

DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI



TENDER DOCUMENT

TITLE OF THE JOB

**ADDITIONAL & REMAINING WORK OF TRAUMA
CENTER CONSTRUCTION OF SERVICES BLOCK
MEDICAL GASSES AND WATER STORAGE
TANK AT OJHA CAMPUS, DUHS, KARACHI**

**NIT # DUHS/P&D/2018/9475
DATED: JULY 20, 2018**

**OFFICE OF PROJECT DIRECTOR PLANNING & DEVELOPMENT
DOW UNIVERSITY OF HEALTH SCIENCES,
BABA-E-URDU ROAD, BESIDES CIVIL HOSPITAL, KARACHI
TEL / FAX # 021-99216065
E-MAIL: rahim.khan@duhs.edu.pk**

SUBJECT: ADDITIONAL & REMAINING WORK OF TRAUMA CENTER CONSTRUCTION OF SERVICES BLOCK MEDICAL GASSES AND WATER STORAGE TANK AT OJHA CAMPUS, DUHS, KARACHI.

To,

THE PROJECT DIRECTOR

Planning & Development Department,
Dow University of Health Sciences, Karachi.

1. Having examined the tender documents including Instructions to Bidders, Bidding Data, and Conditions of Contract, Specifications, Drawings and Bill of Quantities for the execution of the above-named work, we/I, the undersigned, offer to execute and complete the work and remedy any defects therein in conformity with the Conditions of Contract, Specifications, Drawings, Bill of Quantities for the sum of Rs. _____ (Rupees _____) or such other sum as may be ascertained in accordance with the said conditions.
2. We/I understand that all the Appendices attached hereto form part of this bid.
3. As security for due performance of the undertakings and obligations of this bid, we/I submit herewith a bid security in the amount of Rupees _____ (Rs. _____) drawn in your favour or made payable to **Dow University of Health Sciences (DUHS)** and valid for a period of _____ days beginning from the date, bid is opened.
4. We/I undertake, if our bid is accepted, to commence the works and to complete the whole of the works comprised in the contract within the time stated in Appendix-A to Bid.
5. We/I agree to abide by this bid for the period of 90 days from the date fixed for opening the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
6. Unless and until a formal Agreement is prepared and executed, this bid, together with your written acceptance thereof, shall constitute a binding contract between us.
7. We do hereby declare that the bid is made without any collusion, comparison of figures or arrangement with any other bidder for the works.
8. We understand that you are not bound to accept the lowest or any bid you may receive.
9. We undertake, if our/my bid is accepted, to execute the Performance Security referred to in Clause 10 of Conditions of Contract for the due performance of the Contract.

10. We confirm, if our bid is accepted, that all partners of the joint venture shall be liable jointly and severally for the execution of the Contract and the composition or the constitution of the joint venture shall not be altered without the prior consent of the procuring agency.

In the capacity of _____duly authorized to sign Bids for and on behalf of
Dated this _____day of_____2018

Signature: _____

(Name of Tenderer in Block Capitals)

(Seal)

Address: _____

Witness:

Signature: _____

Name: _____

Address: _____

Occupation: _____

APPENDIX-A TO TENDER

1	Amount of Performing Security	2.5% of the Contract price. Total amount including performance security and retention money deducted from bills 5% of contract price stated in Letter of Acceptance.
2	Time for Furnishing Programme (Commencement of Work)	Within _____days from the date of receipt of Letter of Acceptance.
5	Time of Commencement	Within 10 days from the date of receipt of Project Director's Notice to Commence, This shall be issued after signing of Contract Agreement.
6	Time of Completion of Works	12 Months days from the date of Notice to Commence.
7	Amount of Liquidity Damages/ Delay Damages / Penalties	0.1% per day of Contract Price for the work remains un-commenced and un-completed after due date up to maximum of 10% of Contract price and after that termination of contract after 07days notice.
8	Defect Liability Period/ Period of Maintenance	90 days from the effective date of Taking over/ Completion Certificate.
9	Percentage of Retention Money	10% of the amount of the Interim/Running Payment Certificate.
10	Limit of Retention Money	5% of Contract Price stated in Letter of Acceptance.

**Signature of Contractor /Seal of Firm
Authorized representative of Firm**

INSTRUCTIONS TO TENDERS

- a) Project Director Planning & Development, Dow University of Health Sciences, calls tenders for the **“ADDITIONAL & REMAINING WORK OF TRAUMA CENTER CONSTRUCTION OF SERVICES BLOCK MEDICAL GASSES AND WATER STORAGE TANK AT OJHA CAMPUS, DUHS, KARACHI”** with the bill of quantities attached here to be submitted by or before 11:00 A.M on **18-08-2018**. Tenders cost will not be reimbursed for any cost of any kind whatsoever incurred in connection with the preparations and submission of their tenders.
- b) The tender for the each work should be in the sealed envelope bearing name of the work / contractor / firm clearly marked and addressed to Project Director Planning & Development, Dow University of Health Sciences, Karachi.
- c) The tender may be delivered in person or sent by registered mail so as to reach on or before the date and time stated above. Any tender received after the stipulated time will not be considered regardless of the cause of delay.
- d) All tender are invited to the present for the opening of the tender in **18-08-2018** at 11:30 A.M. The name of each tenderer and his total contract price only will be read aloud and recorded.
- e) Any tender/tenders without earnest money will not be entertained. Earnest money of the awarding firm may be return after successful completion of work. If the supplier fails to commence or complete the awarded work within the stipulated time his/her work order will be cancelled as per rule and earnest money shall also be forfeited.
- f) Detailed particulars of the work / works can be seen in the Project Director Office on any working day during the office hours.
- g) Tender shall be made in the form supplied therefore, with all items and blanks properly filled in. all data and figures and the signature of persons signing the tender shall be in ink. The completed BOQ should be without interlineations, alterations or erasures but if these are necessary to correct errors made by the tenderer, person(s) signing the tender shall initial them. Conditional tenders will not accepted.
- h) All unit prices filled in the schedule of quantities shall be firm. The unit prices against each item of work and estimate amount and all other data called for shall be given.
- i) All prices quoted shall be deemed to include all costs of performing the works, including labour, material, income tax, duties, octori charges, royalties permit etc. and no claim whatsoever shall be accepted in case of escalation any or all prices entered in rate of bid.
- j) The actual sum to be paid to the contractor whose tender is accepted shall be determined by measuring the work actually done or supplying/repairing the actual number of items in accordance with the work order and valuing it al the rate or prices by the contractor in the tender.
- k) “In-case of discrepancy between the unit price and amount entered for any item in the schedule of quantities, the unit price will be taken as correct and the amount will be adjusted accordingly when the tender is being examined”.

- l) 10 % security deposit will be deducted from each bill on the paid amount of the contract, which will be returned after maintenance period of 03 months.
- m) The tender must be signed in each and every page by a person(s) authorized to do so.
- n) The site can be visited on any working day during the office hours.
- o) “Engineer” means the Project Director Planning & Development of the University or any other Engineer appointed by him.
- p) The earnest money will be forfeited in case the contractor fails to commence the work within 10 days time after issue of work order or left the work incomplete after commencement and during execution.
- q) The Competent Authority reserve the right to reject any or all the tenders, increase or decrease the scope of work or divide item of work among bidders.
- r) That the Contractor shall be responsible to keep in good condition the premises of the University and shall not damage any property belonging to student of the University and incase of any loss damage caused by the contractors or its employee to any property of the compensate and or indemnify the university or the student as the case may be.

PROJECT DIRECTOR
Planning & Development Department
Dow University of Health Sciences, Karachi

DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI
DIRECTORATE OF PLANNING & DEVELOPMENT

TERMS & CONDITIONS

1. The work / supply is required within 10 Days from the date of letter of Commencement/award.
2. Inspection: *Nominated Inspection Committee will make Inspection of Work.*
3. In case of late delivery @ 0.1% per day will be charged on bid amount deducted from the bill, but not more than 10% of contract value.
4. Quantities shown in the quotation are approximate and no claim shall be entertained for quantities of executed being 30% more or less than those entered in the BOQ.
5. All prices will include all costs of performing the works including labour, material, Income Tax, GST, Octroi Charges, royalties & transportation etc., as mentioned in BOQ.
6. No subletting of all or any part of work will be allowed at any cost / reasons.
7. The supplier will see the site / sample before quoting the rates.
8. Store will be delivered at Dow University of Health Sciences, Karachi.
9. Central Stores and Inspection Officer will issue inspection certificate after inspection through Inspection Committee.
10. If the work / supply is not found according to the specification and samples provided, will be rejected at risk and cost of the manufacturer and in case the manufacturer fails to work / supply the order, the firm will be black listed.
11. Payment:
 - 11.1 The Actual sum to be paid shall be determined by quantifying / measurements of items actually supplied valuing it at the rates/prices quoted in the approved quotations.
 - 11.2 10% security deposit will be retained from each bill upto a period of six months from the date of supply of order.
 - 11.3 Part payment against part supply can be allowed.
12. Request letter for issuance of tender documents should be supported with:
 - a. Copy of GST, SST & NTN registration Certificate and PEC Registration in appropriate category C2 with the following codes BC01 – BC02 – CE01 – CE04 – CE09 – CE10 – EE01 – EE02 – EE04 – EE06 – EE07 – EE08 – EE11 – ME01 – ME02 – ME03 – ME06. **(MANDATORY)**
 - b. Copies of all relevant Certificate/Authorization letter must be attached (where required) mentioned with Tender Enquiry.
13. The bidder must have done at least five (05) contracts of similar nature and magnitude “Similar nature means Construction of Building preferable at educational institutes and hospitals” (Please submit copy of PO/Contract Agreement/Notification of Award). Comply with specifications mentioned in bidding documents.
14. The Bidder should not have been barred of any of provincial or federal Govt. Deptt Agency, organization or autonomous body or private sector organization anywhere in Pakistan. (Submission of undertaking on 100/- legal stamp paper). All the proposed reports should be well known for its quality, performance and reliability.

15. The bidder must have turnover/sales exceeding **400 Million** in PKR annually in any of last three years (Submission of Audited Annual Reports or reputable Bank confirmation letter).
16. Latest income Tax Certificate (NTN), valid GST Registration Certificate and valid SRB registration.

PROJECT DIRECTOR
Planning & Development Department
Dow University of Health Sciences, Karachi

**ADDITIONAL AND REMAINING WORK OF TRAUMA CENTER.
CONSTRUCTION OF SERVICE BLOCK, MEDICAL GASSES & WATER
STORAGE TANK @ D.U.H.S OJHA CAMPUS KARACHI**

ABSTRACT

S. No.	Item of Work	Amount
	REMAINING WORK OF TRUAMA CENTER	
1	CIVIL WORK	
2	INTERNAL WATER SUPPLY & SANITARY WORK	
3	ELECTRICAL WORK	
4	VOICE & DATA COMMUNICATION WORK	
5	FIRE FIGHTING & FIRE ALARAM SYSTEM	
6	CENTRAL MEDICAL GASSES/MECHANICAL, CHEMICAL & SERVICES	
TOTAL AMOUNT RS.		

CONTRACTOR

S. NO.	ITEM OF WORK	QTY.	RATE	UNIT	AMOUNT
CIVIL WORK					
1	Dismantling of Existing Block Masonry and disposal of rubbish materials by mean of Tractor Trolley or Dumper. Trauma center Service block	500.00 500.00		P.Cft P.Cft	
2	Dismantling reinforced cement concrete separating reinforcement and disposal of rubbish materials by mean of Tractor Trolley or Dumper	175.00		P.Cft	
3	Removing Doors/ Windows with Chowkats a) Doors with chowkats. b) Windows with chowkats.	10.00 14.00		Each Each	
4	Dismantling of C.C. Plain and disposal of rubbish materials by mean of Tractor Trolley or Dumper Ratio 1:4:8 Trauma center Service block	294.00 120.00		Cft Cft	
5	Excavation in foundation of buildings, bridges and other structures as per required section, including dag belling, dressing filling around structure with excavated earth watering ramming& compacting etc complete in all respects as per specifications provided and instruction given by the Engineer Incharge. Lead up to 300 Feet & lift up to 6 feet (i) IN ALL TYPE OF SOILS EXCEPT HARD ROCK. Trauma center & U/G Tank Service block	38,898.00 3,500.00		Cft Cft	
6	Stone pitching hand packed with surface levelled off to the correct section with hammer dressed stones (size100-150 mm) and filling voids with crush ash under foundation , compacting with compactor etc complete in all respects as per specifications provided and instruction given by the Engineer Incharge . Trauma center Service block	3,000.00 1,500.00		Cft Cft	

7	<p>Cement Concrete Plain including placing compacting, finishing and curing complete (including screening and washing of crush bajri) without form work. etc complete in all respects as per specifications provided and instructions given by the Engineer Incharge</p> <p>Ratio 1:4:8 (CLASS 'E') (Under Foundation Using S.R Cement)</p>				
	Trauma center & U/G Tank	31,480.00		Cft	
	Service block	3,280.00		Cft	
8	<p>Providing and laying plain cement concrete Class "D"(1:3:6) work in foundation having minimum s cube. crushing strength of 1500 lbs per sq. inch at 28 days for blinding or under floors where required using approved quality 1" maximum size graded crushed stone or gravel with approved quality sand including all formwork, Roding, levelling, compacting and curing etc. complete as per specifications, drawings and to the entire satisfaction of Engineer. Ratio 1:3:6 (CLASS 'D')</p>				
	Trauma center & U/G Tank	1,800.00		Cft	
	Service block	400.00		Cft	
9	<p>Providing & Applying Water Proof Membrane Korean P.E Canvas Sheet on Earth Filling in Bed As Per Specification & Instruction of Engineer Incharge.</p>				
	Trauma center & U/G Tank	3,000.00		Sft	
	Service block	3,000.00		Sft	
10	<p>BITU-POLE Treatment to plastered or exposed Concrete Surface under foundation to be buried in trench as directed by Engineer Incharge.</p>				
	Trauma center & U/G Tank	3,600.00		Sft	
	Service block	1,050.00		Sft	

11	<p>Providing and laying R.C.C Class 'B'(Ratio 1:1-1/2:3) having a minimum crushing strength of 4000 P S I at 28 days), using 6mm to 18mm sizes graded crushed aggregate and fine aggregate including approved quality form work and its removal, all operations of vibrating, levelling, consolidating, curing and cube / cylinder lab tests of pouring material at 07 days & 28 days etc. Complete in all respects as per specifications and drawings and approval of Engineer Incharge. This rate does not includes the cost of steel bars and its erection which will be paid separately</p>				
i	<p>Class "B" Concrete (Footings/ RAFTS Using S.R Cement)</p>				
	Trauma center & U/G Tank	5,800.00		Cft	
	Service block	4,500.00		Cft	
ii	<p>Class "B" Concrete (Pedestal Columns & Plinth Beams Using S.R Cement)</p>				
	Trauma center	560.00		Cft	
	Service block & U/G Tank	850.00		Cft	
iii	<p>Class "B" Concrete Super Structure Columns Using O.P.C Cement)</p>				
	Trauma center & U/G Tank	1,200.00		Cft	
	Service block	1,000.00		Cft	
12	<p>Providing and laying R.C.C Class 'C'(1:2:4 having a minimum crushing strength of 3000 PS I at 28 days), using 6mm to 18mm sizes graded crushed aggregate and fine aggregate including approved quality form work and its removal, all operations of vibrating, leveling, consolidating , curing and cube / cylinder lab tests of pouring material at 07 days & 28 days etc. Complete in all respects as per specifications and drawings and approval of Engineer Incharge .This rate does not includes the cost of steel bars and its erection which will be paid separately</p>				
(i)	Lintels	165.00		Cft	
(ii)	Projections	278.00		Cft	
(iii)	Stair Case & Landing	210.00		Cft	
(iv)	Roof Beams	1,320.00		Cft	
(v)	Roof Slabs	1,450.00		Cft	

13	<p>Fabrication of Deformed Steel Bars, reinforcement for cement concrete work i/c cutting, bending, laying in proper position, making joints & fastenings etc complete. This rate include cost of binding wire, over lapping, extra wastage, laboratory testing of steel and removing rust from bars. (Grade 60, Minimum Yield Strength 60000 Lbs / P.S.I)</p>				
	<p>Deformed Bar Trauma center & U.G Tank Service block</p>	<p>45.00 25.00</p>		<p>Ton Ton</p>	
14	<p>Earth filling with off site material (brought from out side source) in plinth, depression and where ever required laid in 300 m m layer well watered, consolidated and compacted with mechanical means complete as per drawings and as directed by the Consultants. Lead up to 06 Mile with in source and Lift up to 05 Feet</p>				
	<p>Trauma center & U/G Tank Service block</p>	<p>2,000.00 1,000.00</p>		<p>Cft Cft</p>	
15	<p>Providing and laying Class 'D' 1:3:6 cement concrete Solid Block Masonry wall 4" to 8" in thickness and above set in 1:6 cement sand mortar in ground floor superstructure i/c racking of joints and curing, etc, complete.(Minimum crushing strength 1300-lbs/P.S.I)</p> <p>Trauma center 200 mm Thick Service block 200 mm Thick</p> <p>Trauma center 150 mm Thick Service block 150 mm Thick</p> <p>Trauma center 100 mm Thick Service block 100 mm Thick</p>	<p>3,130 2,200 2,130 1,400 780 300</p>		<p>P.Sft P.Sft P.Sft P.Sft P.Sft P.Sft</p>	
16	<p>Cement Plaster in Ratio 1:4 (18 mm Thick) i/c floating coat of cement in proper design and profile on Roof Ceilings etc complete in all respects as per specifications and drawings and approval of Engineer Incharge</p> <p>Trauma center & U/G Tank Service block</p>	<p>6,500.00 6,500.00</p>		<p>P.Sft P.Sft</p>	

17	<p>Cement Plaster in Ratio 1:6 (15 mm Thick) i/c floating coat of cement in proper design & profile on walls/beams & columns .This rate also i/c providing expanded metal at the joint of R.C.C.members and block masonry where as required etc complete in all respects as per specifications and drawings and approval of Engineer Incharge.</p>				
	<p>15 mm thick Internal / External</p>				
	<p>Trauma center & U/G Tank</p>	8,500.00		P.Sft	
	<p>Service block</p>	5,500.00		P.Sft	
18	<p>Cement Plaster in Ratio 1:4 (13 mm Thick) i/c floating coat of cement in proper design and profile on walls, beams & columns etc complete in all respects as per specifications and drawings and approval of Engineer Incharge</p>				
	<p>13 mm thick Internal / External</p>				
	<p>Trauma center & U/G Tank</p>	8,500.00		P.Sft	
	<p>Service block</p>	5,500.00		P.Sft	
19	<p>Providing and laying Topping of cement concrete (1:2:4) including surface finishing & dividing into panels. 3" thick.</p>				
	<p>Trauma center & U/G Tank</p>	7,020.00		P.Sft	
	<p>Service block</p>	2,000.00		P.Sft	
20	<p>- Providing & Fixing mild steel louver door & window with angle framing chowkat 1-1/2" x 1-1/2" 6mm thick door framing 1-1/4" x 1-1/4" thick angle with mild steel sheet 16 swg for louver with all respect accessories, Painting 3-Coats</p>				
	<p>Trauma center & U/G Tank</p>	200.00		P.Sft	
	<p>Service block</p>	550.00		P.Sft	
21	<p>Providing and spraying pesticide solution of approved manufacturer inside building line in Two stages i.e. on floor base & all wood work etc, using "Agenda" or equivalent of Jaffer Brothers water mixed solution as per specifications and approval of Engineer.</p>				
	<p>Trauma center & U/G Tank</p>	12,390.00		P.Sft	
	<p>Service block</p>	3,000.00		P.Sft	

22	Providing & fixing PVC Water Stopper 12" high PVC water stopper for safeguarding them from hydro-static pressures & water seepages of approved quality & maintaining proper alignment, complete in all respects as per drawings, specification & as per instructions of Consultant/ Engineer In-charge.	250.00		P.Rft	
23	Providing and fixing National Tiles Flooring jointed in grey cement and laid over bed of 1"to 2" thick grey cement concrete bed in ratio 1:2:4 i/c washing / filling of joints with grey cement etc: complete in all respect.	8,000.00		P.Sft	
23.1	Providing and fixing Kerb stone pre cast block of 3750lbs/Psi industrial made size 6" thick including the cost of cartage excavation and 3" thick lean concrete of 1450 PSI for giving clean bed for resting of edge blocks and filling joints with cement sand mortar nin ratio 1:4 this rate also i/c two coats of enamel reflector paint over the exposed surface of block etc complete in all respect as per specification provided and instruction given by the engineer incharge.				
	a) 12" x 12"	1,500.00		P. Sft	
	b) 12" x 18"	1,500.00		P. Sft	
24	Providing and fixing JUNG-SHAHI Stone Tile on Face Elevation (Plain Stone Tile Duly Mixed With Ornamental Embraced Stone Tile as per Design Requirements) (12" x6" x 3/4") jointed in white cement and laid over bed of 3/4"thick grey cement send mortar ratio 1:3 i/c washing / filling of joints with white cement etc: complete in all respect	12,000.0		P.Sft	
25	Providing and fixing Stone Coping (12"x 2") with lining of 2" Thick jointed in white cement and laid over bed of 1/2"thick grey cement send mortar ratio 1:3 i/c washing / filling of joints with white cement etc: complete in all respect	2,550.0		P.Rft	
26	Providing Making Single Top Counter up to 2'-6" Height i/c. Masonry Plaster R.C.C Slab Top of Artificial Marble and Internal and External Side and Edge imported Tile				
	a) Type-I	4.00		Each	
	b) Type-II	4.00		Each	

27	Providing and fixing Staircase/Terrace railing with 2"DIA STEEL PIPE @ 1-1/2" C/C Vertically and on top railing With 4 Nos 3/8" dia pipe horizontally between main pipe posts of 2-1/2" dia as per required design, embedded properly in RCC work by means of iron lugs welded with MS rods, complete as per drawing, specification and ratification of the Architect unto any height in any floor.	3,900.00		P.Sft	
28	P/Fixing Stainless Steel Pipe Railing along with wall of 50 mm dia for Handicap persons etc complete in all respects as per directives of Engineer In charge.	1,000.00		Rft	
29	Providing and fixing with sunk iron screws Wooden Border for Wall Dado & other border work of approved design/shape having width not less than 10 inches i/c French polishing etc complete in all respects as directed by Engineer Incharge.(ASH wood /Oak wood)	1,000.00		Rft	
30	Providing and installation polished Entrance glass with fabricating and fixing standard S.S Channel (using standard section)as approved top & bottom the architect with approved quality bottom rails, brush finish as required, with sand blasting Complete with patch fitting, top & bottom locks (from ISEO, Geza or equivalent as approved). Contractor is required to provide joints between the panels with minimum 5mm thick clear silicon from Dow corning or other approved, as per requirement of Architecture Drawings and specifications etc complete in all respects as per directives of Engineer In charge.	4,200.00		P.Sft	
31	Providing and fixing U-PVC sheet chowkats for o.t doors etc complete in all respect. (i)Size 10"x2-1/4"	180.00		P.Rft	

32	Providing & Fixing O.T Pharma Door FRP Composite with Vision Panel (Double Glazed) i/c 8 mm clear glass on std height for vision etc complete as per approved drawing and specification with the entire satisfaction of engineer incharge.	200.00		P.Sft	
33	Providing of Floor Hinge Motor/Machine Model HS-522Z, imported Door Check NFG (Made in Japan)	16.00		Each	
34	Preparing surface and Applying water proofing chemical 1st primary coat of 26 AC 10/55 chemical and then heavy rich coat with canvas cloth and in last two coats of same chemical etc complete in all respects as per directives of Engineer Incharge.				
a	without canvas U/G Tank	13,000.00		P.Sft	
b	Trauma center & U/G Tank (with Canvas)	43,000.00		P.Sft	
c	Service block (with Canvas)	2,500.00		P.Sft	
35	Making Chamfer Gola 6" wide Ratio 1:2:4	4,500.00		P.Rft	
36	Applying/ pasting Epoxy Paint of superior quality suitable for hospitals on wall or floor where as required of approved make and design etc complete in all respects as directed by Engineer Incharge.				
	(a) Flooring 3.00 mm Thick	1,600.00		P.Sft	
	(b) On Walls 0.50 mm Thick	2,760.00		P.Sft	
37	Providing and fixing G.I. sheet chowkats of 18 gauge for doors i/c pouring C.C. 1:2:4 inside chowkat & coat of red oxide paint etc complete in all respect. (i)Size 13"x2-1/2"	180.00		P.Rft	
38	Providing and fixing Printed Granite / Porcelain Master Tiles Flooring (16"x 16" x 1/2") jointed in white cement and laid over bed of 1"to 2" thick grey cement concrete bed in ratio 1:2:4 i/c washing / filling of joints with white cement etc: complete in all respect (Imported Premium Quality costing Rs 1800 per meter or above)				
a	Flooring	5,000		P.Sft	
b	Wall Dado	8,500		P.Sft	
c	6" Wide Wall Border	1,500		P.Rft	

39	Providing and fixing Printed Glazed Ceramic Tiles Flooring jointed in white cement and laid over bed of 1/2"thick grey cement sand mortar ratio 1:3 i/c washing / filling of joints with white cement etc: complete in all respect (Imported Premium Quality costing Rs 1600 per meter or above)	8,500		P.Sft	
40	Providing and fixing Porcelain Master tiles with chequers suitable for ramp or slopes (Size 12" x 12") on floor jointed in white cement and laid over bed of 1/2"thick grey cement sand mortar ratio 1:3 i/c washing / filling of joints with white cement etc: complete in all respect. Premium Quality costing Rs 1000 per meter or above)	4,000.00		P.Sft	
41	S/F in position Aluminum box channels framing (100 mm x 40 mm) for office chamber partitions i/c Aluminum hinged doors of (approved make and design) with Aluminum Sheet 3 mm on bottom up to 300 mm height , 5 mm thick tinted frost glass glazed on remaining portion glass , imported Door Closer over Door and Alpha (Japan) locks including handles stoppers etc complete in all respects as per directives of Engineer Incharge. (Prime / Chawla or Equivalent)				
	Trauma center	1,000.00		P.Sft	
	Service block	240.00		P.Sft	
42	P/F lassani wooden cabinet 16" deep (American / Italian Style) made up of frame of partal wood 2"x2" & shutter of lassani board 3/4" with Formica on outer side i/c making drawn shelves etc: as per required colors catcher handle etc: as per required the cost also i/c T&P carriage from shop to site of work	1,000.00		P.Sft	
43	Providing & Laying 3/4" thick Imported Ten Brown / Black Glary Granite i/c cutting making shapered gola, Line as approved shade. (Trauma center)				
	(a) Step/Landing/Columns/Entrance Floor	5,500.00		P.Sft	
	(b) Riser	850.00		P.Sft	
	(b) Sink Granite	60.00		P.Sft	

44	<p>Aluminum Curtain Wall Section 1.9 mm Thickness. 75 mm x 50 mm (Height), & 1.9 mm Thickness 75 mm x 50 mm (Width), Sino Pak aluminum Company, Powder Coated/ Anodized. MS Flange Plate 3 mm Thickness, Regular Size 3 in x 7 in Min. or Bigger As Per Requirement. Galvanized Rawl Bolts & Curtain Wall Nut Bolt Washer All Heavy Duty. With Scaffolding & Electricity. Tempered Glass 5 mm Blue One Side. All Above with Structural Silicon (on both sides). Necessary Hardware, Accessories etc. Complete in All Respect.</p>				
a	Elevation	6,500.00		P.Sft	
45	<p>Providing and fixing Vinyl Tile Flooring and in dado of approved make and design with adhesive solution over existing floor etc complete in all respects as directed by Engineer Incharge.</p>	3,500.00		P.Sft	
46	<p>Providing and Fixing Mild steel spiral type Stair having circumference of 5 feet dia with 5" Dia 12 Swg with step checker Plate 4mm thick with railing top Pipe 2" Ø 16 SWG including 5/8" Ø Square bar for Supporting step and railing pipe etc complete in all respects i/c painting one coat of red oxide and two coats of enamel paint over metal iron as per matching shade etc complete in all respects as per directives of Engineer Incharge.</p>	1,050.00		P.Rft	
47	<p>Providing and fixing mild steel 3" C channel 1/4" thick frame with chequer plate 3mm thick angle distribution 1 1/2" x 1 1/2" etc complete in all respects/c two coat of enamel paint with all respect accessories etc complete.</p>	200.00		P.Sft	

48	<p>Providing and fixing Roof Shade made of Fiber Glass Sheet 3 mm rest over frame structure of tubular pipe frame consisting of various pipes having sizes 38mm x 18mm, 18mm x 18mm and 25mm x 25mm (16guage) fixed with G.I pipe posts of 60 mm dia painted G.I pipes 10 ' high above ground and 2' buried under ground . This rate i/c all type of work such as cutting and fixing Fiber Sheet with tubular pipe frame fixing with nuts ,bolts, bitumen washers etc complete in all respects i/c painting one coat of red oxide and two coats of enamel paint over metal iron work as per matching shade etc complete in all respects as per directives of Engineer Incharge (Sky Light Canopy + Ramp)</p>	3,500.00		P.Sft	
49	<p>Providing and fixing double glazed one side green and one side plain 5mm tempered with aluminum curtain wall including all respect accessories etc complete.</p>	400.00		P.Sft	
50	<p>Applying 3 Coats of Silk Matt Finishing with primary coat and preparing base surface and filling where as required as per requirement of Architecture Drawings and specifications etc complete in all respects as per directives of Engineer In charge.</p>				
	<p>Trauma center & U/G Tank Service block</p>	<p>145,000.00 5,600.00</p>		<p>P.Sft P.Sft</p>	
51	<p>Applying 3 Coats of Plastic Emulsion Paint i/c primary coat of chalk and preparing base surface and filling where as required as per requirement of Architecture Drawings and specifications etc complete in all respects as per directives of Engineer In charge.</p>				
	<p>Trauma center & U/G Tank Service block</p>	<p>110,000.00 2,500.00</p>		<p>P.Sft P.Sft</p>	
52	<p>P/Applying 3 Coats of Weather Shield Paint of superior quality i/c preparing base surface and filling etc complete in all respects as per directives of Engineer In charge .</p>				
	<p>Trauma center & U/G Tank Service block</p>	<p>20,000.00 2,500.00</p>		<p>P.Sft P.Sft</p>	

53	Dampa ceiling tiles with clamping rail system in various finishes with imported approved hangers for suspension as per detailed drawing etc complete in all respects as per directives of Engineer In charge.	4,500.00		P.Sft	
54	Providing and fixing Air curtain for door 4' long Panasonic	8.00		Each	
55	Supplying and fixing False Ceiling of gypsum sheet (2'-0"X 2'-0"imported) in panels including making frame work of imported aluminum 'T' Channels	5,000.00		P.Sft	
56	Supplying & fixing window printed blinds (Horizontal / Vertical) with printed design and of approved colour i/c fixing in windows with necessary accessories.	6,500.00		P.Sft	
57	Providing & Fixing Patient Bed Curtain with Channeling Cloth Curtain, J-Cart with all respect accessories etc complete.	35,000.00		P.Sft	
58	Providing & Fixing door Alteration as per requirement Fixing glass 5mm plain of approve design with wooden gola etc complete.	50.00		Each	
59	Providing & Fixing Stainless Steel Corner Angle 1½" x 1½" for Column edges with rubber and Screw with all respect accessories etc Complete.	1,835.00		P.Sft	
60	Providing & Fixing Stainless steel Both Side Plate for Door Opening. (Push Plate) Size: 4" x 10" with all respect accessories.	200.00		Each	
60.1	Providing and fixing S.S plat for (O.T Door) door opening 6" x 3'-0" 14 gauge fixing with screw etc complete in all respect.	12		Nos.	
61	Providing and Fixing Door Closer (Foreign made Branded)	20.00		Each	

62	<p>Providing & Fixing Mild Steel Shaft frame 1½" x 1½" and Horizontal Bars equal distance as per design 1" x 1" square type and Vertical ¾" x ¾" equal distance as per design with locking arrangement hinges Wheels, tower bolt all respect accessories etc complete including i/c 02 coats of enamel paints with one coat of red oxide over doors etc complete in all respects as per specifications and drawings and approval of Engineer Incharge.</p>				
	a) Main Door	350.00		P.Sft	
	b) Grill for manifold and plant room	500.00		P.Sft	
63	<p>Providing & Fixing Mild Steel grating angle frame 1½" x 1½" x 2/8" horizontal mild steel square bar 5/8" with folding system including Paint & all respect accessories. 12" wide</p>	210.00		P.Rft	
64	<p>Providing and fixing G.I 18 gauge Expansion Joint 10" wide with Screw polish finish etc complete</p>	650.00		P.Rft	
65	<p>Labour Charges for shifting Electricity, Water & IT/Data Networking lines to other site as per required</p>	1.00		Job	
66	<p>Laying White mosaic topping 1/2" thick with marble khapcha dividing in panels with mosaic patti 3/8" thick of approved any pattern with one part of white cement to two parts of marble chips of required shade and size and of approved pigment in the ratio of 1:12 of cement used in topping including rubbing and polishing over the top of 1" thick C.C. 1:2:4 Bed etc complete in all respects as per directives of Engineer Incharge</p> <p>Architectural & structural Design charges paid to be Architect.</p>	2,500.00		P.Sft	
67	<p>Note:- This will be executed through contractor. The contractor will have to arrange the qualified professional consultant who will prepare all necessary architectural and structural drawings i/c R.C.C Design and the payment to such consultant may be acknowledge to Project Director DUHS as the same will also paid to contractor accordingly</p>	1.00		Job	

68	Providing making and fixing aluco bond .05 mm thick F/R.(USA) with aluminum base fram i/c wastage scaffolding T & P e.t.c as per design or direction by architect and engineer complete in all respect .	10,500.00		Sft	
69	Providing and fixing Lead door with wooden skeleton pressing Formica both side as per approved shade and design etc complete	150.00		Sft	
70	Providing and fixing Lead clear glass for CT Scan and X-ray Room				
	a) 5'-0" x 3'-0"	1.00		Each	
	b) 3'-9" x 1'-0"	4.00		Each	
	c) 1'-0" x 1'-0"	4.00		Each	
71	Providing and fixing wooden door leaping golden teak as per required shutter size	6,000.00		P.Rft	
72	Providing and fixing wooden door picture railing as per approved size golden 3" wide teak	7,500.00		P.Rft	
73	Making of Trench for X-ray and CT Scan with existing floor cutting tile removing and fixing G.I cable tray 200mm x 100mm Swg 18 with all respect etc complete	300.00		P.Rft	
74	Clearance and Shifting malbah and debris from site to other site	10.00		Dumper	
75	Providing and fixing wooden skeleton framing with partal wood 1-1/2" x 2" with lassani 10 mm thick fixing both side with all respect accessories etc complete	350.00		Sft	
76	Providing and fixing light weight Galvanized iron framing for walls with cement board 10mm thick both side for partition wall with all respect accessories etc complete	350.00		Sft	
				Grand Total	

S. NO.	ITEM OF WORK	QTY.	RATE	UNIT	AMOUNT
INTERNAL WATER SUPPLY & SANITARY WORK					
1	Providing & fixing English Commode with Seat cover including flushing cistern, tee stop cock etc complete in all respects (Porta /Marachi or Equivalent) (Classic Model)	3.00		Each	
2	Providing & fixing Orisa W.C 23" Clear including flushing cistern ,tee stop cock etc complete in all respects (Porta/ Equivalent) (Classic Model)	3.00		Each	
3	Providing and fixing C.P Brass Double bib cock with Muslim Shower 1/2" dia (Master/ Sonex or equivalent)	6.00		Each	
4	Providing & Fixing Wash Basin size 24" x18" with wash basin mixture and pedestal etc complete in all respects (Porta/Marachi or Equivalent) (Classic Model)	6.00		Each	
5	Providing & Fixing C.P Brass Wash Basin Mixer with Crystal Head 1/2" Dia (Master/Sonex or equivalent).	6.00		Each	
7	Providing and fixing C.P Brass Bath Shower Mixer (Wall Mounted) with crystal head 1/2" dia (Master / Sonex or equivalent)	16.00		Each	
8	Providing & Fixing Soap tray of made plastic of Superior Quality and Design with fine finishing with C.P screws etc complete.	16.00		Each	
9	Providing & fixing chrome plated brass towel rail complete with brackets fixing on wooden cleats with 1" long c.p brass screws. (Superior Quality) Towel Rail 30" long	52.00		Each	

10	Providing and fixing C.P Brass Concealed TEE stop cock with crystal head 1/2" dia (Master / Sonex or equivalent)	207.00		Each	
11	Providing G.I pipes of approved standard company with fittings such as tee, bend, socket, elbow .union & clamps where as required etc i/c threading ,fixing cutting & fitting complete with & i/c the cost of breaking through walls & roof for making consealed , making good etc, painting two coats after cleaning the pipe etc, with white zink paint with pigment to match the colour of the building and testing with water to a pressure head of 200 feet and handling. (I.I.L.M or Equivalent)				
a)	2" Ø	3,000.00		P/Rft	
b)	1-1/4" Ø	800.00		P/Rft	
c)	1" Ø	1,600.00		P/Rft	
d)	3/4" Ø	2,400.00		P/Rft	
e)	1/2" Ø	100.00		P/Rft	
12	Providing and fixing U.P.V.C. Pipe 4" dia grade-I (AGM or equivalent) including all fittings such bends tees etc with cutting pipe up to required length, fitting with collars, clamps and rubber solvent. This rate also includes making holes in walls, plinth, floor and roof for fixing pipe and making good in c.c. 1:2:4. Testing pressure head 200 feet.				
	a) 4" Dia	1,500.00		P.Rft	
13	Providing and fixing handle valve made by kit Italy				
a)	1/2" Dia	6.00		Each	
b)	3/4" Dia	56.00		Each	
c)	1" Dia	8.00		Each	
d)	1-1/4" Dia	8.00		Each	
14	Providing and fixing Gun Metal wheel Threaded Valve 2" Dia(Made in Italy)	12.00		Each	

15	Providing and fixing Mono Block water pumping set size 2"x 2-1/2" (Golden or Equivalent) with 5 H.P motor of 2850 RPM having Three phase 440 Volts connection including base plate and also making C.C. 1:3:6 platform of required size and fixing with nuts and bolts complete in all respect. This rate also i/c 2-3/.036 P.V.C insulated power wiring,10 Amp Main Switch for motor etc complete in all respects	2.00		Each	
16	Providing and fixing Brass foot valve 2" dia (Imported)	4.00		Each	
17	Providing and fixing Brass check valve 2" dia (Imported)	4.00		Each	
Grand Total					

S. No.	Item of Work	Qty.	Rate	Unit	Amount
ELECTRICAL WORK					
	WIRING/WIRING ACCESSORIES				
1	Wiring for light, fan or plug point with 1.5 sq.mm single core, PVC insulated wire copper conductor wire in 25" mm dia PVC conduct recessed in the wall column, roof etc, including 1 sq.mm single core PVC insulated wire as ECC as required				
(i)	(From D. B to Switch Board)	1,050		P. Point.	
(ii)	(From Switch Board to Point)	850		P. Point.	
(iii)	(From Point To Point)	850		P. Point.	
2	Circuit wiring to switch board including any wiring from switch board to switch board with 2 x 2.5Sqmm + ECC 1 x 2.5 Sqmm 1 core PVC wires 25mm dia of PVC conduit exposed/concealed as shown drawing	200		Each	
3	Wiring for O.T. Light From DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia PVC conduit exposed/concealed as shown on drawings. Complete in all respects.	3		Each	
4	Wiring for two way light point with 1.5 sq.mm single core, PVC insulated wire copper conductor wire in 25mm dia PVC conduct recessed in the wall column, roof etc, including 1 sq.mm single core PVC insulated wire as ECC as required	4		Each	
5	Wiring for Group Control Emergency & Exit Light fixtures from DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia PVC Conduit as exposed / concealed shown on drawings. Complete in all respects.	8		Each	
a	Same as above item but wiring from light point to point.	17		Each	
6	Wiring of 13A/15A socket unit from DB to forts outlet with following size of wires in 25mm dia PVC conduit of Exposed/Concealed 2x 2.5Sqmm CU/PVC+ECC 1x2.5Sqmm CU/PVC	750		Each	
7	Wiring of 13A Duplex Flat Pin Switch Socket unit (for DVR/LCD1 Camera) from DB to first outlet with following size of wires in 25mm dia PVC conduit of exposed / concealed as shown on drawings. Complete in all respects.				

a	2x4 Sq.mm Cu/PVC + ECC 1x4 Sq.mm Cu/PVC	15		Each	
b	Same as item above but wiring from outlet to outlet.	20		Each	
8	wiring of 20A switch unit (for Air curtain)from DB to air curtain point following size of wires in 25mm dia PVC conduit od exposed /conceaed as shown drawing				
a	2x4 Sq.mm Cu/PVC + ECC 1x4 Sq.mm Cu/PVC	8		Each	
	CABLE CONTAINMENT				
9	Providing, fixing UPVC pipes excavated trench i/c necessary fixtures whereas required with rubber solvent as per specifications and drawings etc complete.				
a	25mm dia PVC Conduit	328		RFT	
b	32mm dia PVC Conduit	328		RFT	
c	38mm dia PVC Conduit	328		RFT	
d	50mm dia UPVC Conduit (Class-D)	66		RFT	
e	75mm dia UPVC Conduit (Class-D)	66		RFT	
f	100mm dia UPVC Conduit (Class-D)	66		RFT	
10	Providing and installation of following sizes 16 / 18 SWG Perforated G.I Cable Tray & Ladder with 18 SWG G.I Cover as per details given in the drawings and specifications. Complete with all supporting hangers, brackets, elbows, tee & mounting accessories etc.				
a	75 x 75 mm Cable Tray 18 SWG & Cover 18 SWG	625		RFT	
b	100 x 75 mm Cable Tray 18 SWG & Cover 18 SWG	574		RFT	
c	150 x 75 mm Cable Tray 18 SWG & Cover 18 SWG	519		RFT	
d	150mm x 300mm Cable Tray 18 SWG & Cover 18 SWG	120		RFT	
e	225 x 75 mm Cable Tray 18 SWG & Cover 18 SWG	246		RFT	
f	300 x 75 mm Cable Tray 18 SWG & Cover 18 SWG	164		RFT	
g	450 x 75 mm Cable Tray 16 SWG & Cover 18 SWG	132		RFT	
h	600 x 75 mm Cable Tray 16 SWG & Cover 18 SWG	66		RFT	
i	300 x 100 mm Cable Tray 16 SWG & Cover 18 SWG	33		RFT	
j	750 x 100 mm Cable Tray 16 SWG & Cover 18 SWG	230		RFT	

	SWITCHES & SOCKETS			
11	Providing & fixing 10Amps polycarbonate flame retardant One way switch with fancy gang plate fixed on die fabricated powder coated metal board recessed in wall or column including connection as required (E31/2/3A Clipsal Make)			
(a)	One Switch Plate	65		Each
(b)	Two Switch Plate	48		Each
(c)	Four Switch Plate	85		Each
(d)	Six Switch Plate	66		Each
(e)	Eight Switch Plate	75		Each
12	Providing, installation, testing, commissioning and termination of following size of CU/PVC/PVC & CU/XLPE/PVC Cables for Distribution Board in already installed PVC conduit / Cable tray, including all accessories, Complete in all respect as shown on drawing.			
a	1x1C-300 Sq.mm Cu./PVC/PVC + 2x1C-70 Sq.mm PVC	3,200		Rft
b	1x4C-185 Sq.mm Cu./PVC/PVC + 2x1C-70 Sq.mm PVC	788		Rft
c	From MLVP to Panel Lift - FF 1x4C-95 Sq.mm Cu./PVC/PVC + 2x1C-50 Sq.mm PVC	263		Rft
d	4C-10 Sq.mm Cu./PVC/PVC + 1C-10 Sq.mm PVC	1,444		Rft
e	4C-16 Sq.mm Cu./PVC/PVC + 1C-16 Sq.mm PVC	4,397		Rft
f	4C-25 Sq.mm Cu./PVC/PVC + 1C-16 Sqmm PVC	296		Rft
g	4C-70 Sq.mm Cu./PVC/PVC + 1C-16 Sqmm PVC	1,149		Rft
h	3C-6 Sq.mm Cu./PVC/PVC + 1C-6 Sqmm PVC	230		Rft
i	LT Panel to Cooling Tower 50Sqmm 4 core PVC/PVC Cable + 2 x 70Sqmm S/C PVC ECC.	101		Rft
j	LT Panel to Chiller Water Pump DB 95 Sqmm 4 core PVC/PVC Cable + 2 x 70 Sqmm S/C PVC ECC.	101		Rft
k	LT Panel to Chiller Plant DB 2 x 150 Sqmm 4 core PVC/PVC Cable + 2 x 70 Sqmm S/C PVC ECC.	210		Rft
l	LT Panel to Electric Room 3 x 240 Sqmm 4 core PVC/PVC Cable	163		Rft

m	LT Panel to Electric Room 2 x 150 Sq.mm 4 core PVC/PVC Cable	181		Rft	
n	LT Panel to PFI 240 Sq.mm 4 core PVC/PVC Cable	24		Rft	
LIGHTING FIXTURES					
13	Providing and installation of following lighting fixtures complete with ballast, starter p.f.i capacitor, high quality Driver and specified lamps. (Subject to approval of Architect / Consultant)				
a	Note: Color temperature shall be finalized as per Architect's / end user's approval. Recessed Down Light / Spot Light Fixture with 7W LED (COB Type), OSAKA/Philips Color 4K CRI 80	158		Each	
b	Recessed Down Light Fixture with 18W LED (COB Type), OSAKA/Philips Color 4K CRI 80	100		Each	
c	Recessed Down Light Fixture with 12W LED (COB Type), OSAKA/Philips Color 4K CRI 80	2		Each	
d	Surface Mounted Down Light Fixture with 18W LED (COB Type), OSAKA/Philips Color 4K CRI 80	50		Each	
e	Pendant Decorative Light Fixture with 17W LED (Lamp / COB Type), OSAKA/Philips Color 4K CRI 80	2		Each	
f	Recessed / Surface Mounted Emergency Light Fixture with 3W LED having Built-In battery pack unit. Philips or equivalent	17		Each	
g	Recessed 40W LED Panel (Dimensions 2' x 2'), OSAKA Color 4000K CRI 80	1,200		Each	
h	Recessed 40W LED Panel (Dimensions 1'x4') OSAKA colour 4000K CRI80.	60		Each	
i	Wall Mounted Light Fixture with 15W LED Lamp (IP-65) , Color 4K CRI 80 OSAKA/Philips	69		Each	
j	High Intensity LED Tape / Rope Light (Philips/Equivalent)	8		Rft	
k	Flood Light With 400 HPI-T Lamp (Philips Tempo)	2		Each	
l	Ceiling / Surface Mounted Dust Proof Pacific Light fixture with 2x18W LED Lamp. Philips Equivalent	44		Each	
m	Surface mounted batten tube light fixture (2 ft.) with 10W LED Lamp, Color Temp 4000K make Philips or equivalent.	2		Each	
n	Surface mounted batten tube light fixture (4 ft.) with 18W LED Lamp, Color Temp 4000K make Philips or equivalent.	2		Each	

14	EXIT LIGHTING/INSECT KILLER LIGHTING				
a	Ceiling Mounted / Pendant Emergency Exit Sign in Green Color with 8W LED, including Battery Backup and Directional Arrow	8		Each	
b	Ceiling/ Wall mounted Insect Killer Light.	11		Each	
15	Earthing Providing, Fixing, Testing and Commissioning of 15 x meters long, 100mm dia of UPVC Pipe with Cover, Copper Rod 01" x 10', Copper Conductor for holding Rod in 95mm - 120mm with lugs, Copper Strip 1' x 1.5" x 3/8" including heavy insulators, all related chemicals compounds as per drawing and specifications. Main Whole with Cover in all respect. Result of Earth Pit MUST BE Less than 01 Ohm and 01 Volt.	16		Each	
16	Providing and fixing Earth set with Copper Rod 1" Dia buried in the ground at a depth of 65 feet or less if water comes out from the ground level (with salt and charcoal, or Earth chemical powder) etc.. Making the pit 65 feet deep by excavation of all type	4		Each	
17	Earth Connecting Point (ECP) Providing and fixing Earth set with 2'x2'x1/4" copper plate buried in the ground at a depth of 12 feet or less if water comes out from the ground level (with salt and charcoal, or Earth chemical powder) etc.. Making the pit 12 feet deep by excavation of all type of soil (except soft or hard rock) i/c fixing of 8 SWG copper wire in 1/2" G.I conduit complete in all respects as required.	12		Each	
18	Stranded bare copper conductors of following sizes in appropriate size of UPVC conduit laid in floor/raft from Earth Station to ECP to as shown in drawings. Complete in all respects including termination at ECP.				
a	70 Sq.mm Bare Copper Conductor	820		P.Rft	

18	<p>Providing, installation, testing and commissioning of following LV Panels and Distribution Boards made with 14/16 SWG sheet steel housing (14 SWG for floor standing & 16 SWG for wall mounted) with approved color and having specified circuit breakers as shown on drawing. (Refer Single Line Diagram and Power Schematic)</p> <p>Note: 1) Cost of Intelligent Lighting Control Relay and Power Supply unit should be included in cost of Distribution Board. 2) Safety locking arrangement is required for main incoming circuit breakers of all distribution boards. 3) All the Panels should be front accessible and maintainable.</p>				
1	Panel Light & Power-GF	1.00		Each	
2	Panel Light & Power-FF	1.00		Each	
3	Panel MRI. CT Scan, X-RAY-GF	1.00		Each	
4	Panel Lift-FF	1.00		Each	
5	Panel - AHU-GF	1.00		Each	
6	Main UPS DB-OT-FF	1.00		Each	
7	LDB Ground Floor & First Floor	8.00		Each	
8	UPS DB, GF Control Room	1.00		Each	
9	UPS DB-OT-1-FF	1.00		Each	
11	UPS DB-OT-2-FF	1.00		Each	
12	UPS DB-OT-3-FF	1.00		Each	
13	PDB-G1	1.00		Each	
14	PDB-G2	1.00		Each	
15	PDB-G3	1.00		Each	
16	PDB-G4	1.00		Each	
17	PDB-G5	1.00		Each	
18	PDB-G6	1.00		Each	
19	PDB-G7	1.00		Each	
20	PDB-F1	1.00		Each	
21	PDB-F2	1.00		Each	
22	PDB-F3	1.00		Each	
23	PDB-F4	1.00		Each	
24	PDB-F5	1.00		Each	
25	PDB-F6	1.00		Each	
26	MRI-DB-GF	1.00		Each	
27	CT Scan, DB GF	1.00		Each	
28	DB X-RAY-1-GF	1.00		Each	
29	DB X-RAY-2-GF	1.00		Each	
30	DB X-RAY-3-GF	1.00		Each	
31	DB X-RAY-4-GF	1.00		Each	
32	DB Lift - 1,2,3,3-Roof	5.00		Each	
33	DB AHU - 1-GF	1.00		Each	
34	DB AHU - 2-GF	1.00		Each	
35	DB AHU - 3-GF	1.00		Each	
36	DB AHU - 4-GF	1.00		Each	

37	DB AHU - 1-FF	1.00		Each	
38	DB AHU - 2-FF	1.00		Each	
39	DB AHU - 3-FF	1.00		Each	
40	DB AHU - 4-FF	1.00		Each	
19	<p>MAIN DB Panel</p> <p>Supplying, installation, connection testing & commissioning of Main Distribution Boards double powder quoted Panel Color, in 16 SWG, should be factory assembled Ready complete controlled Wired/Standard Capacity Copper Bus Bars, MCCB (Adj) Breakers , LED Indications, Digital Volt Meters, Digital Ampere Meters with CT's 2000/5, Neutral & Earth Copper Bus Bars 2000Amperes & Complete as per Electric Drawing, should Be Original Schneider/Terasaki JAPAN made MCCB Breakers OR approved / equalant in all respect. As per site Engineers directions.</p> <p>02x 2500Amp ACB/MCCB (Adj)/ Breaker 06x 1000Amp ACB/MCCB (Adj)/ Breaker 02x 630Amp ACB/MCCB (Adj)/ Breaker 04x 250Amp ACB/MCCB Breaker</p>	1.00		Complete	
	<p>SMDB Panel</p> <p>Supplying, installation, connection testing & commissioning of Sub Main Distribution Board, double powder quoted Panel Color, in 16 SWG, should be factory assembled Ready complete controlled Wired/Standard Capacity of material, LED Indications, Digital Volt Meters, Digital Ampere Meters with CT's 1000/5, Neutral & Earth Copper Bus Bars & Complete as per Electric Drawing, should Be Original Schneider/Terasaki JAPAN made ACB & MCCB Breakers OR approved / equalant in all respect.</p> <p>01x 800Amp ACB/MCCB (Adj)/ Breaker 02x 250Amp ACB/MCCB (Adj)/ Breaker 04x 160Amp ACB/MCCB Breaker 04x 100Amp ACB/MCCB Breaker</p>	4.00		Nos	
	<p>Service Block SMDB</p> <p>Supplying, installation, connection testing & commissioning of Sub Main Distribution Board, double powder quoted Panel Color, in 16 SWG, should be factory assembled Ready complete controlled Wired/Standard Capacity of material, LED Indications, Digital Volt Meters, Digital Ampere Meters with CT's 1000/5, Neutral & Earth Copper Bus Bars & Complete as per Electric Drawing, should Be Original Schneider/Terasaki JAPAN made ACB & MCCB Breakers OR approved / equivalent in all respect.</p>	01		Nos.	

20	<p>01x 1000Amp ACB/MCCB (Adj)/ Breaker 02x 800Amp ACB/MCCB (Adj)/ Breaker 02x 630Amp ACB/MCCB (Adj)/ Breaker 02x 250Amp ACB/MCCB Breaker</p> <p><u>Machine DB MRIC</u> Providing and fixing size 24" x 48" 16Swg wall mounted surface type powder coated fixing with 10mm rawal bolt having incoming 1x250 Amp 36K 4pole MCCB Terasaki and 1x160 Amp 3pole Schneider Isolator load breaker switch 5x300 Amp copper busbar and 3 x 250 CT and outgoing 12 x 20 Amp Sp 3 x 10 Amp 1x 32 Amp TP with 3 voltmeter 500 Volt 1 x 300 Amp Ammeter with Selector switch with 3 pilot lamp and complete all respect accessories etc (MRI). As per site Engineers directions.</p>	1.00		Each	
21	<p>D.B of CHILLER PLANT Providing, Installation, testing & Commissioning of Chiller Plant Distribution Board size 30' x 40' 415 volt, 3 phase, 4 wire 50Hz A/C System having incoming 1 x 800 Amp MCCB/ACBB Breakers (Terasaki/Schneider) & outgoing 4 x 1000 Amp Basbar with 3-CT 1000/5 Amp & 04x outgoing ACB/MCCB Breakers 400 - 630Amp (Adj), Digital Volt and Amp Meter with selector Switch, 3 Indication Lamp & earth bar and complete as required. As per site Engineers direction.</p>	2.00		Each	
22	<p>D.B of CHILLER WATER PUMP Providing, Installation, testing & Commissioning of Distribution Board size 48' x 40' in 16SWG, 415 volt, 3 phase, 4 wire 50Hz having incoming 1 x 400 Amp MCB/MCCB (Terasaki/Schneider) TP 3-CT 400/5 Amp, 400Amp Amp Meter with selector, 500 volt Voltmeter with selector & outgoing 4 x 500 Amp Copper Basbar, 3 x 100 Amp TP MCB, 3 x 60 Amp TP MCB, 3 Indication Lamp & earth bar and complete as required. As per site Engineers directions.</p>	1.00		Each	

23	D.B of COOLING TOWER Providing, Installation, testing & Commissioning of Distribution Board size 36' x 36' 415 volt, 3 phase, 4 wire 50Hz having incoming 1 x 250 Amp ACB/MCCB Breaker (Terasaki/Schneider) with 4 x 250 Basbar, 3-CT 300/5 Amp, Digital Voltmeter & Ampers Meter with selector Switch, & outgoing 4 x 100 Amp MCCB Breakers, 3 Indication LED Panel Lamp & earth bar and complete as required. As per site Engineer direction.	1.00		Each	
TOTAL					

S. NO.	ITEM OF WORK	QTY	RATE	UNIT	AMOUNT
VOICE & DATA COMMUNICATION SYSTEM					
1	<p>Providing and fixing Simplex Face plate having 1 Gang Cat-6 RJ-45 I/O for Voice, white / off white finish, complete with shuttered click-ins, labels and all accessories including back box, recessed on wall or column as per design drawings.(clipsal)</p>	65		Each	
2	<p>Providing and fixing Simplex Face plate having 1 Gang Cat-6 RJ-45 I/O for Data, white / off white finish, complete with shuttered click-ins, labels and all accessories including back box, recessed on wall or column as per design drawings.(clipsal)</p>	250		Each	
3	<p>Providing and fixing Duplex Face plate with 2 Gang Cat-6 RJ-45 I/O for Voice, white/off white finish, complete with shuttered click-ins, labels and all accessories including back box. recessed on wall or column as per design drawings.(clipsal)</p>	20		Each	
4	<p>Providing and fixing Duplex Face plate with 2 Gang Cat-6 RJ-45 I/O for Data, white/off white finish, complete with shuttered click-ins, labels and all accessories including back box. recessed on wall or column as per design drawings.(clipsal)</p>	20		Each	
5	<p>Providing and laying CAT-6, UTP Cable for Voice Communication System from Communication Rack to each workstation / outlet in 25 mm PVC conduit / channel as per drawings including termination and tagging at both ends. Complete in all respects.(3M)</p>	15650		Rft	
6	<p>Providing and laying CAT-6a, UTP Cable for Data Communication System from Communication Rack to each workstation / outlet in 25 mm PVC conduit / channel as per drawings including termination and tagging at both ends. Complete in all respects.(3M)</p>	20500		Rft	

7	Providing and fixing CAT-6a, Patch Panel equipped with RJ-45 I/Os for Data Communication System including all labeling and all mounting accessories. Complete in all respects.				
a	24-Port CAT-6a Patch Panel for Data	15		Each	
8	Providing and fixing CAT-6a, factory certified Patch Cords of specified color having RJ-45 connectors at both ends for Data Communication .				
a	3 meter long.	230		Each	
b	1 meter long.	230		Each	
9	Providing and fixing Front Cable Organizer for Voice & Data patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	14		Each	
10	Providing and fixing Communication Rack 42U TOTEN (Floor Mounted) , 19 inches suitable for installation of standard patch panels and etc. Complete with floor base, vertical cable managers. Rack shall be equipped with power distribution units (PDUs) with at least 5 imported power sockets etc. Complete in all respects.	2		Each	
11	Providing and fixing Communication Rack 12U (Wall Mounted) , Complete with vertical cable managers. Rack shall be equipped with power distribution units (PDUs) with imported power sockets etc. Complete in all respects.	6		Each	
12	Providing and fixing 25 Pair, CAT-6 shielded , 0.6 mm dia, twisted pair telephone cable to be installed in 25mm dia PVC conduit / channel from Control room to Communication racks as per drawings including connection, labeling and tagging. Complete in all respects.	656		Rft	

13	Providing and fixing CAT-6 UTP cable for nurse call system from nurse call panel to nurse call push button in 25mm dia PVC conduit / channel as per drawing including termination & tagging at booth ends complete in all respects.(3M)	12,136		Rft	
14	Providing and commissioning and testing wiring of RG-6/U CAT-6 cable for CCTV system in 25mm dia PVC conduit from each camera to Digital Video Recorder (DVR) as per drawings including terminations.	5,200		Rft	
15	Providing & Fixing Cisco Catalyst 3850 Series Switches with 4 x Gigabit Ethernet with Small Form-Factor Pluggable.	14		Each	
16	Providing and fixing SFP Module for Optical Fiber for giga (1Ghz) Cisco	10		Each	
17	Providing & Fixing ODF Optical Fiber Mount Rack	3		Each	
18	Providing & Fixing Optical Fiber panel	12		Each	
19	Optical Fiber Splicing	48		Each	
20	Providing & Fixing MDF Box (50-Pair)	1		Each	
21	Providing & Fixing MDF Box (100-Pair)	1		Each	
22	Providing & Fixing 300 Pair MDF Box	1		Each	
23	Provide & Fixing Telephone Sets (Panasonic) in Required Locations	100		Each	
24	Providing & Fixing Korona Module	30		Each	
25	Providing, installation, testing and commissioning of IP Based CCTV Camera 4.0 MP Samsung or LG Korea for CCTV System including communication accessories, housings, mounting brackets, suspension rods etc. required for completion of the system.	36		Each	

26	providing and fixing NVR HD box (32-Channel) Samsung or LG Korea Complete with all connecting cords, accessories, software for Integration.	2		Each	
27	Providing & Fixing with Bracket 40" LED Samsung.	4		Each	
28	Providing & Fixing Hard Disk (6-TB) Surveillance Grade	8		Each	
29	Providing & Fixing 8 x 8 HDMI Matrix Switch with Scaler	2		Each	
30	Providing & Fixing Network Switch Cisco Gigabit 16-Port	4		Each	
31	Providing and fixing Smart LED TV 48" Samsung with wall bracket etc complete.	6		Each	
32	Providing and laying HDMI Cable 10 meter	6		Each	
33	Providing and fixing RJ 7 with channeling with connector	2000		Rft	
34	Providing and fixing Splinter 4 gang	4		Each	
35	Providing and fixing joinder	4		Each	
				TOTAL	

S. NO.	ITEM OF WORK	QTY.	RATE	UNIT	AMOUNT
FIRE FIGHTING & FIRE ALARAM SYSTEM					
	<u>FIRE HYDRANT SYSTEM</u>				
1	Pump Set, Electrical Motor and Diesel Engine Driven, Horizontal End Suction Type, Capacity 500 GPM at 8 Bar with Jockey Pump, Controller star delta and Standard Accessories Excel Series, Standard Approved, SFFECO Dubai, Model 500 EDJ-8 star delta and with only discharge manifold with 1-year Warranty, Training & Free Maintenance.	1.00		Set	
2	Installation, Commissioning & Testing of Fire Pumps Complete with Flexible Couplings,	1.00		Job	
3	SUPPLY AND INSTALLATION OF SEAMLESS SCHEDULE-40 MS PIPE Ø4"	1,040.00		Rft	
4	SUPPLY AND INSTALLATION OF SEAMLESS SCHEDULE-40 MS PIPE Ø3"	360.00		Rft	
5	SUPPLY AND INSTALLATION OF SEAMLESS SCHEDULE-40 MS PIPE Ø2"	500.00		Rft	
6	FITTING, ACCESSORIES & SUPPORT	1.00		Lot	
7	SUPPLY AND INSTALLATION OF HDPE PIPE 4" SDR 11 PN 16	500.00		Rft	
8	FITTING, ACCESSORIES & SUPPORT	1.00		Lot	
9	SUPPLY AND INSTALLATION OF Fire Hose Pipe Cabinet 24" x 24" x 8" Painted Red Made of M.S Sheet Wall Mounted □Lock & Handle	6.00		Each	
10	HYD060-CI-100RD 2 Way Fire Hydrant 2 x 2-1/2" Control Valve with Female BS Instantaneous Outlet Body Material: Cast Iron To B 1452 Outlet : Copper Alloy BS 1400 Test Pressure: 30 bar (435 PSI) Working Pressure: 20 Bar (290 PSI) finishing : Red Color 'SRI' Malaysia	6.00		Each	

11	OSW-Fire Fighting Hoses, Quality Syntax 500-White Inside EPDM-rubber lined, Outside white plain, Jacket: 100% High Tenacity olyesteryarn Temperature range: From -40°C UPTO +100°C Approval: EN 14540 M.E.D. 96 / 98 / EC Bursting pressure: 50 bar Working pressure: 17 bar 65 MM – 2-1/2” DIA x 30m (100 FT.) or 15m (50FT.) Made In Germany Fitted with original German male / female light alloy BS – couplings. (100-Rft) (External Work)	6.00		Each	
12	Triple Purpose Nozzle For Jet, Spray & Fog 2-½“ dia Material: Brass Pak / China made. (External Work)	6.00		Each	
13	OS&Y GATE VALVE 4"(UL/FM PPROVED) FlangeXFlange, 250 PSI APC CHINA. (External Work)	4.00		Each	
14	Supply of New Sffeco Fire Hose Reel Swinging Type BS EN 671 approved Hose: Hose is semi rigid made of rubber in red color manufactured to European standards BS EN 694. The hose has three ply with two synthetic rubber layers and textile reinforcement. Diameter of hose: 1” dia Length of hose: 30 m Max. Working pressure: 12 bar Min. Bursting pressure: 42 bar Proof pressure: 24 bar Conforming to: EN 694 Nozzle: Rigid plastic fast opening. (equivalent diameter 6mm) Shut-spray-jet: spray discharge pattern in conical form with a spray angle more Than 45°. Valve & nipple: Valves shall be of 1” ball Valve and nipple of 1”Body made of brass Model: SF/30 ‘Sffeco’ Saudi Arabia. Including Fire Hose Reel Cabinetde of 18 SWG M.S. Sheet Font: SS, Back: MS Size 30” x 60” x 12” Pak made. Complete in all respect.	14.00		Each	
15	Supply And Installation AUTOMATIC AIR VENT	7.00		Nos.	
16	DRS095-CI-002-RD BREECHING INLET CI- 2 WAY 4” TE/PN16	1.00		Each	

17	HFC 236-FA clean agent Fire extinguisher 06-kg capacity with UL listed gas (NFPA approved alternative of Halon 1211) Deep drawn seamless cylinder, made of carbon steel C/W pressure gauge, valve, wall bracket & initial charge Manufactured to exacting standards Under ISO 9001, tested to EN3 standard Made in China	28.00		Each	
18	EXCAVATION OF TRENCHES, PIPE JOINTING & BACKFILLING FOR UNDERGROUND PIPING	2,250.00		Job	
19	Drawings, Design, Supervision & Engineering.	1.00		Job	
<u>Fire System In CT-Scan, MRI, UPS Room & Technical Room</u>					
20	52-Ltr Container Assembly (DOT) UL LISTED C/W VALVE ASSEMBLY, ELECTRIC ACTUATOR , LOW PRESSURE SWITCH, LABEL & WALL BRACKET SAPPHIRE, UK	1.00		Set	
21	106-Ltr Container Assembly (DOT) UL LISTED C/W VALVE ASSEMBLY, ELECTRIC ACTUATOR , LOW PRESSURE SWITCH, LABEL & WALL BRACKET SAPPHIRE, UK	1.00		Set	
22	147-Ltr Container Assembly (DOT) UL LISTED C/W VALVE ASSEMBLY, ELECTRIC ACTUATOR , LOW PRESSURE SWITCH, LABEL & WALL BRACKET SAPPHIRE, UK (303.207.006)	2.00		Set	
23	DISCHARGE NOZZLE	8.00		Each	
24	Novec 1230 Fluid, 3M (Cat No.300.207.001)	409.00		Kgs	
25	MANUAL ACTUATOR, Sapphire, UK (Cat No.304.209.002)	4.00		Each	
26	ABORT SWITCH, SURFACE MOUNT TYPE C/W IAM IDNET SUPERVISORY MODULE (UL, ULC listed & FM approved) <u>Simplex, Tyco Fire Protection Products, USA</u> <u>(Cat No.2080-9057)</u>	4.00		Nos.	
27	2080-9060 MAINTENANCE SWITCH WITH LAMP SURFACE MOUNT (UL, ULC listed & FM approved) <u>Simplex, Tyco Fire Protection Products, USA</u>	4.00		Each	

28	Conventional Deluge Release Panel c/w Mounting Hardware, IOM Manual, EOL Resistor kit, Backup Batteries <u>UL Listed, FM Approved</u> <i>Simplex, Tyco Fire Protection Products, USA (Cat No.4004-9302)</i>	2.00		Each	
29	Conventional Electronic Horn (<u>UL, ULC listed & FM approved</u>) Simplex, Tyco Fire Protection Products, USA (Cat No.4901-9820)	4.00		Each	
30	Conventional Electronic Horn cum Strobe (<u>UL, ULC listed & FM approved</u>) Simplex, Tyco Fire Protection Products, USA (Cat No.4906-9127)	4.00		Each	
31	Conventional Photo Smoke Detector C/w 2 wire Base (<u>UL, ULC listed & FM approved</u>) Simplex, Tyco Fire Protection Products, USA (Cat No.4098-9601/4098-9788)	8.00		Each	
32	INSTALLATION WITH LABOR & MATERIAL PVC CONDUIT, FR CABLE AND FITTINGS (CT-Scan) M.S piping Network (Seamless Schedule 40)	1.00		Job	
33	INSTALLATION WITH LABOR & MATERIAL PVC CONDUIT, FR CABLE AND FITTINGS (CT Scan Machine Room) M.S piping Network (Seamless Schedule 40)	1.00		Job	
34	INSTALLATION WITH LABOR & MATERIAL PVC CONDUIT, FR CABLE AND FITTINGS (MRI Scan) M.S piping Network (Seamless Schedule 40)	1.00		Job	
35	INSTALLATION WITH LABOR & MATERIAL PVC CONDUIT, FR CABLE AND FITTINGS (MRI UPS + Machine Room) M.S piping Network (Seamless Schedule 40)	1.00		Job	
	<u>Fire Alaram System. Simplex</u>				
36	Intelligent addressable 4 Loop fire Alarm Control Panel with 854 Char multi-Line LCD Display Complete with 1-No. EPS Info alarm INTL 240V, 6-Nos. IDNET2 Loop Cards, Factory built-Configured Main Board Power Distribution Module 220 V (UL., ULC Listed & FM Approved) Simplex, USA. i/c Dry Rechargeable Battery 12V 18-Ah (2-Nos)	1.00		Each	

37	4098-9714. Intelligent Addressable Photoelectric Smoke detector Programmable Sensitivity Range 0.2% to 3.7% / ft obscuration along with standard base with output for remote LED (UL, ULC Listed & FM Approved) Simplex, USA. Including 4098-9789. Life Alarm Sensor Base W/LED out UL listed & FM Approved Simplex, USA. Complete in all respect.	268.00		Each	
38	4099-9701 Simplex INT English Call point. Including 515.001.021 Back Box for C/Points SUS516W. Complete in all respect.	27.00		Each	
39	49AV-WRF AV. Intelligent Addressable Horn cum multi-candela strobe unit, Customization of Intensity Selection from 15cd to 185 cd of Strobe with self-test diagnostic feature which is able to generate NAC pass / fail report. UL, ULC Listed & FM Approved Simplex, USA.	27.00		Each	
40	4090-9116 Dual port, bi-directional communications fault isolator for detector loop ckt. (UL, ULC listed & FM Approved) Simplex, USA.	8.00		Each	
41	Installation Charges with Material and Labor Including 1.5mm ² FR Cable, PVC Pipe & Fitting Fire Alarm System.	1.00		Job	
42	Programming, Testing, Commissioning Intelligent Fire Alarm System. Simplex with 1-year Warranty, Training & Free Maintenance.	1.00		Job	
				TOTAL	

S. NO.	ITEM OF WORK	QTY.	RATE	UNIT	AMOUNT
CENTRAL MEDICAL GASSES/MECHANICAL, CHEMICAL & SERVICES					
1	Providing installation, testing, commissioning of Automatic manifold for oxygen 10x2(Brand MMPL),Fully HTM 2022 / HTM 02--01 compliant, Fully Automatic Operation, Fail Safe control system in case of power loss, Integral Alarm System Interface Indicator, Integral Transmitter, BMS/Alarm outputs for Remote Status Indication, Line Fault Monitoring for ERM and ESM backup manifolds wiring. MMPL	1.00		Job	
2	Providing installation, testing, commissioning of Automatic manifold for Nitrous 3x2(Brand MMPL),Fully HTM 2022 / HTM 02--01 compliant, Fully Automatic Operation, Fail Safe control system in case of power loss, Integral Alarm System Interface Indicator, Integral Transmitter, BMS/Alarm outputs for Remote Status Indication, Line Fault Monitoring for ERM and ESM backup manifolds wiring. MMPL	1.00		Job	
3	Providing & Fixing Medical Gas Outlet Oxygen -- Megasan	190.00		Each	
4	Providing & Fixing Medical Gas Outlet AIR 400 KPA Megasan	368.00		Each	
5	Providing & Fixing Medical Gas Outlet AIR 700 KPA Megasan	6.00		Each	
6	Providing & Fixing Medical Gas Outlet Nitrous Megasan	6.00		Each	
7	Bed Head Units, Configurable from 1 to 6 gases, Any make of TU can be fitted, made with aluminum ,Electrical accessories, 2 schuko,1 on/off, 1 multifunction,, Bed Lights, Electrically pre--wired for ease of installation, Pre-piped with inert gas soldered medical copper tube, Fully removable, hinged covers for easy fitting and maintenance, Pressure and electrical tested prior to shipment	187.00		Each	

8	Spacer For Bed Head Unit, made with aluminum, powder coated.	950.00		Rft	
9	<u>MEDICAL AIR COMPRESSOR, TRIPLEX, DAARI</u> Italy, Model Number : DETF 900/NB10--20T, KW: 7.5+7.5+7.5 KW, 30 HP, Air Delivery ,3400 L/M, M3/h 123, CFM, 72.4, Working Pressure 10 Bar ,PSI:145, Noise Level : 68, Connection : 3/4" In/out, Weight 240 kg, Dimension : LXWXH : cm 80x65x98. with electric control panel, Dryer : Dassicent Dryer: DD 340, l/m 3.333, m3: 200, Connection 1--1/2", TANK Capacity : 900 Litre vertical Type. with inner galvanized, Filters: HM : 34 l/m 33, m3: 200 , CFM :118, Bar : 16 bar, 232 psi, connection 3/4". CM 34, QM: 34.	1.00		Each	
10	Providing & Fixing Area Zone Valve Box shutoff valve(Italian) and pressure gauges.- - Oxygen+ Air	22.00		Each	
11	Providing & Fixing Area Zone Valve Box shutoff valve(Italian) and pressure gauges.- - Oxygen+ Air + Nitrous	6.00		Each	
12	Providing & Fixing Area Alarm For Oxygen	10.00		Each	
13	Providing & Fixing Area Alarm For Oxygen+Air+Nitrous	3.00		Each	
14	Copper Line 1--1/2". De greased copper pipe 18 swg with complete fittings and installation and hanging, Testing commissioning and purging	300.00		Rft	
15	Copper Line1--1/4'. De greased copper pipe 18 swg with complete fittings and installation and hanging, Testing commissioning and purging	300.00		Rft	
16	Copper Line1". De greased copper pipe 18 swg with complete fittings and installation and hanging, Testing commissioning and purging	1,500.00		Rft	

17	Copper Line 3/4". . De greased copper pipe 18 swg with complete fittings and installation and hanging, Testing commissioning and purging	3,500.00		Rft	
18	Copper Line 5/8". . De greased copper pipe 18 swg with complete fittings and installation and hanging, Testing commissioning and purging	5,500.00		Rft	
19	Copper Line 1/2". De greased copper pipe 18 swg with complete fittings and installation and hanging, Testing commissioning and purging	4,500.00		Rft	
				Total	
MECHANICAL, CHEMICAL & SERVICES					
1	Providing and fixing Complete in all respects water treatment system with equipment, chemicals, by-pass feeder, Apparatus etc. Make: Drew Amberoid/Maxon chemicals & Feeders Origin: UK/Italy.	1		LOT	
2	Providing and installation of Fiber Glass Insulation on Black carbon steel piping 64 density with 8 onz, clothing with all respects Make: Kimmco, Affico	1		LOT	
3	Providing and installation of Valves Gate Valves Globe Valve. Y-Strainer Check Valve, Flexible pipe Connector	1		LOT	
4	Providing and installation BSS heavy weight G.I piping for fresh water complete With (Japanese / European)Valves and accessories. Make: Jamal Pipes Origin: Pakistan	1		LOT	
5	Supply, return, fresh and exhaust air diffusers, registers, registers grilles, dampers and louvers etc. including O.T's stainless steel Diffusers & Grills Make: Venture Eng. CO. Origin: Pakistan	1		LOT	

6	Providing and fixing Equipment insulation and G.I sheet jacketing instruments comprising of pressure gauges, Thermometers, Wells, cocks etc duct/ pipe mounted as specified. Make: Wika, Weksler Triage Origin: USA or Approved Equal	1		LOT
7	Providing and fixing Insulated Pressurized Expansion tank for chilled water complete with accessories and controls Make: Venture Eng. Co ,	1		LOT
8	Providing and fixing Air Separator for chilled water complete with accessories and controls Make: Venture Eng. Co ,	1		LOT
9	Providing and Commissioning Air Balancing Service	1		LOT
10	Providing and Commissioning Water balancing Service	1		LOT
11	Providing and applying Painting of all system components	1		LOT
12	Providing and making Shop Drawings.	1		LOT
13	Making and labeling Chart and Tags. Set of spare parts for all the contractor	1		LOT
14	Providing items for two years sets of Special tools and instruments.	1		LOT
15	Providing and making As-installed drawings and transparencies on auto CAD 2000 formate (4sets)	1		LOT
16	Cost of testing ,startup, commissioning , balancing ,adjusting & handing over of the	1		LOT
17	Cost of one month test run	1		LOT
18	Cost of plant Operation for 12 month (1Engineer +1 Mechanic +1 plant operator +1-Electracion + 3 helpers) per 10 hours daily	12		Each Month
				TOTAL