No Single Pole MCB-16A-14 Nos Transfamer 0-18V/3A - 1 Nos Earth Connectrors for Earth (10Nos),Nutral (10Nos) and Control Panel Supply(14Nos) Relays for on - Off Switch - 1 Nos Make: Siemens/ BLS / CZS | 3 No's |
| 31 | Supply and Fixing of Surgeon Control Panel mounted flush in the theatre wall, comprising of the following:1 No. Day Time Clock1 No. Elapse Time Clock1 Set dimmer for peripheral/ planair lights1 No. hands free telephone1 No. Medical Gas status/ alarm1 set indicator only for temperature and humidity displaySize - 650 x 650 x 115 mm (Make :Altos/Mercury/Arivali/ Digiline) | 3 No's |
| 32 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | 25 Sqm |
| 33 | Supply, instalaltion, testing and commissioning of 60 to 100 degrees F Heat Thermostat including making connections and soldering etc., complete Make: Honey Well / Johnson / Siemanes | 3 Lot |
| 34 | Supply, instalaltion, testing and commissioning of 0 to 100 RH presure guage Humidistate including making connections and soldering etc., complete Make: Honey Well / Johnson / Siemanes | 3 Lot |
| 35 | Supply, instalaltion, testing and commissioning of Pressure sensor for VFD including making connections etc., complete Make: Honey Well / Johnson / Siemanes | 2 Lot |

| | | |
|----|--|---------|
| 36 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast alluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV,THD<10%, with high power LED's having efficacy of > 120 lumens/watt,CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| | In side OT's | 30 Nos |
| | CIVIL WORKS | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 200 Sqm |
| b | Old cement mortar plaster | 200 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 10 Cum |
| 2 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 180 Sqm |
| 3 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 200 Sqm |
| 4 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 150 Sqm |

| | | |
|---|--|---------|
| 5 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, etc., complete for finished item of work in all floor in all floors. | |
| | Corridors | 125 Sqm |
| 6 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, incidental, operational and all labour charges etc., complete for finished item of work in all floors.. | |
| 7 | Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc., complete for finished item of work. (APSS No.701 & 707) | |
| | Corridors | 125 Sqm |
| 8 | Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., complete for finished item of work. | |
| | Corridors | 125 Sqm |

| | | |
|---|---|---------|
| 9 | Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors | |
| | and SS cover plates with brass pivot and sigle piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | |
| | Corridors | 55 Sqm |
| | Electrical items | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS regid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all ccessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 100 Rmt |
| 2 | Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building)Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 50 Pts |

| | | |
|---|--|---------|
| 3 | Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 10 No's |
| 4 | Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 20 No's |
| 5 | Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 10 No's |
| 6 | Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 150 Rmt |

| | | |
|----|---|---------|
| 7 | Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 8 | Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 9 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 40 Rmt |
| 10 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 75 Rmt |
| 11 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 80 Rmt |
| 12 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 1 Nos |

| | | |
|----|---|---------|
| 13 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 5 Nos |
| 14 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 5 Nos |
| 15 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 4 Nos |
| 16 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured aluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / CMI SSR 2017-18 (ELEC-4.1.25) | 200 Rmt |
| 17 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangements such as saddles, clamps, wooden separators etc., (as directed by departmental official) for eath connections for the cables. | 200 Rmt |
| 18 | Supply and installation of 5KVA, 180/192V DC true on line UPS system IGBT technology pure sine wave out put, double conversion with auto and manual static by pass switch single phase input / single phase output .tMakes: CONSUL / power one / Numeric / Emerson / APC . | 5 Nos |
| 19 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries 2017-18 (ELEC-11.1.13) | 5 Nos |
| 20 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. 2017-18 (ELEC-11.1.15) | 100 Nos |
| | Oxygen Pipe lines systems | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work. Make : Mexflow | 225 Rmt |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 225 Rmt |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 225 Rmt |

| | | |
|---|--|---------|
| 4 | Supply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 225 Rmt |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 225 Rmt |

| | | |
|--|--|-----------------|
| 11. Name of work : Upgradation of Infrastructure for NABH accreditation at Kakinada | | |
| Sub work : Modification of existing OT's (5 Nos) as per NABH Standards and Civil works in (3 Modular and 2 non-modular) | | |
| Detailed Estimate | | |
| Sl. No | Description of item | Quantity |
| Condensing units | | |
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| Nominal Capacities: | | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 5 Nos |
| b | 20HP (12TR actual capacity at 45 deg. C) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | |
| Air handling Units | | |

| | | |
|---|---|-------|
| 2 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar/voltas/ Thosibha/Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks.</p> | |
| | <p>Fan section should be SISW direct driven plug fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Motor drive should be VFD. VFD drive should be included in AHU supply. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHu package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit APPROVED MAKE: 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY</p> | |
| a | 4000 cfm 4.5" static | 3 Nos |
| 3 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber</p> | |

| | | |
|---|--|--------|
| | insulations. | |
| | <p>Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE :</p> <ol style="list-style-type: none"> 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 2.5" static | 2 Nos |
| 4 | <p>Ceiling suspended laminar flow work space / discharge plenum for operation rooms comprising as standard feature with HEPA filter efficiency not less than 99.97% at 0.3 Microns (Factory DOP tested), per operation room shall not be less than 3.1 sqm area with appropriate depth to accommodate absolute filters, with air flow at approx. 90-100 Fpm velocity. Size 8ft X 6ft Material of construction Shall be 1.2mm thick S S 304 Plenum with S S Perforated sheet at the bottom. Each air inlet should be supplied with Aluminium opposed blade damper . The entire plenum should be insulated with 19mm thick Al faced nitrile rubber. Bottom discharge should be perforated SS Sheet of 1.6mm with reinforcement to avoid waviness</p> <p>APPROVED MAKE : Dyna / American Air Filter / M.K Precision</p> | |
| | Laminar flow plenum chamber | 3 Nos |
| 5 | <p>supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent</p> | 10 Sqm |
| 6 | <p>supply and installation of powder coated return air grilles</p> <p>APPROVED MAKE : Cosmic / System air / carry air / Equivalent</p> | 10 Sqm |

| | | |
|----|--|----------|
| 7 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 5 Sqm |
| 8 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 5 Sqm |
| 9 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 150 Rm |
| b | 1/2 inches OD | 150 Rm |
| 9 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 150 Sqm |
| b | 20 Gauge | 150 Sqm |
| 10 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 150 Sqm |
| 11 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foileds with suitable adhesives as recommended by manufacturers. APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 150 Sqm |
| 12 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 7 Sqm |
| 13 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 25 mm Dia | 0 Rmt |
| | 32 mm Dia | 0 Rmt |
| | 40 mm Dia | 150 Rmt |
| 14 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 100 Rmt |
| 15 | Supply, Installation of Fresh air package consists Louvers, GI volume control damper including Bird Cowl with wiremesh along with 20 microns filter. | |
| 16 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice | 1000 Kgs |

| | | |
|----|--|---------|
| 17 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 400 Sqm |
| 18 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 230 Rmt |
| | wall to wall and wall to ceiling | |
| 31 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 75 Rmt |
| 20 | Supply and Fixing of Epoxy Flooring: Seamless with perfectly curved resistance and dynamic loads and having conductive protection characteristics, 3 mm thick, washable Epoxy flooring and Before apply epoxy apply ESD self leveling - eletrotape copper foil / Copper grounding strips (0.05 mm thick, 50mm width) is used to create ground grids for peel and stic ESD flooring and ESD matting also ESD primer,screading and topping for self leveling (Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 110 Sqm |
| 21 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyance of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 75 Sqm |
| 19 | Supply and Fixing of Pass Box SS 304 (Size: 2'*2') can be provided in operation theatre to remove waste materials from the operation theatres to Dirty linen area just adjacent to Operation Theatre. Pass Box is equipped with two doors and the door shall operate electronically. The Pass Box is designed in such a way that only one door should be opened at one time. The UV light shall be installed in chamber. Make: CZS /BLS / SS 304 Zindal | 3 Nos |
| 21 | Supply and Fixing of Two Plate X-Ray Viewing Screen designed to provide a high level of control luminance without flicker. Size - 950 x 650 x 115 mm (Make : Mediconz International - Country of Origin - India , Srimodular / CZS / Altos) | 3 Nos |

| | | |
|----|--|---------|
| 22 | Supply and Fixing of Writing Board of size 950 x 650 x 75 mm with 50 mm thick and consealed in wall panelling (Make : CZS /BLS / Altos / Srimodular / Mediconz or equavalent) | 3 Nos |
| 23 | Supply and application of poly urethene (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 150 Sqm |
| 24 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 16 Sqm |
| 25 | Supply and Fixing of Surgucal Scrub: Surgical scrub sink should be designed for use in OT complex providing Surgeons with a convenient sink for pre – OT scrub up. Each fixture should be fabricated with 18 SWG gauge type 304 stainless steel and should be seamless welded construction, polished to a stain finish. The scrub sink should be provided with a water controlled value, waste connections, stoppers and strainers. 4 Feet Length and 3 Feet Hight with 2 Foot operated and 2 elbow taps should be there. Make : Zindal/ Tata | 3 Nos |
| 26 | Supply and Fixing of Surgeon Double Arm Pendant - Comprising of - 1 x Arm 800 & 1 x Arm 800 having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 750 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar), 1xAir(7bar), 1xN2O, 1xCO2, Provision for CO2 Data & A/V 2 nos.) Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 3 Nos |

| | | |
|------------------------|--|-------|
| 27 | <p>Supply and Fixing of Anesthesia Single Arm Pendant - Comprising of</p> <ul style="list-style-type: none"> - 1 x Arm 800 mm having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 600 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar),1xAir 7 Bar,1x N20 , Provision for AGSS, Data & A/V 2 nos.) <p>(Make : Meditech / Altos / Aravali / Digiline or Equqalent)</p> | 3 Nos |
| V - FIRE EXTINGUISHERS | | |
| 28 | <p>Supply and fixing of ISI mark (IS:15683) Mono ammonium phosphate powder 90 (MAP) 6 Kg Fire extinguisher, stored pressure type, pressure gauge, gross wt. 9.4 kg, empty wt.3.4 kg, Discharge time minimum 13 sec, controllable discharge mechanism, range min. 4 mts applicable on classes A,B, C & electrically started fire, A rating - 4 A, B rating -34 B, can construction: Deep drawn and Co2 mig welding, Valve construction: Forging & Machining, internal coating of can: Epoxy powder coating, External coating of Can:Epoxy polyester powder coating, sheet metal thickness:1.60mm, Helium leak detection tested with 5 years warranty Including transportation, all taxes and all labour charges etc complete. Makes: Safex / Kenex / Bharat / Reliance. (SSR - 17-18 - 9.4.8)</p> | 0 Nos |
| 29 | <p>OT Distribution Board: DB for controlling Inside OT Surgeon Panel,X-Ray View Panel,Writing Board and LED Lights and its consisting of: 2 Pole - Incomer MCB - 32A - 1 No Single Pole MCB-16A-14 Nos Transformer 0-18V/3A - 1 Nos Earth Connectrors for Earth (10Nos),Nutral (10Nos) and Control Panel Supply(14Nos) Relays for on - Off Switch - 1 Nos Make: Siemens/ BLS / CZS</p> | 3 Nos |
| 30 | <p>Supply and Fixing of Surgeon Control Panel mounted flush in the theatre wall, comprising of the following: 1 No. Day Time Clock 1 No. Elapse Time Clock 1 Set dimmer for peripheral/ planair lights 1 No. hands free telephone 1 No. Medical Gas status/ alarm 1 set indicator only for temperature and humidity display Size - 650 x 650 x 115 mm (Make :Altos/Mercury/Arivali/ Digiline)</p> | 3 Nos |

| | | |
|----|--|---------|
| 31 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | 25 Sqm |
| 32 | Thermostatrs | 3 Lot |
| 33 | Humidistate | 3 Lot |
| 34 | Pressure sensor | 2 Lot |
| 32 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast aluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV,THD<10%, with high power LED's having efficacy of > 120 lumens/watt,CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| | In side OT's | 30 Nos |
| | Civil items | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 200 Sqm |
| b | Old cement mortar plaster | 200 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 10 Cum |
| 2 | Conveyance of un-useful excavated earth to a distance of 5 KM for disposal including hire charges of T & P, labour charges etc., complete for finished item of work. | 0 Cum |
| 3 | Plain Cement Concrete (1:5:10) (cement: fine aggregate: Coarse aggregate) for foundations and under flooring bed using coarse aggregate 20mm size hard , machine crushed granite from approved quarry including cost and conveyance of all materials like cement, sand, coarse aggregate, water etc. to site, sales & other taxes on all materials and including all charges for machine mixing, laying concrete in foundations and under flooring bed, ramming in 15 cm layers finishing top surface to the required level curing etc.,and complete for finished item of work. (APSS No. 402) | 0 Cum |
| 4 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 180 Sqm |

| | | |
|---|---|---------|
| 5 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 200 Sqm |
| 6 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 150 Sqm |
| 7 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, overheads & contractor profit etc., complete for finished item of work in all floor in all floors. | |
| | Corridors | 125 Sqm |
| 8 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors.. | |
| | Corridors | 500 Sqm |

| | | |
|----|--|---------|
| 9 | Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc.,and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707) | |
| | Corridors | 125 Sqm |
| 10 | Flooring with Non-skid red or white full body Ceramic floor tiles of size 300 x 300 mm and thickness between 7-8 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs as approved by Engineer-in-charge, set over base coat of cement mortar (1:8), 12mm thick using screened sand over CC bed already laid or RCC roof slab, including neat cement slurry of honey like consistency spread @ 3.3 Kgs per sqm & jointed neatly with white cement paste to full depth mixed with pigment of matching shade, including cost of all materials like cement, screened sand , water and tiles etc., and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707) | |
| | Corridors | 125 Sqm |
| 11 | Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors | |

| | | |
|---|--|---------|
| | and SS cover plates with brass pivot and sigle piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., including overheads & contractors profit complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | |
| | Corridors | 52 Sqm |
| | Electrical items | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS regid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all ccessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 100 Rmt |
| 2 | Supply of ISI 32mm width and 12.5mm height Casing and Caping. Makes: Any ISI make | 0 |
| 3 | Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building) Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 50 Pts |
| 4 | Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specificationflexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 10 Nos |

| | | |
|---|--|---------|
| 5 | Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 20 Nos |
| 6 | Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 20 Nos |
| 7 | Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 8 | Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 9 | Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |

| | | |
|----|---|---------|
| 10 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 11 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 12 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 13 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 1 No |
| 14 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 5 Nos |
| 15 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 5 Nos |
| 16 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 3 Nos |

| | | |
|----|---|---------|
| 17 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / CMI | 200 Rmt |
| 18 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangments such as saddles, clamps, wooden separators etc., (as directed by departmental official) for eath connections for the cables. | 200 Rmt |
| 19 | Supply and installation of 5KVA, 180/192V DC true on line UPS system IGBT technology pure sine wave out put, double conversion with auto and manual static by pass switch single phase input / single phase output .tMakes: CONSUL / power one / Numeric / Emerson / APC . | 5 Nos |
| 20 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries | 5 Nos |
| 21 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. | 100 Nos |
| | Oxygen Pipe lines systems | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work. Make : Mexflow | 225 Rmt |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 225 Rmt |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 225 Rmt |
| 4 | SSupply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work.Make : Mexflow | 225 Rmt |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for funished item of work. Make : Mexflow | 225 Rmt |

Name of work : Upgradation of Infrastructure for NABH accreditation at Kakinada

Sub work : Modification of existing OT's (5 Nos)as per NABH Standards and Civil works in (3 Modular and 2 non-modular)

Detailed Estimate

| Sl. No | Description of item | Quantity |
|---------------|----------------------------|-----------------|
| | Condensing units | |

| | | |
|---|--|-------|
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| | Nominal Capacities: | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 5 Nos |
| b | 20HP (12TR actual capacity at 45 deg. C) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | |
| | Air handling Units | |
| 2 | SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar/voltas/ Thosibha/Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. | |
| | Fan section should be SISW direct driven plug fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Motor drive should be VFD. VFD drive should be included in AHU supply. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHu package should include Electronic expansion valves compatable to condensing units, Temperature sensor/controller compatable to inverter drive, communication cables from AHU to condensing unit APPROVED MAKE: 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |

| | | |
|---|---|-------|
| a | 4000 cfm 4.5" static | 3 Nos |
| 3 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations.</p> <p>Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE :</p> <ol style="list-style-type: none"> 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 2.5" static | 2 Nos |
| 4 | <p>Ceiling suspended laminar flow work space / discharge plenum for operation rooms comprising as standard feature with HEPA filter efficiency not less than 99.97% at 0.3 Microns (Factory DOP tested), per operation room shall not be less than 3.1 sqm area with appropriate depth to accommodate absolute filters, with air flow at approx. 90-100 Fpm velocity. Size 8ft X 6ft Material of construction Shall be 1.2mm thick S S 304 Plenum with S S Perforated sheet at the bottom. Each air inlet should be supplied with Aluminium opposed blade damper . The entire plenum should be insulated with 19mm thick Al faced nitrile rubber. Bottom discharge should be perforated SS Sheet of 1.6mm with reinforcement to avoid waviness</p> <p>APPROVED MAKE : Dyna / American Air Filter / M.K Precesion</p> | |
| | Laminar flow plenum chamber | 3 Nos |

| | | |
|----|--|---------|
| 5 | supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent | 10 Sqm |
| 6 | supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 10 Sqm |
| 7 | Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 5 Sqm |
| 8 | Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent | 5 Sqm |
| 9 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 150 Rm |
| b | 1/2 inches OD | 150 Rm |
| 9 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 150 Sqm |
| b | 20 Gauge | 150 Sqm |
| 10 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 150 Sqm |
| 11 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foileds with suitable adhesives as recommended by manufacturers. APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 150 Sqm |
| 12 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 7 Sqm |
| 13 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 25 mm Dia | 0 Rmt |
| | 32 mm Dia | 0 Rmt |
| | 40 mm Dia | 150 Rmt |
| 14 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 100 Rmt |
| 15 | Supply, Installation of Fresh air package consists Louvers, GI volume control damper including Bird Cowl with wiremesh along with 20 microns filter. | |

| | | |
|----|--|----------|
| 16 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice | 1000 Kgs |
| 17 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 400 Sqm |
| 18 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 230 Rmt |
| | wall to wall and wall to ceiling | |
| 31 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 75 Rmt |
| 20 | Supply and Fixing of Epoxy Flooring: Seamless with perfectly curved resistance and dynamic loads and having conductive protection characteristics, 3 mm thick, washable Epoxy flooring and Before apply epoxy apply ESD self leveling - eletrotape copper foil / Copper grounding strips (0.05 mm thick, 50mm width) is used to create ground grids for peel and stic ESD flooring and ESD matting also ESD primer,screading and topping for self leveling (Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 110 Sqm |
| 21 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyence of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | 75 Sqm |
| 19 | Supply and Fixing of Pass Box SS 304 (Size: 2'*2') can be provided in operation theatre to remove waste materials from the operation theatres to Dirty linen area just adjacent to Operation Theatre. Pass Box is equipped with two doors and the door shall operate electronically. The Pass Box is designed in such a way that only one door should be opened at one time, The UV light shall be installed in chamber. Make: CZS /BLS / SS 304 Zindal | 3 Nos |

| | | |
|----|--|---------|
| 21 | Supply and Fixing of Two Plate X-Ray Viewing Screen designed to provide a high level of control luminance without flicker. Size - 950 x 650 x 115 mm (Make : Mediconz International - Country of Origin - India , Srimodular / CZS / Altos) | 3 Nos |
| 22 | Supply and Fixing of Writing Board of size 950 x 650 x 75 mm with 50 mm thick and consealed in wall panelling (Make : CZS /BLS / Altos / Srimodular / Mediconz or equivalent) | 3 Nos |
| 23 | Supply and application of poly urethane (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 150 Sqm |
| 24 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 16 Sqm |
| 25 | Supply and Fixing of Surgucal Scrub: Surgical scrub sink should be designed for use in OT complex providing Surgeons with a convenient sink for pre – OT scrub up. Each fixture should be fabricated with 18 SWG gauge type 304 stainless steel and should be seamless welded construction, polished to a stain finish. The scrub sink should be provided with a water controlled value, waste connections, stoppers and strainers. 4 Feet Length and 3 Feet Hight with 2 Foot operated and 2 elbow taps should be there. Make : Zindal/ Tata | 3 Nos |

| | | |
|------------------------|--|-------|
| 26 | Supply and Fixing of Surgeon Double Arm Pendant - Comprising of - 1 x Arm 800 & 1 x Arm 800 having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 750 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar), 1xAir(7bar), 1xN2O, 1xCO2, Provision for CO2 Data & A/V 2 nos.) Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 3 Nos |
| 27 | Supply and Fixing of Anesthesia Single Arm Pendant - Comprising of - 1 x Arm 800 mm having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 600 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar),1xAir 7 Bar,1x N20 , Provision for AGSS, Data & A/V 2 nos.) (Make : Meditech / Altos / Aravali / Digiline or Equqalent) | 3 Nos |
| V - FIRE EXTINGUISHERS | | |
| 28 | Supply and fixing of ISI mark (IS:15683) Mono ammonium phosphate powder 90 (MAP) 6 Kg Fire extinguisher, stored pressure type, pressure gauge, gross wt. 9.4 kg, empty wt.3.4 kg, Discharge time minimum 13 sec, controllable discharge mechanism, range min. 4 mts applicable on classes A,B, C & electrically started fire, A rating - 4 A, B rating -34 B, can construction: Deep drawn and Co2 mig welding, Valve construction: Forging & Machining, internal coating of can: Epoxy powder coating, External coating of Can:Epoxy polyster powder coating, sheet metal thickness:1.60mm, Helium leak detection tested with 5 years warranty Including transportation, all taxes and all labour charges etc complete. Makes: Safex / Kenex / Bharat / Reliance. (SSR - 17-18 - 9.4.8) | 0 Nos |
| 29 | OT Distribution Board: DB for controlling Inside OT Surgeon Panel,X-Ray View Panel,Writing Board and LED Lights and its consisting of: 2 Pole - Incomer MCB - 32A - 1 No Single Pole MCB-16A-14 Nos Transfarmer 0-18V/3A - 1 Nos Earth Connectrors for Earth (10Nos),Nutral (10Nos) and Control Panel Supply(14Nos) Relays for on - Off Switch - 1 Nos Make: Siemens/ BLS / CZS | 3 Nos |

| | | |
|----|--|---------|
| 30 | Supply and Fixing of Surgeon Control Panel mounted flush in the theatre wall, comprising of the following: 1 No. Day Time Clock 1 No. Elapse Time Clock 1 Set dimmer for peripheral/ planair lights 1 No. hands free telephone 1 No. Medical Gas status/ alarm 1 set indicator only for temperature and humidity display Size - 650 x 650 x 115 mm (Make :Altos/Mercury/Arivali/ Digiline) | 3 Nos |
| 31 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | 25 Sqm |
| 32 | Thermostatrs | 3 Lot |
| 33 | Humidistate | 3 Lot |
| 34 | Pressure sensor | 2 Lot |
| 32 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast aluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV,THD<10%, with high power LED's having efficacy of > 120 lumens/watt,CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| | In side OT's | 30 Nos |
| | Civil items | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 200 Sqm |
| b | Old cement mortar plaster | 200 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 10 Cum |
| 2 | Conveyance of un-useful excavated earth to a distance of 5 KM for disposal including hire charges of T & P, labour charges etc., complete for finished item of work. | 0 Cum |
| 3 | Plain Cement Concrete (1:5:10) (cement: fine aggregate: Coarse aggregate) for foundations and under flooring bed using coarse aggregate 20mm size hard , machine crushed granite from approved quarry including cost and conveyance of all materials like cement, sand, coarse aggregate, water etc. to site, sales & other taxes on all materials and including all charges for machine mixing, laying concrete in foundations and under flooring bed, ramming in 15 cm layers finishing top surface to the required level curing | 0 Cum |

| | | |
|---|---|---------|
| | etc.,and complete for finished item of work. (APSS No. 402) | |
| 4 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 180 Sqm |
| 5 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 200 Sqm |
| 6 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 150 Sqm |
| 7 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, overheads & contractor profit etc., complete for finished item of work in all floor in all floors. | |

| | | |
|----|---|---------|
| | Corridors | 125 Sqm |
| 8 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors.. | |
| | Corridors | 500 Sqm |
| 9 | Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab, including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc.,and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707) | |
| | Corridors | 125 Sqm |
| 10 | Flooring with Non-skid red or white full body Ceramic floor tiles of size 300 x 300 mm and thickness between 7-8 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs as approved by Engineer-in-charge, set over base coat of cement mortar (1:8), 12mm thick using screened sand over CC bed already laid or RCC roof slab, including neat cement slurry of honey like consistency spread @ 3.3 Kgs per sqm & jointed neatly with white cement paste to full depth mixed with pigment of matching shade, including cost of all materials like cement, screened sand, water and tiles etc., and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707) | |
| | Corridors | 125 Sqm |

| | | |
|----|---|---------|
| 11 | Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors | |
| | and SS cover plates with brass pivot and sigle piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., including overheads & contractors profit complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | |
| | Corridors | 52 Sqm |
| | Electrical items | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS regid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all ccessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 100 Rmt |
| 2 | Supply of ISI 32mm width and 12.5mm height Casing and Caping. Makes: Any ISI make | 0 |
| 3 | Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building) Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 50 Pts |

| | | |
|---|--|---------|
| 4 | Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 10 Nos |
| 5 | Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 20 Nos |
| 6 | Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 20 Nos |
| 7 | Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 8 | Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |

| | | |
|----|---|---------|
| 9 | Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 10 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 11 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 12 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Rmt |
| 13 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, masonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 1 No |
| 14 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 5 Nos |

| | | |
|----|--|---------|
| 15 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 5 Nos |
| 16 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 3 Nos |
| 17 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured aluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / CMI | 200 Rmt |
| 18 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangements such as saddles, clamps, wooden separators etc., (as directed by departmental official) for eath connections for the cables. | 200 Rmt |
| 19 | Supply and installation of 5KVA, 180/192V DC true on line UPS system IGBT technology pure sine wave out put, double conversion with auto and manual static by pass switch single phase input / single phase output .tMakes: CONSUL / power one / Numeric / Emerson / APC . | 5 Nos |
| 20 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries | 5 Nos |
| 21 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. | 100 Nos |
| | Oxygen Pipe lines systems | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 225 Rmt |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work.Make : Mexflow | 225 Rmt |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work.Make : Mexflow | 225 Rmt |
| 4 | SSupply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work.Make : Mexflow | 225 Rmt |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 225 Rmt |

| |
|---|
| 12. Name of work : Upgradation of Infrastructure for NABH accreditation at KGH, Visakhapatnam |
| Sub work : Modification of existing OT's (8 Nos)as per NABH Standards and Civil works in CSSD in KGH, Visakhapatnam (3 Nos - Modular and 5 Nos Non- Madular) |

| Detailed Estimate | | | | | | | | |
|----------------------------|--|--------------|---|---|---|-----|--|-------|
| Sl. No | Description of item | Measurements | | | | Qty | | |
| | | No. | L | B | D | | | |
| Condensing units | | | | | | | | |
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | | | | | | | |
| Nominal Capacities: | | | | | | | | |
| a | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | | | | | | | |
| | Nuero Surgery O.T-1 | 1 | x | 1 | | | | 1.00 |
| | Nuero Surgery O.T-2 | 1 | x | 1 | | | | 1.00 |
| | Ortho O.T | 1 | x | 1 | | | | 1.00 |
| | Gynec - O.T | 1 | x | 1 | | | | 1.00 |
| | Urology O.T | 1 | x | 2 | | | | 2.00 |
| | | | | | | | | 6 Nos |
| b | 20HP (12TR actual capacity at 45 deg. C) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | | | | | | | |
| | EMD - OT' | 1 | x | 1 | | | | 1.00 |
| | Ortho O.T | 1 | x | 1 | | | | 1.00 |
| | | | | | | | | 2 Nos |
| Air handling Units | | | | | | | | |

| | | | |
|---|---|-------|-------|
| 2 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar/voltas/ Thosibha/Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations. Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks.</p> | | |
| | <p>Fan section should be SISW direct driven plug fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Motor drive should be VFD. VFD drive should be included in AHU supply. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE:1. FAN – KRUGER / ZIEHL-ABEGG2. MOTORS – ABB/SIEMENS/BBL3. FILTERS – CAMFIL/THERMADYNE4. VFD DRIVE - DANFOSS / ABB5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY</p> | | |
| a | 4000 cfm 4.5" static | | |
| | Nuero Surgery O.T-1 | 1 x 1 | 1.00 |
| | Nuero Surgery O.T-2 | 1 x 1 | 1.00 |
| | Ortho O.T | 1 x 1 | 1.00 |
| | | | 3 Nos |

| | | |
|---|--|------------|
| 3 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations.</p> | |
| | <p>Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE :</p> <ol style="list-style-type: none"> 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| a | 4000 cfm 2.5" static | |
| | EMD - OT's | 1 x 1 1.00 |
| | Ortho O.T | 1 x 1 1.00 |
| | Gynec - O.T | 1 x 1 1.00 |
| | Urology O.T | 1 x 2 2.00 |
| | | 5 Nos |
| | | |

| | | | | | | | | |
|------------------------------------|--|---|---|---|------|------|--|--------|
| 4 | Ceiling suspended laminar flow work space / discharge plenum for operation rooms comprising as standard feature with HEPA filter efficiency not less than 99.97% at 0.3 Microns (Factory DOP tested), per operation room shall not be less than 3.1 sqm area with appropriate depth to accomodate absolute filters, with air flow at approx. 90-100 Fpm velocity. Size 8ft X 6ft Material of construction Shall be 1.2mm thick S S 304 Plenum with S S Perforated sheet at the bottom. Each air inlet should be supplied with Aluminium opposed blade damper . The entire plenum should be insulated with 19mm thick Al faced nitrile rubber. Bottom discharge should be perforated SS Sheet of 1.6mm with reinforcement to avoid waveviness APPROVED MAKE : Dyna / American Air Filter / M.K Precesion | | | | | | | |
| Laminar flow plenum chamber | | | | | | | | |
| | Nuero Surgery O.T-1 | 1 | x | 1 | | | | 1.00 |
| | Nuero Surgery O.T-2 | 1 | x | 1 | | | | 1.00 |
| | Ortho O.T | 1 | x | 1 | | | | 1.00 |
| | | | | | | | | 3 Nos |
| 5 | supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent | | | | | | | |
| | EMD - OT's | 1 | x | 4 | 0.60 | 0.60 | | 1.44 |
| | Ortho O.T | 1 | x | 4 | 0.60 | 0.60 | | 1.44 |
| | Gynec - O.T | 1 | x | 4 | 0.60 | 0.60 | | 1.44 |
| | Urology O.T | 2 | x | 4 | 0.60 | 0.60 | | 2.88 |
| | | | | | | | | 4.80 |
| | | | | | | | | 12.00 |
| | | | | | | | | 12 Sqm |
| 6 | supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent | | | | | | | |
| | EMD - OT's | 1 | x | 4 | 0.60 | 0.60 | | 1.44 |
| | Ortho O.T | 1 | x | 4 | 0.60 | 0.60 | | 1.44 |
| | Gynec - O.T | 1 | x | 4 | 0.60 | 0.60 | | 1.44 |
| | Urology O.T | 2 | x | 4 | 0.60 | 0.60 | | 2.88 |
| | | | | | | | | 4.80 |
| | | | | | | | | 12.00 |
| | | | | | | | | 12 Sqm |

| | | | | | | | | | |
|---|--|---|---|---|-------|------|--|--|----------------|
| | Urology O.T-2 S.S block | 1 | x | 1 | 27.30 | | | | 27.30 |
| | Ortho O.T-2 | 1 | x | 1 | 25.50 | | | | 25.50 |
| | | | | | | | | | 26.70 |
| | | | | | | | | | 250.00 |
| | | | | | | | | | 250 Rm |
| | | | | | | | | | |
| 9 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | | | | | | | | |
| a | 22 Gauge | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | 26.50 | 1.80 | | | 47.70 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | 26.50 | 1.80 | | | 47.70 |
| | Ortho O.T-1 | 1 | x | 1 | 29.70 | 1.80 | | | 53.46 |
| | EMD - O.T-1 | 1 | x | 1 | 25.70 | 1.80 | | | 46.26 |
| | Gynec - O.T | 1 | x | 1 | 31.20 | 1.80 | | | 56.16 |
| | Urology O.T-1 S.S block | 1 | x | 1 | 30.90 | 1.80 | | | 55.62 |
| | Urology O.T-2 S.S block | 1 | x | 1 | 27.30 | 1.80 | | | 49.14 |
| | Ortho O.T-2 | 1 | x | 1 | 25.50 | 1.80 | | | 45.90 |
| | | | | | | | | | |
| | | | | | | | | | 250.00 |
| | | | | | | | | | 250 Sqm |
| b | 20 Gauge | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | 26.50 | 1.80 | | | 47.70 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | 26.50 | 1.80 | | | 47.70 |
| | Ortho O.T-1 | 1 | x | 1 | 29.70 | 1.80 | | | 53.46 |
| | EMD - O.T-1 | 1 | x | 1 | 25.70 | 1.80 | | | 46.26 |
| | Gynec - O.T | 1 | x | 1 | 31.20 | 1.80 | | | 56.16 |
| | Urology O.T-1 S.S block | 1 | x | 1 | 30.90 | 1.80 | | | 55.62 |
| | Urology O.T-2 S.S block | 1 | x | 1 | 27.30 | 1.80 | | | 49.14 |
| | Ortho O.T-2 | 1 | x | 1 | 25.50 | 1.80 | | | 45.90 |
| | | | | | | | | | |

| | | | | | | | | |
|----|---|---|---|---|-------|--|--|---------|
| 12 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | | | | 1.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | | | | 1.00 |
| | Ortho O.T-1 | 1 | x | 1 | | | | 1.00 |
| | EMD - O.T-1 | 1 | x | 1 | | | | 1.00 |
| | Gynec - O.T | 1 | x | 1 | | | | 1.00 |
| | Urology O.T-1 S.S block | 1 | x | 1 | | | | 1.00 |
| | Urology O.T-2 S.S block | 1 | x | 1 | | | | 1.00 |
| | Ortho O.T-2 | 1 | x | 1 | | | | 1.00 |
| | | | | | | | | 8 Nos |
| | | | | | | | | |
| 13 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | | | | | | | |
| | 25 mm Dia | | | | | | | 160 Rmt |
| | 32 mm Dia | | | | | | | 160 Rmt |
| | 40 mm Dia | | | | | | | 160 Rmt |
| 14 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) (ELEC-4.1.22) | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | 75.00 | | | 75.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | 75.00 | | | 75.00 |
| | Ortho O.T-1 | 1 | x | 1 | 75.00 | | | 75.00 |
| | EMD - O.T-1 | 1 | x | 1 | 75.00 | | | 75.00 |
| | Gynec - O.T | 1 | x | 1 | 75.00 | | | 75.00 |
| | Urology O.T-1 S.S block | 1 | x | 1 | 75.00 | | | 75.00 |
| | Urology O.T-2 S.S block | 1 | x | 1 | 75.00 | | | 75.00 |
| | Ortho O.T-2 | 1 | x | 1 | 75.00 | | | 75.00 |
| | | | | | | | | 200 Rmt |
| | | | | | | | | |
| 15 | Supply, Installation of Fresh air package consists Louvers, GI volume | | | | | | | |

| | | | | | | | | |
|----|--|---|---|---|--------|------|--|----------|
| | control damper including Bird Cowl with wiremesh along with 20 microns filter. | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 2 | | | | 2.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 2 | | | | 2.00 |
| | Ortho O.T-1 | 1 | x | 2 | | | | 2.00 |
| | EMD - O.T-1 | 1 | x | 2 | | | | 2.00 |
| | Gynec - O.T | 1 | x | 2 | | | | 2.00 |
| | Urology O.T-1 S.S block | 1 | x | 2 | | | | 2.00 |
| | Urology O.T-2 S.S block | 1 | x | 2 | | | | 2.00 |
| | Ortho O.T-2 | 1 | x | 2 | | | | 2.00 |
| | | | | | | | | 0 Nos |
| 16 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice (ELEC-9.5.45) | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | 150.00 | | | 150.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | 150.00 | | | 150.00 |
| | Ortho O.T-1 | 1 | x | 1 | 150.00 | | | 150.00 |
| | EMD - O.T-1 | 1 | x | 1 | 150.00 | | | 150.00 |
| | Gynec - O.T | 1 | x | 1 | 150.00 | | | 150.00 |
| | Urology O.T-1 S.S block | 1 | x | 1 | 150.00 | | | 150.00 |
| | Urology O.T-2 S.S block | 1 | x | 1 | 150.00 | | | 150.00 |
| | Ortho O.T-2 | 1 | x | 1 | 150.00 | | | 150.00 |
| | | | | | | | | 1200 Kgs |
| | | | | | | | | |
| 17 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | | | | | | | |
| | Ceiling | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | 6.30 | 5.70 | | 35.91 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | 6.30 | 5.70 | | 35.91 |

| | | | | | | | | | |
|----|--|---|---|---|-------|------|--|--|------------|
| | Ortho O.T-1 | 1 | x | 1 | 7.30 | 6.30 | | | 45.99 |
| | Ortho O.T-2 | 1 | x | 1 | 6.30 | 3.20 | | | 20.16 |
| | Walls | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 2 | 6.30 | 3.20 | | | 40.32 |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 2 | 5.70 | 3.20 | | | 36.48 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 2 | 6.30 | 3.20 | | | 40.32 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 2 | 5.70 | 3.20 | | | 36.48 |
| | Ortho O.T-1 | 1 | x | 2 | 7.30 | 3.20 | | | 46.72 |
| | Ortho O.T-1 | 1 | x | 2 | 6.30 | 3.20 | | | 40.32 |
| | | | | | | | | | 504 Sqm |
| 18 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | | | | | | | | |
| | wall to wall and wall to ceiling | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | 90.00 | | | | 90.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | 90.00 | | | | 90.00 |
| | Ortho O.T-1 | 1 | x | 1 | 90.00 | | | | 90.00 |
| | EMD - O.T-1 | 1 | x | 1 | 60.00 | | | | 60.00 |
| | Gynec - O.T | 1 | x | 1 | 60.00 | | | | 60.00 |
| | Urology O.T-1 S.S block | 1 | x | 1 | 60.00 | | | | 60.00 |
| | Urology O.T-2 S.S block | 1 | x | 1 | 60.00 | | | | 60.00 |
| | Ortho O.T-2 | 1 | x | 1 | 60.00 | | | | 60.00 |
| | | | | | | | | | 300 Rmt |

| | | | | | | | | | |
|----|---|---|---|---|-------|------|--|--|--------------------|
| 33 | Supply and application of epoxy coving of light green or light blue colour with SIKHA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | | | | | | | | |
| | EMD - O.T-1 | 1 | x | 1 | 60.00 | | | | 60.00 |
| | Gynec - O.T | 1 | x | 1 | 60.00 | | | | 60.00 |
| | Urology O.T-1 S.S block | 1 | x | 1 | 60.00 | | | | 60.00 |
| | Urology O.T-2 S.S block | 1 | x | 1 | 60.00 | | | | 60.00 |
| | Ortho O.T-2 | 1 | x | 1 | 60.00 | | | | 60.00 |
| | | | | | | | | | 180 Rmt |
| 20 | Supply and Fixing of Epoxy Flooring: Seamless with perfectly curved resistance and dynamic loads and having conductive protection characteristics, 3 mm thick, washable Epoxy flooring and Before apply epoxy apply ESD self leveling - eletrotape copper foil / Copper grounding strips (0.05 mm thick, 50mm width) is used to create ground grids for peel and stic ESD flooring and ESD matting also ESD primer,screading and topping for self leveling (Make :Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | 6.30 | 5.70 | | | 35.91 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | 6.30 | 5.70 | | | 35.91 |
| | Ortho O.T-1 | 1 | x | 1 | 7.30 | 6.30 | | | 45.99 |
| | | | | | | | | | 117.81 Sqm |
| 21 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyence of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARKET) | | | | | | | | |
| | EMD - O.T-1 | 1 | x | 1 | 6.00 | 3.60 | | | 21.60 |
| | Gynec - O.T | 1 | x | 1 | 7.10 | 7.00 | | | 49.70 |
| | Urology O.T-1 S.S block | 1 | x | 1 | 7.20 | 7.00 | | | 50.40 |

| | | | | | | | | | |
|----|---|---|---|---|------|------|--|--|---------------|
| | Urology O.T-2 S.S block | 1 | x | 1 | 6.70 | 5.70 | | | 38.19 |
| | Ortho O.T-2 | 1 | x | 1 | 6.30 | 3.20 | | | 20.16 |
| | | | | | | | | | 180.05 Sqm |
| 19 | Supply and Fixing of Pass Box SS 304 (Size: 2'*2') can be provided in operation theatre to remove waste materials from the operation theatres to Dirty linen area just adjacent to Operation Theatre. Pass Box is equipped with two doors and the door shall operate electronically. The Pass Box is designed in such a way that only one door should be opened at one time. The UV light shall be installed in chamber. Make: CZS /BLS / SS 304 Zindal | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Ortho O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | | | | | | | | | 3 Nos |
| 21 | Supply and Fixing of Two Plate X-Ray Viewing Screen designed to provide a high level of control luminance without flicker. Size - 950 x 650 x 115 mm (Make : Mediconz International - Country of Origin -India , Srimodular / CZS / Altos) | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Ortho O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | | | | | | | | | 3 Nos |
| 22 | Supply and Fixing of Writing Board of size 950 x 650 x 75 mm with 50 mm thick and consealed in wall panelling (Make : CZS /BLS / Altos / Srimodular / Mediconz or equivalent) | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Ortho O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | EMD - O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | Gynec - O.T | 1 | x | 1 | | | | | 1.00 |
| | Urology O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |

| | | | | | | | | | |
|----|--|---|---|---|------|------|------|--|--------------------|
| | Urology O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Ortho O.T-2 | 1 | x | 1 | | | | | 1.00 |
| | | | | | | | | | 3 Nos |
| 23 | Supply and application of poly urethane (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | | | | | | | | |
| | EMD - O.T-1 | 1 | x | 2 | 6.00 | 3.20 | | | 38.40 |
| | EMD - O.T-1 | 1 | x | 2 | 3.60 | 3.20 | | | 23.04 |
| | Gynec - O.T | 1 | x | 2 | 7.10 | 3.20 | | | 45.44 |
| | Gynec - O.T | 1 | x | 2 | 7.00 | 3.20 | | | 44.80 |
| | Urology O.T-1 S.S block | 1 | x | 2 | 7.20 | 3.20 | | | 46.08 |
| | Urology O.T-1 S.S block | 1 | x | 2 | 7.00 | 3.20 | | | 44.80 |
| | Urology O.T-2 S.S block | 1 | x | 2 | 6.70 | 3.20 | | | 42.88 |
| | Urology O.T-2 S.S block | 1 | x | 2 | 5.70 | 3.20 | | | 36.48 |
| | Ortho O.T-2 | 1 | x | 2 | 6.30 | 3.20 | | | 40.32 |
| | Ortho O.T-2 | 1 | x | 2 | 3.20 | 3.20 | | | 20.48 |
| | Add varivous qty | | | | | | | | 17.28 |
| | | | | | | | | | 360 Sqm |
| 24 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door (1.5 X 2.1 M) | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | 1.80 | | 2.10 | | 3.78 |

| | | | | | | | | | |
|----|--|---|---|---|------|--|------|--|---------------|
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | 1.80 | | 2.10 | | 3.78 |
| | Ortho O.T-1 | 1 | x | 1 | 1.80 | | 2.10 | | 3.78 |
| | EMD - O.T-1 | 1 | x | 1 | 1.80 | | 2.10 | | 3.78 |
| | Gynec - O.T | 1 | x | 1 | 1.80 | | 2.10 | | 3.78 |
| | Urology O.T-1 S.S block | 1 | x | 1 | 1.80 | | 2.10 | | 3.78 |
| | Urology O.T-2 S.S block | 1 | x | 1 | 1.80 | | 2.10 | | 3.78 |
| | Ortho O.T-2 | 1 | x | 1 | 1.80 | | 2.10 | | 3.78 |
| | | | | | | | | | 26 Sqm |
| 28 | <p>Supply and Fixing of Surgucal Scrub: Surgical scrub sink should be designed for use in OT complex providing Surgeons with a convenient sink for pre – OT scrub up. Each fixture should be fabricated with 18 SWG gauge type 304 stainless steel and should be seamless welded construction, polished to a stain finish. The scrub sink should be provided with a water controlled value, waste connections, stoppers and strainers. 4 Feet Length and 3 Feet High with 2 Foot operated and 2 elbow taps should be there. Make : Zindal/ Tata</p> | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Ortho O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | EMD - O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | Gynec - O.T | 1 | x | 1 | | | | | 1.00 |
| | Urology O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Urology O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Ortho O.T-2 | 1 | x | 1 | | | | | 1.00 |
| | | | | | | | | | 3 Nos |
| 29 | <p>Supply and Fixing of Surgeon Double Arm Pendant - Comprising of- 1 x Arm 800 & 1 x Arm 800 having a- 1 x drop tube having a carrying capacity of maximumload of 80 kg-Rotation of 330 deg.- 1 x Basic Console - 750 mm- 1 x Fixed shelf (350x350x50 mm)- 1 x Adjustable shelf (350x350x50mm)- 6 x Mains Socket (5/15Amp)- 6 x Medical Gas Terminal & Hose Assembly(2 x Oxy, 2xVac, 1xAir(4bar), 1xAir(7bar), 1xN2O, 1xCO2,Provision for CO2 Data & A/V 2 nos.)Make : Meditech / Altos / Aravali / Digiline or Equqalent)</p> | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |

| | | | | | | | | | |
|----|--|---|---|---|--|--|--|--|-------|
| | Ortho O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | | | | | | | | | 3.00 |
| 29 | Supply and Fixing of Anesthesia Single Arm Pendant - Comprising of - 1 x Arm 800 mm having a - 1 x drop tube having a carrying capacity of maximum load of 80 kg -Rotation of 330 deg. - 1 x Basic Console - 600 mm - 1 x Fixed shelf (350x350x50 mm) - 1 x Adjustable shelf (350x350x50mm) - 6 x Mains Socket (5/15Amp) - 6 x Medical Gas Terminal & Hose Assembly (2 x Oxy, 2xVac, 1xAir(4bar), 1xAir 7 Bar, 1x N20 , Provision for AGSS, Data & A/V 2 nos.) (Make : Meditech / Altos / Aravali / Digiline or Equqalent) | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Ortho O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | | | | | | | | | 3 Nos |
| | V - FIRE EXTINGUISHERS | | | | | | | | |
| 31 | OT Distribution Board: DB for controlling Inside OT Surgeon Panel,X-Ray View Panel,Writing Board and LED Lights and its consisting of: 2 Pole - Incomer MCB - 32A - 1 No Single Pole MCB-16A-14 Nos Transformer 0-18V/3A - 1 Nos Earth Connectrors for Earth (10Nos),Nutral (10Nos) and Control Panel Supply(14Nos) Relays for on - Off Switch - 1 Nos Make: Siemens/ BLS / CZS | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Ortho O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | EMD - O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | Gynec - O.T | 1 | x | 1 | | | | | 1.00 |
| | Urology O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Urology O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |

| | | | | | | | | | |
|----|--|---|---|---|--|--|--|--|--------------|
| | Ortho O.T-2 | 1 | x | 1 | | | | | 1.00 |
| | | | | | | | | | 3 Nos |
| | | | | | | | | | |
| 32 | Supply and Fixing of Surgeon Control Panel mounted flush in the theatre wall, comprising of the following: 1 No. Day Time Clock 1 No. Elapse Time Clock 1 Set dimmer for peripheral/ planair lights 1 No. hands free telephone 1 No. Medical Gas status/ alarm 1 set indicator only for temperature and humidity display Size - 650 x 650 x 115 mm (Make :Altos/Mercury/Arivali/ Digiline) | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Ortho O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | EMD - O.T-1 | 1 | x | 1 | | | | | 1.00 |
| | Gynec - O.T | 1 | x | 1 | | | | | 1.00 |
| | Urology O.T-1 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Urology O.T-2 S.S block | 1 | x | 1 | | | | | 1.00 |
| | Ortho O.T-2 | 1 | x | 1 | | | | | 1.00 |
| | | | | | | | | | 3 Nos |
| | | | | | | | | | |
| 34 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | | | | | | | | 5.00 |
| | Nuero Surgery O.T-2 S.S block | | | | | | | | 5.00 |
| | Ortho O.T-1 | | | | | | | | 5.00 |
| | EMD - O.T-1 | | | | | | | | 5.00 |
| | Gynec - O.T | | | | | | | | 5.00 |
| | Urology O.T-1 S.S block | | | | | | | | 5.00 |
| | Urology O.T-2 S.S block | | | | | | | | 5.00 |
| | Ortho O.T-2 | | | | | | | | 5.00 |

| | | | | | | | | | |
|---|--|---|---|---|------|------|------|--|------------------|
| | Nuero Surgery O.T-2 S.S block | 1 | x | 4 | | | | | 4.00 |
| | Ortho O.T-1 | 1 | x | 4 | | | | | 4.00 |
| | EMD - O.T-1 | 1 | x | 4 | | | | | 4.00 |
| | Gynec - O.T | 1 | x | 4 | | | | | 4.00 |
| | Urology O.T-1 S.S block | 1 | x | 4 | | | | | 4.00 |
| | Urology O.T-2 S.S block | 1 | x | 4 | | | | | 4.00 |
| | Ortho O.T-2 | 1 | x | 4 | | | | | 4.00 |
| | | | | | | | | | 48 Nos |
| | | | | | | | | | Sub total |
| | Civil items | | | | | | | | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | | | | | | | | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | | | | | | | | |
| | EMD - O.T-1 | | | | | | | | |
| | L/W | 1 | x | 2 | 6.00 | | 3.00 | | 36.00 |
| | S/W | 1 | x | 2 | 3.60 | | 3.00 | | 21.60 |
| | flooring | 1 | x | 1 | 6.00 | 3.60 | | | 21.60 |
| | Gynec - O.T | | | | | | | | |
| | L/W | 1 | x | 2 | 7.10 | | 3.00 | | 42.60 |
| | S/W | 1 | x | 2 | 7.00 | | 3.00 | | 42.00 |
| | flooring | 1 | x | 1 | 7.10 | 7.00 | | | 49.70 |
| | Urology O.T-1 at S.S block | | | | | | | | |
| | L/W | 1 | x | 2 | 7.20 | | 3.00 | | 43.20 |
| | S/W | 1 | x | 2 | 7.00 | | 3.00 | | 42.00 |
| | flooring | 1 | x | 1 | 7.20 | 7.00 | | | 50.40 |
| | Urology O.T-2 at S.S block | | | | | | | | |
| | L/W | 1 | x | 2 | 6.70 | | 3.00 | | 40.20 |
| | S/W | 1 | x | 2 | 5.70 | | 3.00 | | 34.20 |
| | flooring | 1 | x | 1 | 6.70 | 5.70 | | | 38.19 |
| | Nuero Surgery O.T-1 at S.S block | | | | | | | | |
| | flooring | 1 | x | 1 | 6.30 | 5.70 | | | 35.91 |
| | Nuero Surgery O.T-2 at S.S block | | | | | | | | |
| | flooring | 1 | x | 1 | 6.30 | 5.70 | | | 35.91 |

| | | | | | | | | |
|---|---|---|---|---|------|------|------|---------------|
| | Ortho O.T-1 | | | | | | | |
| | flooring | 1 | x | 1 | 7.30 | 6.30 | | 45.99 |
| | Ortho O.T-2 | | | | | | | |
| | L/W | 1 | x | 2 | 6.30 | | 3.00 | 37.80 |
| | S/W | 1 | x | 2 | 3.20 | | 3.00 | 19.20 |
| | flooring | 1 | x | 1 | 6.30 | 3.20 | | 20.16 |
| | | | | | | | | 656.66 Sqm |
| | | | | | | | | |
| b | Old cement mortar plaster | | | | | | | |
| | EMD - O.T-1 | | | | | | | |
| | L/W | 1 | x | 2 | 6.00 | | 3.00 | 36.00 |
| | S/W | 1 | x | 2 | 3.60 | | 3.00 | 21.60 |
| | flooring | 1 | x | 1 | 6.00 | 3.60 | | 21.60 |
| | Gynec - O.T | | | | | | | |
| | L/W | 1 | x | 2 | 7.10 | | 3.00 | 42.60 |
| | S/W | 1 | x | 2 | 7.00 | | 3.00 | 42.00 |
| | flooring | 1 | x | 1 | 7.10 | 7.00 | | 49.70 |
| | Urology O.T-1 at S.S block | | | | | | | |
| | L/W | 1 | x | 2 | 7.20 | | 3.00 | 43.20 |
| | S/W | 1 | x | 2 | 7.00 | | 3.00 | 42.00 |
| | flooring | 1 | x | 1 | 7.20 | 7.00 | | 50.40 |
| | Urology O.T-2 at S.S block | | | | | | | |
| | L/W | 1 | x | 2 | 6.70 | | 3.00 | 40.20 |
| | S/W | 1 | x | 2 | 5.70 | | 3.00 | 34.20 |
| | flooring | 1 | x | 1 | 6.70 | 5.70 | | 38.19 |
| | Ortho O.T-2 | | | | | | | |
| | L/W | 1 | x | 2 | 6.30 | | 3.00 | 37.80 |
| | S/W | 1 | x | 2 | 3.20 | | 3.00 | 19.20 |
| | flooring | 1 | x | 1 | 6.30 | 3.20 | | 20.16 |
| | | | | | | | | 538.85 Sqm |
| | | | | | | | | |
| c | Unreinforced cement concrete up to 15cm thickness | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | 6.30 | 5.70 | 0.05 | 1.80 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | 6.30 | 5.70 | 0.05 | 1.80 |
| | Ortho O.T-1 | 1 | x | 1 | 7.30 | 6.30 | 0.05 | 2.30 |
| | EMD - O.T-1 | 1 | x | 1 | 6.00 | 3.60 | 0.05 | 1.08 |
| | Gynec - O.T | 1 | x | 1 | 7.10 | 7.00 | 0.05 | 2.49 |

| | | | | | | | | | |
|---|--|---|---|---|------|------|------|--|--------------|
| | Urology O.T-1 S.S block | 1 | x | 1 | 7.20 | 7.00 | 0.05 | | 2.52 |
| | Urology O.T-2 S.S block | 1 | x | 1 | 6.70 | 5.70 | 0.05 | | 1.91 |
| | Ortho O.T-2 | 1 | x | 1 | 6.30 | 3.20 | 0.05 | | 1.01 |
| | | | | | | | | | 14.89 Cum |
| | | | | | | | | | |
| 2 | Conveyance of un-useful excavated earth to a distance of 10 KM for disposal including hire charges of T & P, labour charges etc., complete for finished item of work. | | | | | | | | |
| | | | | | | | | | 250 Cum |
| | | | | | | | | | |
| 3 | Plain Cement Concrete (1:5:10) (cement: fine aggregate: Coarse aggregate) for foundations and under flooring bed using coarse aggregate 20mm size hard , machine crushed granite from approved quarry including cost and conveyance of all materials like cement, sand, coarse aggregate, water etc. to site, sales & other taxes on all materials and including all charges for machine mixing, laying concrete in foundations and under flooring bed, ramming in 15 cm layers finishing top surface to the required level curing etc.,and complete for finished item of work. (APSS No. 402) | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | 6.30 | 5.70 | 0.05 | | 1.80 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | 6.30 | 5.70 | 0.05 | | 1.80 |
| | Ortho O.T-1 | 1 | x | 1 | 7.30 | 6.30 | 0.05 | | 2.30 |
| | EMD - O.T-1 | 1 | x | 1 | 6.00 | 3.60 | 0.05 | | 1.08 |
| | Gynec - O.T | 1 | x | 1 | 7.10 | 7.00 | 0.05 | | 2.49 |
| | Urology O.T-1 S.S block | 1 | x | 1 | 7.20 | 7.00 | 0.05 | | 2.52 |
| | Urology O.T-2 S.S block | 1 | x | 1 | 6.70 | 5.70 | 0.05 | | 1.91 |
| | Ortho O.T-2 | 1 | x | 1 | 6.30 | 3.20 | 0.05 | | 1.01 |
| | | | | | | | | | 14.89 Cum |

| | | | | | | | | |
|---|--|---|---|---|------|------|------|---------------|
| 4 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | | | | | | | |
| | EMD - O.T-1 | 1 | x | 1 | 6.00 | 3.60 | | 21.60 |
| | Gynec - O.T | 1 | x | 1 | 7.10 | 7.00 | | 49.70 |
| | Urology O.T-1 S.S block | 1 | x | 1 | 7.20 | 7.00 | | 50.40 |
| | Urology O.T-2 S.S block | 1 | x | 1 | 6.70 | 5.70 | | 38.19 |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 1 | 6.30 | 5.70 | | 35.91 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 1 | 6.30 | 5.70 | | 35.91 |
| | Ortho O.T-1 | 1 | x | 1 | 7.30 | 6.30 | | 45.99 |
| | Ortho O.T-2 | 1 | x | 1 | 6.30 | 3.20 | | 20.16 |
| | | | | | | | | 297.86 Sqm |
| 5 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | | | | | | | |
| | EMD - O.T-1 L/W | 1 | x | 2 | 6.00 | | 3.00 | 36.00 |
| | S/W | 1 | x | 2 | 3.60 | | 3.00 | 21.60 |
| | Gynec - O.T L/W | 1 | x | 2 | 7.10 | | 3.00 | 42.60 |
| | S/W | 1 | x | 2 | 7.00 | | 3.00 | 42.00 |
| | Urology O.T-1 at S.S block L/W | 1 | x | 2 | 7.20 | | 3.00 | 43.20 |
| | S/W | 1 | x | 2 | 7.00 | | 3.00 | 42.00 |
| | Urology O.T-2 at S.S block L/W | 1 | x | 2 | 6.70 | | 3.00 | 40.20 |
| | S/W | 1 | x | 2 | 5.70 | | 3.00 | 34.20 |
| | Ortho O.T-2 L/W | 1 | x | 2 | 6.30 | | 3.00 | 37.80 |
| | S/W | 1 | x | 2 | 3.20 | | 3.00 | 19.20 |
| | | | | | | | | 358.80 Sqm |

| | | | | | | | | |
|---|--|---|---|---|-------|--|------|-------|
| 6 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | | | | | | | |
| | EMD - O.T-1 L/W | 1 | x | 2 | 6.00 | | 3.00 | 36.00 |
| | S/W | 1 | x | 2 | 3.60 | | 3.00 | 21.60 |
| | Gynec - O.T L/W | 1 | x | 2 | 7.10 | | 3.00 | 42.60 |
| | S/W | 1 | x | 2 | 7.00 | | 3.00 | 42.00 |
| | Urology O.T-1 at S.S block L/W | 1 | x | 2 | 7.20 | | 3.00 | 43.20 |
| | S/W | 1 | x | 2 | 7.00 | | 3.00 | 42.00 |
| | Urology O.T-2 at S.S block L/W | 1 | x | 2 | 6.70 | | 3.00 | 40.20 |
| | S/W | 1 | x | 2 | 5.70 | | 3.00 | 34.20 |
| | Ortho O.T-2 L/W | 1 | x | 2 | 6.30 | | 3.00 | 37.80 |
| | S/W | 1 | x | 2 | 3.20 | | 3.00 | 19.20 |
| | Corridors | | | | | | | |
| | EMD - O.T-1 L/W | 1 | x | 2 | 16.00 | | 1.50 | 48.00 |
| | S/W | 1 | x | 2 | 3.00 | | 1.50 | 9.00 |
| | Gynec - O.T L/W | 1 | x | 2 | 16.00 | | 1.50 | 48.00 |
| | S/W | 1 | x | 2 | 3.00 | | 1.50 | 9.00 |
| | Urology O.T-1 at S.S block L/W | 1 | x | 2 | 16.00 | | 1.50 | 48.00 |
| | S/W | 1 | x | 2 | 3.00 | | 1.50 | 9.00 |
| | Urology O.T-2 at S.S block L/W | 1 | x | 2 | 16.00 | | 1.50 | 48.00 |
| | S/W | 1 | x | 2 | 3.00 | | 1.50 | 9.00 |
| | Ortho O.T-2 L/W | 1 | x | 2 | 16.00 | | 1.50 | 48.00 |
| | S/W | 1 | x | 2 | 3.00 | | 1.50 | 9.00 |
| | Nuero Surgery O.T-1 L/w | 1 | x | 2 | 16.00 | | 1.50 | 48.00 |
| | Nuero Surgery O.T-1 C/w | 1 | x | 2 | 3.00 | | 1.50 | 9.00 |
| | Nuero Surgery O.T-2 L/w | 1 | x | 2 | 16.00 | | 1.50 | 48.00 |
| | Nuero Surgery O.T-2 C/w | 1 | x | 2 | 3.00 | | 1.50 | 9.00 |
| | Ortho O.T-1 L/w | 1 | x | 2 | 16.00 | | 1.50 | 48.00 |

| | | | | | | | | | |
|---|---|---|---|---|------|--|------|--|--------------------|
| | Ortho O.T-1 L/w | 1 | x | 2 | 3.00 | | 1.50 | | 9.00 |
| | Add varivous qty | | | | | | | | 85.20 |
| | | | | | | | | | 400 Sqm |
| 7 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, overheads & contractor profit etc., complete for finished item of work in all floor in all floors. | | | | | | | | |
| | Corridors | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | | | | | | | | 25.00 |
| | Nuero Surgery O.T-2 S.S block | | | | | | | | 25.00 |
| | Ortho O.T-1 | | | | | | | | 25.00 |
| | EMD - O.T-1 | | | | | | | | 25.00 |
| | Gynec - O.T | | | | | | | | 25.00 |
| | Urology O.T-1 S.S block | | | | | | | | 25.00 |
| | Urology O.T-2 S.S block | | | | | | | | 25.00 |
| | Ortho O.T-2 | | | | | | | | 25.00 |
| | | | | | | | | | 200 Sqm |
| 8 | Supply & application of two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors.. | | | | | | | | |
| | Corridors | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | | | | | | | | 100.00 |
| | Nuero Surgery O.T-2 S.S block | | | | | | | | 100.00 |
| | Ortho O.T-1 | | | | | | | | 100.00 |
| | EMD - O.T-1 | | | | | | | | 100.00 |

| | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|------------|
| | Gynec - O.T | | | | | | | | | 100.00 |
| | Urology O.T-1 S.S block | | | | | | | | | 100.00 |
| | Urology O.T-2 S.S block | | | | | | | | | 100.00 |
| | Ortho O.T-2 | | | | | | | | | 100.00 |
| | | | | | | | | | | 800 Sqm |
| | | | | | | | | | | |
| 9 | <p>Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab, including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc.,and overheads & contractors profit complete for finished item of work. (APSS No.701 & 707)</p> | | | | | | | | | |
| | Corridors | | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | | | | | | | | | 25.00 |
| | Nuero Surgery O.T-2 S.S block | | | | | | | | | 25.00 |
| | Ortho O.T-1 | | | | | | | | | 25.00 |
| | EMD - O.T-1 | | | | | | | | | 25.00 |
| | Gynec - O.T | | | | | | | | | 25.00 |
| | Urology O.T-1 S.S block | | | | | | | | | 25.00 |
| | Urology O.T-2 S.S block | | | | | | | | | 25.00 |
| | Ortho O.T-2 | | | | | | | | | 25.00 |
| | | | | | | | | | | 200 Sqm |
| | | | | | | | | | | |

| | | | | | | | | | |
|----|---|--|--|--|--|--|--|--|------------|
| 10 | Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., and overheads & contractors profit complete for finished item of work. | | | | | | | | |
| | Corridors | | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | | | | | | | | 25.00 |
| | Nuero Surgery O.T-2 S.S block | | | | | | | | 25.00 |
| | Ortho O.T-1 | | | | | | | | 25.00 |
| | EMD - O.T-1 | | | | | | | | 25.00 |
| | Gynec - O.T | | | | | | | | 25.00 |
| | Urology O.T-1 S.S block | | | | | | | | 25.00 |
| | Urology O.T-2 S.S block | | | | | | | | 25.00 |
| | Ortho O.T-2 | | | | | | | | 25.00 |
| | | | | | | | | | 200 Sqm |
| 11 | Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mmm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors | | | | | | | | |

| | | | | | | | | |
|---|--|---|---|---|------|--|------|--------------------------------|
| | and SS cover plates with brass pivot and single piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., including overheads & contractors profit complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm) | | | | | | | |
| | Corridors | | | | | | | |
| | Nuero Surgery O.T-1 S.S block | 1 | x | 2 | 2.00 | | 2.60 | 10.40 |
| | Nuero Surgery O.T-2 S.S block | 1 | x | 2 | 2.00 | | 2.60 | 10.40 |
| | Ortho O.T-1 | 1 | x | 2 | 2.00 | | 2.60 | 10.40 |
| | EMD - O.T-1 | 1 | x | 2 | 2.00 | | 2.60 | 10.40 |
| | Gynec - O.T | 1 | x | 2 | 2.00 | | 2.60 | 10.40 |
| | Urology O.T-1 S.S block | 1 | x | 2 | 2.00 | | 2.60 | 10.40 |
| | Urology O.T-2 S.S block | 1 | x | 2 | 2.00 | | 2.60 | 10.40 |
| | Ortho O.T-2 | 1 | x | 2 | 2.00 | | 2.60 | 10.40 |
| | | | | | | | | 83.20 Sqm |
| | | | | | | | | Civil sub total |
| | Electrical items | | | | | | | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS rigid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all accessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | | | | | | | |
| | | | | | | | | 1200 Rmt |
| 2 | Supply of ISI 32mm width and 12.5mm height Casing and Caping. Makes: Any ISI make SSR 2017-18 (ELEC-1.2.10) | | | | | | | |
| | | | | | | | | 600 Rmt |

| | | |
|---|--|--------|
| 3 | <p>Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building)</p> <p>Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | |
| | | 120.00 |
| | | |
| 4 | <p>Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete.</p> <p>Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar</p> <p>Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series.</p> | |
| | | 20 Nos |
| | | |

| | | |
|---|--|----------|
| 5 | Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | |
| | | 85 Nos |
| | | |
| 6 | Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | |
| | | 80 Nos |
| | | |
| 7 | Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | |
| | | 1200 Rmt |
| | | |

| | | | | | | | | | |
|----|---|--|--|--|--|--|--|--|---------|
| | | | | | | | | | |
| 12 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | | | | | | | | |
| | | | | | | | | | 500 Rmt |
| | | | | | | | | | |
| 13 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | | | | | | | | |
| | | | | | | | | | 8 Nos |
| | | | | | | | | | |
| 14 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | | | | | | | | |
| | | | | | | | | | 8 Nos |
| | | | | | | | | | |
| 15 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | | | | | | | | |
| | | | | | | | | | 8 Nos |
| | | | | | | | | | |
| 16 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | | | | | | | | |

| | | | | | | | | | |
|---|--|---|---|---|-------|--|--|--|---------|
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | | | | | | | | |
| | | 3 | x | 8 | 15.00 | | | | 360 Rmt |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | | | | | | | | |
| | | 3 | x | 8 | 15.00 | | | | 360 Rmt |
| 4 | Supply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | | | | | | | | |
| | | 3 | x | 8 | 15.00 | | | | 360 Rmt |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | | | | | | | | |
| | | 3 | x | 8 | 15.00 | | | | 360 Rmt |

| | | |
|--|--|-----------------|
| 13. Name of work : Upgradation of Infrastructure for NABH accreditation at Srikakulam | | |
| Sub work : Modification of existing OT's (8 Nos) as per NABH Standards and Civil works in (0 Modular and 4 non-modular) | | |
| Detailed Estimate | | |
| Sl. No | Description of item | Quantity |
| | Condensing units | |
| 1 | SITC of following OUTDOOR CONDENSING UNITS-INVERTER type suitable to operate upto 52°C ambient temperature with minimum one variable speed inverter scroll compressor. Matching air cooled condenser with copper tubes and aluminium fins duly covered by anti-corrosion and hydrophillic resin film. Scroll compressors suitable for operation with R-410A.. Unit with all necessary safety devices like high/low pressure cut-outs, fan motor thermal overload protector, over current/low current safety, fuses etc. Suitable for operation on 380V~415V~3Ph~50Hz A.C. supply. Oil separator and Accumulator to be provided for inverter compressors. | |
| | Nominal Capacities: | |
| | 24HP (14TR actual capacity at 45 deg. C ambient) APPROVED MAKE : Bluestar / Voltas / Thosibha/ Daikin | 4 Nos |

| | | |
|---|--|--------|
| 2 | <p>SITC of double skin horizontal floor mounted air handling unit of recirculation type having mixing box with fresh air & return air manually operated AL dampers. Fresh air inlet should have back draft dampers along with AL manually operated fresh air dampers. Units shall be with minimum 80mm GI base channel. The panel thickness should be 46+/-2mm having thermal break AL profile. Outer skin of the unit should be 0.6mm pre-coated GI sheet & Inner skin should be 0.8mm AL. All internal blank off should be GI. Filter section with 90% efficiency down to 10 micron pre-filter box type followed by 95% efficiency down to 5 micron Microvee filter in a separate filter frame. Cooling coil section should be 6 or 8 Row Deep Direct Expansion intertwining cooling coil compatible for Bluestar /Voltas / Thosibha/ Daikin outdoor unit. Fin thickness should be 0.15mm & fin spacing should be 12 FPI. Coil casing should be GI & fin shall be with standard fin material. Coil shall be 18G SS-304 drain pan with 13mm thick closed cell nitrile rubber insulations.</p> | |
| | <p>Unit shall be ultra violet lamp to kill germs/fungus. Heater section should be with 4kW electric strip heater in 2 banks. Fan section should be DIDW centrifugal backward curved fan with a minimum efficiency of 65%. Motors should be IE-2, TEFC squirrel cage induction type with IP-55 protection, 415V, 3Phase & 50Hz. Fan should be housed over the spring isolator. Unit should be supplied with manually operated AL dampers. The AHU package should include Electronic expansion valves compatible to condensing units, Temperature sensor/controller compatible to inverter drive, communication cables from AHU to condensing unit</p> <p>APPROVED MAKE :</p> <ol style="list-style-type: none"> 1. FAN – KRUGER / ZIEHL-ABEGG 2. MOTORS – ABB/SIEMENS/BBL 3. FILTERS – CAMFIL/THERMADYNE 4. VFD DRIVE - DANFOSS / ABB 5. AHU - EDGE TECH / ZRCO/ CITIZEN/ BOOPATHY | |
| | 4000 cfm 2.5" static | 4 Nos |
| 3 | <p>supply and installation of powder coated linear supply air grilles/Preforated sheets with VCD & Plenum box .APPROVED MAKE : Cosmic / System air / carry air /Equivalent</p> | 10 Sqm |
| 4 | <p>supply and installation of powder coated return air grilles APPROVED MAKE : Cosmic / System air / carry air / Equivalent</p> | 10 Sqm |
| 5 | <p>Supplying and installation of Aluminium Volume control dampers with flanges for mounting on branch ducts and units etc complete. APPROVED MAKE : Cosmic / System air / carry air / Equivalent</p> | 12 Sqm |
| 6 | <p>Supply and installation of fusible link mechanical Fire safety dampers according to NFPA 90A and UL 555. The casings and blades of fire dampers shall be constructed of zinc-coated steel of at least 1.9 mm thickness. APPROVED MAKE : Cosmic / System air / carry air / Equivalent</p> | 6 Sqm |

| | | |
|----|--|---------|
| 7 | Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular insulation with 13/19mm thickness | |
| a | 7/8 inches OD | 700 RM |
| b | 1/2 inches OD | 100 Sqm |
| 8 | Supply and fixing of Rectangular G.I ducting complete with angel flanges, high tech supports, curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon or any adhesive after fabrication as per approved drawing as per standard practice Approved Makes:TATA/ Jindal | |
| a | 22 Gauge | 150 Sqm |
| b | 20 Gauge | 150 Sqm |
| 9 | Supply and installation of Thermal insulation with 25mm thick Nitrile rubber/ XLPE with Aluminum cladding fixed to the external surface of ducts with suitable adhesives as recommended by manufacturers. (for exposed ducts) APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 150SQM |
| 10 | Supply and installation of Thermal insulation with 19mm thick Nitrile rubber/ XLPE faced with Aluminum foil fixed to the external surface of duct with Al foileds with suitable adhesives as recommended by manufacturers. APPROVED MAKE: K- flex / Supreme /Paramount / Arma flex. | 150 SQm |
| 11 | Supply & Erection of 18G Aluminium Backdraft Dampers at inlet of AHU unit Approved Makes: Airmaster, Systemair, carryair. | 4 Sqm |
| 12 | Supply and Fixing of 2 mm thick Hard PVC drain piping with suitable supports as required & insulated with 6mm thick Nitrile rubber insulation Approved Makes: Sudhakar, Supreme. | |
| | 40 mm Dia | 80 Sqm |
| 13 | Supply and Fixing of Armoured Electrical cable Interconnecting between AHU unit and out door units for Condensing Units as per standards Approved Makes: Finolex, Fine cab.(3.5Core x 35 Sqm) | 100 Sqm |
| 14 | Supply & Fixing of MS structural support for mounting of Floor mounted AHU with 50 x 50 x 5 mm angle finished with Epoxy painting as per standard practice (ELEC-9.5.45) | 80 Kgs |
| 15 | Supply and Fixing of Modular OT Wall and Ceiling Paneling: Wall & Ceiling with PPGI Panel Having 50 mm thick with PUF (Polyurethane Foam) and thickness not less than 0.6 mm thick in room side and 0.6 mm thick in wall side having density of 40 Kg / M3. Including of all joints with silicon sealant. Make: Tata/ Jindal | 150 RM |

| | | |
|----|--|--------|
| 16 | Supply and Laying of Coving : Supply and installation of Aluminium Extruded profiles with 1.50mm thick. Coving has executed as male and female. Gemale coving with "V" Groove for clip grip for male & supporting at wall to ceiling, wall to wall & wall to floor. Male coving with clip on type power coated / PPGI Nickel - Chrome Anodizing radius - R 70. to avoid dust accumulation at 90 deg. places like wall to floor, wall to wall & wall to ceiling. Make :- Sumangalam / Zindal. | 96 RM |
| 17 | Supply and application of epoxy coving of light green or light blue colour with SIKA brand with 50mmX50mmwidth at the corners of the walls including cost and conveyance of all materials and labour charges etc.,complete for finished item of work for Operation Theatres wall to flooring and wall to wall.(Make :Cipy/SIKHA/ARDEX/STRIDEX/TARGET) | 150 Rm |
| 18 | Supply and application of epoxy flooring of light green or light blue colour in Operation Theatres - Epoxy seamless joint free finish with 3mm thickness and anti slip & water washable chemical resistance durable and non particle shedding with attractive finishing including cost and conveyance of all materials and all labour charges etc., complete for finished item of work. Make : Cipy/SIKHA/ARDEX/STRIDEX/TARGET) | 150 Rm |
| 19 | Supply and application of poly urethane (P.U) of light green or light blue colour with 1mm thickness with anti fungal and anti bacterial chemical resistance durable and non particle shedding including cost and conveyance of all materials and labour charges etc., complete for finished item of work in Operation Theatre walls and ceilings | 300 Rm |
| 20 | Providing & Fixing of Scientific Doors with metal door frames and door shutters made of galvanize steel (base steel as per IS 513 of 0.58 mm thick D quality, galvanized as per IS 277 with Zinc of 120 GSM). coated with Zinc Phosphate Primer to receive any paint on site or finished with Thermosetting Polyurethane paint of Aliphatic Grade providing high levels of scratch resistance and durability/Epoxy polyester powder for powder coating paint thickness 50-60 microns (Dry film thickness) outer frame section of 100 x 58 mm x 1.2 mm thick, shutter section of 0.80 mm thick galvanized steel sheet pressed (roll formed) for 46mm thick fully flush, double skin door shell seam joints at stile edges, in-fill of honeycomb Kraft paper used to give the required rigidity and effective acoustic insulation with 6" Tower bolt – 2 Nos., 6" D handles – 2 Nos., 10" Aldrops – 1 No., Butt Hinges – 6 Nos, Mortise Lock of approved quality – 1 No, frames fixed to the concrete/masonry wall by means of self expanding screws including etc., complete for finished item of work for Double leaf Door | 13 Rm |
| 21 | Supply and Fixing of SS/GI Perforated air Grills with AL VCD as per standard practice. Approved Makes: Airmaster, Systemair, carryair or equivalent | 12 Rm |

| | | |
|----|---|--------|
| 22 | Supply Instalation, testing and commissioning of 60 to 100 degrees F heat Thermostat including making connections and soldering etc, complete. Make: Honey Well / Johnson / Siemanes | 4 Nos |
| 23 | Supply, Instalaltion, testing and commissioning of 0 to 100 RH pressure guage Humidistate including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 4 Nos |
| 24 | Supply, Instalaltion, testing and commissioning of Pressure sensor for VDF including making connections and soldering etc, complete. Make : Honey Well / Johnson / Siemanes | 4 Nos |
| 25 | Supply, Transportation and fixing of 36W/40W (600mm x 600mm) LED Slim Panel Round /Square suitable for Recessed / Surface mounting made of diecast alluminium body with powder coating, acrylic diffuser with Driver, operating voltage range of 150 to 265 Volts AC, P.F > 0.9, Surge protection: 2KV, THD<10%, with high power LED's having efficacy of > 120 lumens/watt, CCT: 3000K - 5700K, minimum CRI>70, .etc., complete a) LUMINAIRE MAKE : Phillips / GE / Crompton / Wipro / Bajaj / Havells / VIN / Renesola b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG. (ELEC-3.9.4 h) | |
| | In side OT's | 24 Nos |

OTs ELECTRICAL ITSMS

| SI. No | Description of item | Quantity |
|--------|--|----------|
| | Electrical items | |
| 1 | Supply of ISI 25mm outer dia medium (1.80mm thickness) grade with IS:9537 part 3 FRLS rigid PVC pipe Makes : VIP / Besto plast / GoldMedal / Million plast / GM /Sudhakar / Polyline/Polycab with all ccessories fixing on chromium plated metallic base saddles including all labour charges etc., complete for run of mains. | 200 Rm |
| 2 | Supply of ISI 32mm width and 12.5mm height Casing and Caping. Makes: Any ISI make | |

| | | |
|---|--|--------|
| 3 | Wiring with 2 runs of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A Modular switch, Ceiling rose/BH/SBH Modular switches with cover plate including all labour charges etc., complete for Light, Fan, Exhaust Fan etc., complete. (for Non Residential Building) Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | |
| 4 | Wiring with three runs of 1.5 sq.mm FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (phase, neutral, earth) in the existing conduit pipe with 6 Amps Modular type switch, and 6 A 3/2 pin Modular type socket with cover plate on common switch board etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 16 Nos |
| 5 | Wiring with 2 of 22/0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable (ISI MARK) in existing pipe with 6A switch and 6A, 3/2 pin socket Modular type with 6A switch control and MS boxes with cover plate fixing on separate board including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 12 Nos |
| 6 | Supply and Fixing of 16A/6A, 2 in one socket with 16A switch control modular type with MS flush boxes with front cover plate including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar Makes of switches:- Legrand Arteor / Schneider Zen celo/ Crabtree Murano/ GM-Zenova / Legrand Myrius / Cabtree Thames Platinum / GM- Zicono/ / Million / Logus / Gold Medal Curve / GIFA / CPL/ Panasonic Vision / Salzer S 90 Series. | 10 Nos |

| | | |
|----|---|---------|
| 7 | Supply and run of 1 of 22 /0.3mm (1.5 Sq.mm) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing pipe for earth continuity including all labour charges etc., complete. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 250 Nos |
| 8 | Supply and run of 3 of 2.5 sq.mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for individual lighting circuits including labour charges etc., complete as required for switch boards. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Nos |
| 9 | Supply and 3 runs of 4.0 sq mm (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing conduit pipe for run of mains including labour charges etc., complete as required including labour charges for 16A sockets. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 100 Nos |
| 10 | Supply & run of 3 of 6.0 Sqmm (84/0.3mm) (phase neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for run of mains including labour charges etc. complete for AC points & SDB's etc as required. Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Nos |
| 11 | Supply and run of 5 of 6 Sq mm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in existing MS conduit pipe for circuits including labour charges etc. complete as required for run of mains from Lighting panel board to TPN DB'S with pin type lugs and connections. [for LDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 160 Rm |

| | | |
|----|---|--------|
| 12 | Supply & run of 5 of 10.0 Sqmm (phases, neutral and earth) FRLS / HFFR / ZHFR P.V.C. insulated 1100V grade as per IS : 694 / 1990 specification flexible copper cable in the existing conduit pipe for run of mains from Power panel board to TPN DB"s with pin type lugs and connections etc., complete. [for PDBs] Makes of wires:- Finolex / RR kabel / Havells / APAR E-beam / KEI / Polycab / Bonton / V-Guard / GM / Million / HPL / Goldmedal / Finecab / Vimal / Fortune Art / Gloster / Kundan cab/Sudhakar | 60 Rm |
| 13 | Supply and Installation of 250 Amps FP, MCCB, 25KA with cable end boxes on suitable angle iron frame work for the areas mentioned in the drawings including all Labours charges, massonry work etc for finished item of work. Make: L&T / Schneider / Siemens / Hager | 1 Nos |
| 14 | Providing independent earthing for Important equipment with 40mm dia 'B' class 2.5m long G.I pipe and 19mm dia 'B' class G.I pipe of 0.3mtr. long connected with reducer providing G.I funnel with mesh enclosed in C.C.Chamber of 400m x 400m x 400mm with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe giving earth connection from electrode through G.I strip of 40 x 6mm x 200mm length with all accessories and labour charges complete, as per IS specifications 732/1982 (Part II) | 4 Nos |
| 15 | Providing independent earthing for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia G.I Pipe of 2.5mtr. length filling with salt and charcoal giving earth connection from electrode G.I strip of 40 mm x 6mm x 200mm length and hume pipe with all accessories and labour charges complete as per IS specification 732/1982 (Part II). | 4 Nos |
| 16 | Supply and fixing of 4way TPN, D.B with IP-43, 63A FP MCB - 1 No for incomer, 10kA-6-32A SP MCBs - 12Nos for outgoing. Including labour charges etc., complete | 4 Nos |
| 17 | Supply of 50 Sqmm 3.5 Core XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I) Makes: Torent / Universal / Unicab / Havells / KEI /Gloster / Polycab / CMI | 200 Rm |
| 18 | Labour charges for run of U.G cable on wall / existing pipe with necessary fixing arrangments such as saddles, clamps, wooden separators etc., (as directed by departmental official) for eath connections for the cables. | 200 Rm |
| 19 | Supply and installation of 10KVA, 312V DC true on line UPS system IGBT based rectifier with input power factor correction, 32 bit micro processor based with isolation transformers , double conversion , SNMP controls, LCD Display ,Pure Sine wave output , with auto static switch, 3 phase input / 3 phase output and modular structure for better thermal technology with warranty upto 3 years.tMakes: CONSUL / Numeric / Emerson / APC. | 4 Nos |
| 20 | Supply and providing of UPS cum battery rack upto 11 to 20 batteries. | 4 Nos |

| | | |
|----|--|--------|
| 21 | Supply and fixing of 12V 42 AH SMF battery including wire leads Makes: Quanta / Racket / Exide. | 80 Nos |
| | Oxygen Pipe lines systems | |
| 1 | Supply and fixing of Copper Pipe with 12 OD X 0.7 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 180 RM |
| 2 | Supply and fixing of Copper Pipe with 15 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 180 Rm |
| 3 | Supply and fixing of Copper Pipe with 22 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 180 Rm |
| 4 | Supply and fixing of Copper Pipe with 28 OD X 0.9 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 180 Rm |
| 5 | Supply and fixing of Copper Pipe with 42 OD X 1.2 mm on wall including cost and conveyance of all materials and all labour charges etc. complete for finished item of work. Make : Mexflow | 180 Rm |

| OTS CIVIL | | |
|------------------|--|------------|
| Sl. No | Description of item | Quantity |
| | Civil items | |
| 1 | Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges , etc., complete | |
| a | Kadapa slabs or Vitrified flooring and Dadoing on sand bed | 200 Sqm |
| b | Old cement mortar plaster | 200 Sqm |
| c | Unreinforced cement concrete up to 15cm thickness | 10 Cum |
| 2 | Granolithic Concrete flooring 20 mm thick with (1:1:2), using 6mm to 12 mm size hard granite machine crushed metal and screened sand laid over CC bed already laid or RCC roof slab, in alternate panels of size not exceeding 1.50 m x 1.50 m, using glass strips and finishing the top surface to required smoothness and slopes and thread lining including cost of all materials like cement, metal sand and water complete for finished item of work. (APSS No.701 & 710) | 150 Sqm |

| | | |
|---|---|------------|
| 3 | Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work.(SS 901,903 & 904) | 200 Sqm |
| 4 | Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, etc., complete for finished item of work in all floors for Internal walls | 300 Sqm |
| 7 | Providing and fixing in true horizontal level 15 mm - Mineral Fiber Ceiling tile of 595 x 595 (Square edge Fissura fine model) using hot dipped Galvanized Steel section exposed surface with pre-coated capping, main Tee of size 24 x 32 mm at every 1200 mm c/c maximum and rotary stitched cross tee of size 24 x 27 mm at every 600 mm c/c and sub-cross tee of size 24 mm x 25 mm at 1200 mm c/c and wall angle of size 19 x 19 mm fixed to periphery of the wall and the above grid is suspended at every 1200 mm c/c in both directions using 2.0 mm thick pre-straightened GI Wire including cost and conveyance of all materials and labour charges such as cutting , fixing of standing of frame work exposing roof making, overheads & contractor profit etc., complete for finished item of work in all floor in all floors. | |
| | Corridors | 100 Sqm |
| 8 | Supply & application of one coat water based cement primer of interior grade I and two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors. | 400 Sqm |

| | | |
|----|--|------------|
| 9 | Flooring with soluble salt porcelain vitrified tiles screen printed and polished of size 600 x 600 mm and thickness between 8-10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders and design as per the approved flooring pattern as directed by the Engineer-In -Charge, laying tiles using spacers of 2mm thick, set over a base coat of CM (1:8) prop. 12mm thick using screened sand over CC bed already laid or RCC roof slab , including neat cement slurry of honey like consistency spread @ 3.3 kgs per sqm. and jointed neatly with white cement paste to full depth mixed with pigment of matching shade including cost and conveyance of all materials like cement, sand, water, tiles, white cement etc., to site (excluding cost of C.C. bed) including cost of base coat and all labour charges for mixing of cement mortar, laying tiles to required slope as directed by the Engineer- in-charge etc., complete for finished item of work. (APSS No.701 & 707) | 100 Sqm |
| 10 | Providing dadoing to walls with glazed red or white full body ceramic wall tiles of size 200 x 300 mm / 245 mm x 325 mm and thickness 6 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs with borders as approved by Engineer-in-Charge set over base coat of CM(1:5) 12 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per sqm and jointing with white cement paste mixed with pigment of matching shade to full depth, including cost of all materials like tiles, cement, sand and water etc., complete for finished item of work. | 100 Sqm |
| 11 | Supply and fixing powder coated aluminium fully glazed swing door as per the approved drawing with fixed fan light of 500mm height at top door using aluminium sections of 101.60 mm x 44.45mm , 3.18 mm thick for frame and door shutter made of styles , top and middle rail of 47.62mm x 44.45mm , 3.18 mm thick and bottom rail of 114.30mm x 44.45 mm , 3.18mm thick,powder coating of alluminium sections 25mm microns thick, 5 mm thick plain float glass fitted with suitable aluminium glazing clips and rubber beading in fan light portion, double shutters fitted with 5mm thick frosted / ground glass in the top half and MDF Board: interior-Both Side Laminated -12 mm thick in the bottom half fitted with suitable aluminium glazing clips and rubber beading,shutters mounted on double action hydraulic floor spring of approved brand manufacture IS : 6315 marked , Hardwyn make M-3000 for doors including cost of cutting floors as required , embedding in floors | |

| | | |
|--|--|--------|
| | <p>and SS cover plates with brass pivot and sigle piece MS Sheet outer box with slide plate etc.complete (Weight Capacity up to 130 Kgs) as approved by Engineer-in-Charge including supply and fixing ISI marked powder coated aluminium fixtures of 4 Nos.tower bolts 10mm bolt (IS:204) 300mm long , 4 Nos.alluminium handles (IS:208) 150mm dia and 2 Nos. aldrops (IS:2681) 300mm long including labour charges for manufacturing door , fixing the door with required No. of screws etc., including overheads & contractors profit complete for finished item of work. (The Aluminium section used shall be standard make confirming to IS 1948 – 1961) and as approved by the Engineer) (2000mmx2600mm)</p> | 42 Sqm |
|--|--|--------|

Annexure - A

Consignee's Lists:

The Modular Operation Theatre have to be erected at the following destinations.

| SI No | Item Name | Qty |
|--------------|---|------------|
| 1. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at SVRRGGH, Tirupathi | 1 |
| 2. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Ananthapur | 1 |
| 3. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at RIMS, Kadapa | 1 |
| 4. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Kurnool | 1 |
| 5. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Nellore | 1 |
| 6. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at RIMS, Ongole | 1 |
| 7. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Vijayawada | 1 |
| 8. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at Victoria Hospital, Visakhapatnam | 1 |
| 9. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at Govt. Chest Hospital, Visakhapatnam | 1 |
| 10. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Guntur | 1 |
| 11. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at GGH, Kakinada | 1 |
| 12. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at KGH, Visakhapatnam | 1 |
| 13. | Erection of Modular Operation Theaters for Upgradation of Infrastructure of NABH accreditation at RIMS, Srikakulam | 1 |

SECTION – VI

PRE - QUALIFICATION CRITERIA

(Referred to in clause 13.3 of ITB)

I. Terms of Qualification for Erection of Modular operation Theatres :

The Bidder should have erected Modular Operation Theaters as specified in the schedule of requirements to any Government/Semi Government Institutions, in any one of the last three calendar/financial years and completed the erection of Modular operation Theatres. The erected units should be in working condition without any adverse remarks.

- The bidder should furnish the information on past erections and satisfactory performance in the proforma given under Section XI- Format B1, duly attested by the Bid signatory
- Bidders shall invariably furnish documentary evidence (End-user Certificate) in support of the satisfactory operation of the Modular Operation Theaters.
- The Bidder shall have an Avg. annual turnover in the last three financial years (2015-16, 2016-17 and 2017-18) of not less than Rs.10 Crs and also to have a positive net worth as per the latest Annual Accounts.
- Towards the above, the bidder should furnish data as per the Format (B3) given in Section- XI, to support that he has the financial capacity to perform the contract. Further the bidder has to submit the corresponding Balance Sheets and Profit and Loss Accounts for verification
 - a) The Bidder, must have necessary quality certifications for processes such as ISO 9001 Quality Management System for Organization or ISO 13485 Quality Management System for Medical Device, wherever applicable.

II. Terms of Disqualification:

1. The Bidders who has withdrawn their bids in any of the previous tenders of APMSIDC
2. A bidder who is placed on the black-list by either APMSIDC or by any other State /Central government's department or organization for the product offered with his bid in the last 3 years
3. A bidder who is placed on the black-list by either APMSIDC or by any other State / Central government's department or organization in the last 3 years
4. A bidder who is currently blacklisted / debarred either by APMSIDC or by any State Government or Central Government Department or Organization
5. The bidder who has been declared as 'undependable supplier' for two (2) items or in two (2) instances in the last one year by the APMSIDC and

6. The bidders against whom there have been reports of substandard Equipment and/or service are liable for disqualification.

Note: In all the above cases, the disqualification cut-off date will be till the contract is signed

III. Not with standing anything stated above, the purchaser reserves the right to assess the Bidders capabilities and capacity to perform the contract should circumstances warrant such an assessment in the overall interest of the purchaser deciding on award.

7. A bidder who is placed on Blacklist either by the APMSIDC or by any other states/central Government. If files a bid in a different name as a different bidder, it is liable to be disqualified. If the principal persons of both, are found to be the same.

SECTION – VII (A): BID FORM

(Name and Address of Purchaser)

Date _____

To
The Managing Director,
APMSIDC, Mangalagiri, Guntur.

Contract No. _____

Gentlemen:

Having examined the Bidding Documents including Addenda No. _____ the receipt of which is hereby duly acknowledged, we, the under-signed, offer to erect Modular Operation Theaters _____ (Description of Goods and Services) in conformity with the said Bidding Documents for the sum as given in the Price Bid (electronically) or such other sums as may be ascertained in accordance with the schedule of prices furnished and made part of this bid.

We undertake, if our bid is accepted, to commence delivery within 90 (Number) days and to complete erection of delivery of all the Modular Operation Theaters and perform incidental services as specified in the contract within 90 (Number) days calculated from the date of receipt of your Notification of Award/Letter of credit.

If our bid is accepted we will obtain the guarantee of a bank in a sum not exceeding 5% of the Contract price for the due performance of the Contract

We agree to abide by this bid for a period of 90 (Number) days from the date fixed for bid opening under Clause 22 of the Instruction to Bidders and shall remain binding upon us and may be accepted at any time before the expiration of that period.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in India like "The Prevention of Corruption Act 1988"

Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this _____ day of _____

Signature: _____

(in the Capacity of) : _____

Duly Authorized to sign bid for and on behalf of

Section VII (B) - Model PRICE Schedules (available on e-procurement Platform)

Information Technology Electro. (P) | <https://tenders.eprocurement.gov.in/ViewItemFormatX.html#>

Current Tender Details

| | |
|--|--|
| Tender ID: L138 | IFB Number / Tender Notice Number: 1.1447MSDC/2016-17, Dated: 07.05.2016 |
| Tender Category: PRODUCTS | Tender Evaluation Type: One-Step |
| Tender Type: O&M | Estimated Contract Value: 0 |
| Tender Opening Date: 17/05/2016 05:15 PM | Bid Submission Closing Date: 02/06/2016 05:15 PM |

Schedule Details

| | |
|------------------------------|---------------------------------------|
| Schedule Name: Miscellaneous | Schedule Description: Different items |
|------------------------------|---------------------------------------|

Item Details

| | |
|--|--|
| Item Code: Surg001 | Item Name: GRAM STAINING KIT |
| Item Description: As per tender document | Item Specification: As per tender document |

Add / Edit Cost Component Details

| ID | Component Name | Type | Percentage / Amount |
|------|--------------------------------|------------|---------------------|
| E001 | CST | --SELECT-- | |
| E002 | Customs Duty | --SELECT-- | |
| E003 | Discount | --SELECT-- | |
| E004 | Entry Tax | --SELECT-- | |
| E005 | Excise Duty Including Cess | --SELECT-- | |
| E006 | Freight Charges | --SELECT-- | |
| E007 | Insurance Charges | --SELECT-- | |
| E008 | Other Charges, if any | --SELECT-- | |
| E009 | Packaging & Forwarding Charges | --SELECT-- | |
| E010 | VAT | --SELECT-- | |

Remarks: [Empty]

| Total MIT Quantity | Offered Quantity (A) | Brand/Make/Model | Basic price Unit (INR) (B) | Basic price Unit(s) Words | Total Cost Component Unit (INR) (C) | Landed Price Per Unit (B+C) |
|--------------------|----------------------|------------------|----------------------------|---------------------------|-------------------------------------|-----------------------------|
| | | | | | | |

SECTION – VIII

The Bid Security shall be in the shape of **Demand Draft** drawn in favour of Managing Director, APMSIDC, Payable at Guntur.

SECTION – IX : CONTRACT FORM

THIS AGREEMENT made the _____ day of _____ between _____ (Name of Purchaser) of _____ (Country of Purchaser) (hereinafter "the Purchaser") of one part and _____ (Name of the Supplier) of _____ (City and Country of Supplier) (hereinafter "the Supplier") of the other part.

WHEREAS the Purchaser is desirous that certain Goods and ancillary services should be provided by the supplier, viz, _____ (Brief description of Goods and Services) and has accepted a bid by the supply of Goods and services in the sum of _____ (Contract price in Words and Figures) (hereinafter "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the conditions of Contract referred to;
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) The Technical and Price bid of the Supplier
 - (b) The approved Technical Specifications,
 - (c) The General Conditions of Contract,
 - (d) The Special Conditions of Contract, and
 - (e) The Purchaser's Notification of Award.
3. In consideration of the payments to be made by the purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provision of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
5. Brief particulars of goods and services which shall be supplied/provided by the Supplier are as under.

| SL NO. | BRIEF DESCRIPTION TO GOODS & SERVICES | QUANTITY TO BE SUPPLIED | UNIT PRICE | DELIVERY TERMS |
|--------|---------------------------------------|-------------------------|------------|----------------|
| | | | | |
| | | | | |
| | | | | |

TOTAL VALUE:

DELIVERY SCHEDULE:

IN WITNESS whereof the parties here to have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, Sealed and Delivered by the

Said _____ (For the Purchaser)

in the presence of _____

Signed, sealed and Delivered by the

Said _____ (For the supplier)

In the presence of _____

SECTION- X: PERFORMANCE SECURITY FORM

To

The Managing Director
APMSIDC,
Mangalagiri, Guntur.

WHEREAS _____ (Name of the Supplier) hereinafter called "the Supplier" has undertaken, in pursuance of Contract No. _____ dated _____ to supply _____ (Description of Goods and Services) hereinafter called "the Contract".

AND WHEREAS it has been stipulated by you in the said contract that the Supplier shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of _____ (Amount of the Guarantee in Words and Figures) and we under take to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limit of _____ (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the _____ day of _____.

Signature and seal of Guarantors

Date _____

Address _____

SECTION XI

FORMAT B1: PROFORMA FOR PERFORMANCE (for a period of last three years)

(Please see Section VI: Qualification Criteria)

Bid No. _____ **Date of Opening** _____ **Time** _____ **Hours**

Name of the Firm _____

| Order placed by _____ (Full address of Purchaser) | Order No | Date | Description of Modular Operation Theaters | Quantity of ordered Modular Operation Theaters | Value of order | Date of completion of Modular Operation Theaters | | Remarks indicating reasons for late delivery, if any | Has the Supplier received full payment towards the supplies made |
|---|----------|------|---|--|----------------|--|--------|--|--|
| | | | | | | Purchase terms | Actual | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Signature and seal of the Bid Signatory

SECTION - XII

DECLARATION FORM

I / We having Our
..... office at read and
understood the terms and conditions contained in the bidding documents under this
notification for bid and offer our bids unconditional, to the extent not stated at any
other part of our bid.

We will not quote or erect the Modular Operation Theaters similar to the ones
offered under this bid notification to any agency or organization in the country, at the
rate lower than the rate quoted in this present tender.

If we found quoting lower rate than the rate quoted to the APMSIDC, to any
other agency in the country during the validity of the present contract, we will remit
the differential cost to the APMSIDC, unconditionally.

Signature :

Date :

Name of the
Firm and address :

SECTION XIII

Check List of Documents to be Uploaded as part of the Bid and Notes to Bidders

I. Documents with the Technical Bid

| Sl. No | Document Description | Documents to be submitted Online & offline |
|---------------|---|---|
| 1 | Process Fee 28,650/- | Online & offline |
| 2 | EMD Presence of Bid Security / Exemption of EMD details | Online & offline |
| 3 | Bid Form Section VII-A | Online & offline |
| 4 | Past Performance Details Format B1 | Online & offline |
| 5 | Financial Capability Details Format B3 | |
| 6 | Letter of authorization to sign the bids | Online & offline |
| 7 | Clause-by-clause commentary on technical specifications | Online & offline |
| 8 | Technical and Commercial deviations statements | Online & offline |
| 9 | Copy of the GST Certificate and Details of IT Returns- PAN / TIN copies. | Online & offline |
| 10 | The Manufacturer, must have necessary quality certifications for both processes and products such as ISO 9001 (Quality Management System for Organization) or ISO 13485 (Quality Management System for Medical Devices), wherever applicable. | Online & offline |

II. Financial (Price) Bid in the format available with the e-procurement platform

- Please note that the Bidder runs the risk of his bid being rejected if the price schedule contains any conditions.

Notes to Bidders

1. Upload the documents in ZIP format with suitable description as defined above.
2. The scanned documents shall be legible failing which they will not be considered.
3. Sign on all statements, documents, certificates uploaded owning responsibility for their correctness / authenticity.
4. All the statements copies of the certificates, documents etc., enclosed to the Technical bid shall be given page numbers on the right corner of each certificate
5. The tenderer is subjected to be blacklisted and the EMD forfeited if he is found to have mislead or furnished false information in the forms / statements / certificates submitted in proof of qualification requirements or record of performance (Please see Corrupt and Fraudulent Practices Clause)
6. All the Bidders are requested to quote with single option only, for the each item offered and please note that bids with multiple options, for any one or all of the items offered, will be rejected by the purchaser as Non-responsive.

| | | | |
|---|--|--------------|--|
| any | | | |
| Remarks of hospital authorities | | | |
| Recommend to release payment YES <input type="checkbox"/> NO <input type="checkbox"/> | The Modular Operation Theaters is working satisfactorily YES <input type="checkbox"/> NO <input type="checkbox"/> | | |
| The Modular Operation Theaters was installed and handed over on (Installation date to be filled in by the Head of the institution or by the end user) | | | |
| | | | |
| Name of End User & Department Mobile No. | | Sign. | |
| Name of representative of Bidder & Organization | | Sign. | |
| Signature of the Executive Engineer, APMSIDC Mobile No. | | Sign. & Seal | |
| Signature of the Medical Superintendent. Mobile No. | | Sign. & Seal | |
| Date: Seal of supplier: | Date: Hospital Seal : | | |

Note: The installation report shall be submitted in a single sheet printed back to back and shall be submitted individually for each location.

On Consignee letter Head

Dt: _____

**ANDHRA PRADESH MEDICAL SERVICES & INFRASTRUCTURE
DEVELOPMENT CORPORATION (APMSIDC)**
THREE MONTHS PERFORMANCE CERTIFICATE
(to be filled by the head of user institution individually for every location)

| | | | | |
|--|------------------|--------------------------|---|--|
| HOSP CODE / Hospital Name: | | | | |
| SUP.CODE / Name of the Bidder | | | | |
| Modular Operation Theaters Details | | | | |
| Name of the location: | | Purchase Order No: | | |
| | | Purchase Order Date: | | |
| | | Purchase Amount | | |
| | | Project Name | | |
| Date of Installation | | Location / Department | | |
| Whether Modular Operation Theaters working satisfactorily without any problem for one month? | | | | YES <input type="checkbox"/> NO <input type="checkbox"/> |
| If No, provide details of Modular Operation Theaters failure in the first month (attach additional details if any in a separate sheet) | | | | |
| BREAK DOWN DETAILS | | | | |
| Break down Reported Date | Attended date | Rectified date | Attended by | Details of beak down / service |
| | | | | |
| | | | | |
| | | | | |
| Present status of the Modular Operation Theater | | | Working satisfactorily <input type="checkbox"/> Not working satisfactorily <input type="checkbox"/> | |
| Recommended to settle the final payment | | | YES <input type="checkbox"/> NO <input type="checkbox"/> | |
| Recommend for trial run for one more month | | | YES <input type="checkbox"/> NO <input type="checkbox"/> | |
| Performance of accessories supplied | | | | |
| Further Training | | | Required <input type="checkbox"/> Not required <input type="checkbox"/> | |
| Remarks of hospital authorities | | | | |
| Three month performance certificate was issued on (date to be filled in by the Head of the institution or by the end user) | | | | |
| Name of End User & Department | | Sign. | | |
| Signature of the Executive Engineer. | | Sign. & Seal | | |

BIDDER

251

MANAGING DIRECTOR

| | | | |
|-------------------------------------|--------------------------|--------------|--|
| Signature of the Superintendent. | | Sign. & Seal | |
| Date: Seal of supplier: | Date: Hospital Seal : | | |

Annexure - III

**ANDHRA PRADESH MEDICAL SERVICES & INFRASTRUCTURE
DEVELOPMENT CORPORATION (APMSIDC)**

GENERAL INFORMATION ABOUT THE TENDERER

Name of the Tenderer

Registered
address of the firm

State:

District

Telephone. No.

Fax. No.

Email.

| | | | | |
|---|---------------|--|----------|--|
| 3 | Address | | | |
| | State | | District | |
| | Telephone No. | | Fax | |
| | Email | | Website | |

Type of Firm (Please relevant box)

| | | | | | | |
|--|--------------|--------------------------|---|--------------------------|-----------------|--------------------------|
| 4 | Private Ltd. | <input type="checkbox"/> | Public Ltd. | <input type="checkbox"/> | Proprietorship | <input type="checkbox"/> |
| | Partnership | <input type="checkbox"/> | Society | <input type="checkbox"/> | Others, specify | <input type="checkbox"/> |
| Registration No. & Date of Registration. | | | | | | |
| Nature of Bussiness (| | | -lease <input type="checkbox"/> relevant box) | | | |
| 5 | | | | | | |
| | | | | | | |