

AMENDMENT NO-I**Dated : 26.04.2022**

PROJECT NAME Tender for the work " Construction of Additional block (Blood bank ,Mortuary ,Space for holding /handling Bio-Medical waste,Canteen and cafeteria,Laboratories, Diagnostic labs,Guest rooms and other infrastructure as required for AIMSS.at Chamyana,Shimla,H.P."

Tender No **HSCC/AIMSS/HP/SHIMLA/ADD/2022 Dated -01/04/2022**

This has reference to subject work,the following Amendment may be noted which shall be treated as a part of the contract to be uploaded along with tender/bid:

1 Reply to Pre-bid queries raised by bidders,pre-bid meeting held on 18.04.2022 at HSCC,Head Office,Noida

SI NO	Ref.	Pre-Bid Queries/Bidder's Request/Description	Reply/Clarification/Amendment
1	Clause 37(i) - Vol II (GCC)	Since the GST included in the rates, kindly clarify if the GST applicable in this work is 12% or 18%	Presently GST for this project is Applicable as 12%. Further GST shall be applicable as per Govt. guidelines issued time to time.
2	Clause 31.9 - Vol III (GCC)	Kindly calrify if there are any trees that will require cutting as it is a very time consuming process to take necessary permissions especially in the state of Himachal Pradesh	Tender Conditiond shall prevail.
3	Clause 31.10- Vol III (GCC)	As per GCC "All concrete work shall be strictly done by weigh batcher/RMC ".Please clarify that is it a condition to install RMC plant on site or can the concreting be carried out with Reversible Drum Mixture Machines with Digital weight batcher as there is shortage of space on the site.	Bidder shall install calibrated,computerised Batch mix plant of adequate capacity.In case of failure of Batching plant,outside ready mix concrete of approved manufacturer may be allowed as per approved design mix at no extra cost..
4	Clause E(i)- Vol III	In order to obtain GRIHA 3 Star Rating ,apart from the conditions mentioned in Clause E (ii) to (xviii) and under Heading Griha Rating of Integrated Habitat Assessment (GRIHA) Sr.1 to 4 starting on page 62, a lot of conditions are related to design,energy efficiency,sustainable building materials used,innovation etc.Since the bidder will not be deciding these itemsas this is not an EPC tender,it may not be possible for the bidder to confirm what rating will be given.Also kindly clarify if the rating achieved is below 3 star ,will there be any repercussions of the same.	Tender Conditiond shall prevail.

5		The Site for the main building lies in the area where there is currently a labour camp and that area has been filled with earth. Though there are 2 floors below the ground level, it is not possible to assess the depth of filling already done. In case the filling is more than the required depth at foundation level, the structure drawing may need revision to reach the natural level or soil stabilization may be required. If soil investigation has been done at that location same may please be confirmed.	Tender Condition shall prevail. Structure Drawings shall be issued to the Lowest bidder at the time of execution.
6		Since the site is adjacent to an existing hospital building and there is not much space around the proposed building as it is located on the downhill side, please clarify if there will be any provision by the executing agency to provide additional space for labour camp, material storage, fabrication unit etc.	Shall be as per Tender conditions. Bidder should visit and examine the site before submitting the bid. Spaces for batching plant, steel/shuttering yard, godown etc may be provided depending upon availability. The Bidder shall not have any claim whatsoever reason in case the space is not provided.
7	Completion period	The period for completion may please be changed from 18 months to 30 months	Tender conditions prevails.
8	Cost Index in BOQ on Hilly area	The cost index @23.81% has been given on Civil works only and no cost index has been given on Public Health, Electrical & other services in this project on DSR items. We request you to kindly allow cost index @23.81% on these services also.	Tender conditions prevails.
9	Cement	The provision for cement in the project is allowed OPC 43 Grade but we request you to allow PPC cement also.	OPC 43 Cement/PPC Cement of approved make for both RCC & other works is allowed.
10	Reinforcement steel	Only SAIL/RINL/TISCO make steel is allowed but we request you to allow all the primary steel for this project.	Reinforcement Steel (TMT Bars)- Allowed Makes for this project are - SAIL, RINL, TISCO, JSPL & JSW.
11	Estimated cost of Project	It is submitted that during the last 6 months the rates of Steel, Cement, POL, Electrical items & other construction materials has sky rocketed approx. 30-40% in the market but in case of Copper, it has increased about 100% & looking to this we request you kindly increase the project cost accordingly.	Tender conditions prevails.
12	Volume V (BOQ)	Correction in BOQ	Corrected & Revised BOQ is enclosed as Annexure -1. Earlier BOQ shall be treated as cancelled. Contractors are advised to quote as per the revised BOQ enclosed as Annexure -1 with this Amendment.

13		Bid Submission date	Bid Submission date is extended upto 3.00 PM on 6.05.2022 & Bids shall be opened at 3.30 PM at HSCC , Noida office. The validity of bid security/Earnest Money (deposit EMD) to be submitted by the bidders with their bid in the form of Bank Guarantee (BG) shall be considered from the original due date of bid submission i.e. from 29.4.2022.
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All other terms & conditions of the tender shall remain unchanged.

Prospective bidders are advised to regularly scan through HSCC e-tender portal <http://www.tenderwizard.com/HSCC> & HSCC website <http://www.hsccltd.co.in> as corrigendum/amendments etc,if any,will be notified on this portal only and separate advertisement will not be made for this.

GM(Projects),
HSCC (I) Ltd.

Tender No: HSCC/AIMSS/HP/SHIMLA/ADD/2022 dated 01.04.2022

Tender for “Construction of Additional Block (Blood Bank, Mortuary), Space for Holding / handling Bio-Medical Waste, Canteen and Cafeteria, Laboratories, Diagnostic Labs, Guest Rooms and other Infrastructure as required for AIMSS at Chamyana, Shimla, H.P.”

ANNEXURE -1

REVISED BOQ

GOVERNMENT OF HIMACHAL PRADESH
Atal Institute of Medical Super Specialties, Shimla

TENDER

FOR

Construction of Additional Block (Blood Bank, Mortuary), Space for holding / handling Bio-Medical Waste, Canteen and cafeteria, laboratories, Diagnostic Labs, Guest Rooms and other Infrastructure, Diagnostic Labs, Guest Rooms and other infrastructure as required for AIMSS at Chamyana, Shimla, H.P.

VOLUME – V

**Revised Bill of Quantities
(BOQ)**

April'2022

Executing Agency



HSCC (INDIA) LTD.
(CONSULTANTS & ENGINEERSFORMEGA HOSPITALS & LABORATORIES)
E-6(A), sector-1, NOIDA(U.P) 201301 (India)

Phone : 0120-2542436-40

Fax : 0120-2542447

Tender No. HSCC/AIMSS/HP/SHIMLA/ADD/2022

Project Name: "Construction of Additional Block (Blood Bank, Mortuary), Space for holding / handling Bio-Medical Waste, Canteen and cafeteria, laboratories, Diagnostic Labs, Guest Rooms and other Infrastructure, Diagnostic Labs, Guest Rooms and other infrastructure as required for AIMSS at Chamyana, Shimla, H.P. for AIMSS at Chamyana, Shimla, H.P."

Summary Sheet

Note: Percentage should not quoted anywhere else except this summary page

Name of the Bidder

Sr.No.	Particulars	Estimated Cost (in Rs.)	Percentage above or below the estimated cost	% above or below in Figures	Percentage above or below in Words	Amount (in Rs.)
1	Construction of Additional Block (Blood Bank, Mortuary), Space for holding / handling Bio-Medical Waste, Canteen and cafeteria, laboratories, Diagnostic Labs, Guest Rooms and other Infrastructure, Diagnostic Labs, Guest Rooms and other infrastructure as required for AIMSS at Chamyana, Shimla, H.P. for AIMSS at Chamyana, Shimla, H.P.	47,85,02,530.73			Zero	0.00
GRAND TOTAL (in Rs.)						0.00

SUMMARY SHEET

SUMMARY SHEET		
Sub:	“Construction of Additional Block (Blood Bank, Mortuary), Space for holding / handling Bio-Medical Waste, Canteen and cafeteria, laboratories, Diagnostic Labs, Guest Rooms and other Infrastructure, Diagnostic Labs, Guest Rooms and other infrastructure as required for AIMSS at Chamyana, Shimla, H.P. for AIMSS at Chamyana, Shimla, H.P.”	
S. No.	Sub Head (Item Description)	Amount (in Rs.)
1	Civil Works	33,59,58,476.94
2	Public Health Engineering Works	2,07,47,100.00
3	Fire Fighting Works	1,08,06,313.00
4	Electrical Works	3,79,54,642.00
5	HVAC Works	5,05,18,046.00
6	Specialised Services Works (Mortuary& BMWMS)	1,50,38,720.00
7	IT Works	74,79,232.79
	Total (in Rs)	47,85,02,530.73
	Estimated Cost put to Tender (Say in Rs. Cr.)	47.85 Cr

**NAME OF WORK : Construction of Construction of Blood bank, BMW and Mortuary at Atal Institute of Medical Super Specialities,
Chamyana Shimla.**

REVISED ABSTRACT OF CIVIL WORK

S. No.	Description	Total Amount (Rs.)	
1	EARTH WORK	8584001.61	
2	CONCRETE WORK	2406702.20	
3	REINFORCED CEMENT CONCRETE	136018277.60	
4	MASONRY WORK	27196089.80	
5	MARBLE WORK	5069086.83	
6	WOOD WORK & PVC WORK	2219066.55	
7	STEEL WORK	2505064.80	
8	FLOORING	23469047.00	
9	ROOFING	13163286.70	
10	FINISHING	27710991.65	
11	ALUMINIUM WORK	9412589.60	
12	WATER PROOFING	4683581.40	
13	STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL	558439.70	
14	ROADWORK AND HORTICULTURE	4018879.35	
	Total	267015104.80	
	Cost Index @ 23.81%	63576296.45	
15	NON DSR ITEM	5367075.69	
	Total	335958476.94	
	SAY	33.60	Crore

NAME OF WORK : Construction of Construction of Blood bank, BMW and Mortuary at Atal Institute of Medical Super Specialities, Chamyana Shimla.

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
1.00		EARTH WORK				
1.01	2.6	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.				
a)	2.6.1	All kinds of soil	Cum	20692.41	205.45	4251255.86
1.02	2.8	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
a)	2.8.1	All kinds of soil.	Cum	438.00	286.85	125640.30
1.03	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.				
			Cum	7266.00	253.95	1845200.70
1.04	2.26	Extra for every additional lift of 1.5 m or part thereof in excavation / banking excavated or stacked materials.				
a)	2.26.1	All kinds of soil.	Cum	16998.00	104.50	1776291.00
1.05	2.27	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.				
			Cum	236.00	2161.20	510043.20
1.06	16.3	Supplying and stacking at site.				
a)	16.3.9	Good earth	Cum	121.00	624.55	75570.55
		Total of sub-head				8584001.61
2.00		CONCRETE WORK				
2.01	4.10	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
a)	4.1.8	1:4:8 (1 Cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size)	Cum	218.00	6326.05	1379078.90
b)	4.1.10	1:5:10 (1 cement : 5 coarse sand (zone-III): 10 graded stone aggregate 40 mm nominal size)	Cum	65.00	6050.65	393292.25

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
2.02	4.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor etc., up to floor five level, excluding the cost of centering, shuttering and finishing :				
a)	4.2.3	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	Cum	32.00	9375.20	300006.40
2.03	4.11	Providing and laying damp-proof course 50mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 20mm nominal size).	Sqm	167.00	452.25	75525.75
2.04	4.12	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.	per 50kg cement	45.00	57.15	2571.75
2.05	4.13	Providing & applying a coat of residual petroleum bitumen of grade of VG-10 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with apiece of cloth lightly soaked in kerosene oil.	sqm	167.00	113.85	19012.95
2.06	4.17	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, levelling & dressing & finishing the top smooth.	Sqm	348.00	681.65	237214.20
		Total of sub-head				2406702.20
3.00		REINFORCED CEMENT CONCRETE				
3.01	5.9	Centering and shuttering including strutting, propping etc. and removal of form for all heights:				
a)	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	536.00	307.95	165061.20
b)	5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	Sqm	6835.00	669.55	4576374.25
c)	5.9.3	Suspended floors, roofs, landings, balconies and access platform	Sqm	7748.00	766.55	5939229.40
d)	5.9.4	Shelves (Cast in situ)	Sqm	55.00	766.55	42160.25
e)	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	5781.00	608.35	3516871.35
f)	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	3067.00	804.25	2466634.75
g)	5.9.7	Stairs, (excluding landings) except spiral-staircases	Sqm	163.00	657.75	107213.25
h)	5.9.15	Small lintels not exceeding 1.5 m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like	Sqm	186.00	307.95	57278.70
i)	5.9.16	Edges of slabs and breaks in floors and walls				
	5.9.16.1	Under 20 cms wide	metre	204.00	181.90	37107.60
j)	5.9.19	Weather shade, Chajjas, corbels etc., including edges	Sqm	84.00	814.95	68455.80

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
3.02	5.11	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and decentering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured).				
a)	5.11.1	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)	sqm	8881.00	319.25	2835259.25
3.03	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
a)	5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	kilogram	398235.00	89.65	35701767.75
3.04	5.22A	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.				
a)	5.22A.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	kilogram	329448.00	89.65	29535013.20
3.05	5.30	Add for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	Metre	127.00	64.70	8216.90
3.06	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately).				
(i)	5.33.1	All works upto plinth level	Cum	3515.00	7997.30	28110509.50
(ii)	5.33.2	All works above plinth level upto floor V level	Cum	2247.00	10080.15	22650097.05
3.07	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	Quintal	292.00	688.45	201027.40
		Total of sub-head				136018277.60
4.00		MASONRY WORK				
4.01	6.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:				
a)	6.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	67.00	6658.25	446102.75
4.02	6.15	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every third course of half brick masonry.	Sqm	25689.00	86.45	2220814.05
4.03	6.44	Brick edging 7cm wide 11.4 cm deep to plinth protection with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 including grouting with cement mortar 1:4 (1 cement : 4 fine sand).	Metre	1032.00	55.80	57585.60

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
4.04	6.45	Half brick masonry with non modular fly ash bricks of class designation 10, conforming to IS :12894, in super structure above plinth and upto floor V level.				
a)	6.45.2	Cement mortar 1 : 4 (1 cement : 4 coarse sand)	Sqm	6498.00	969.65	6300785.70
4.05	6.47	Providing and laying autoclaved aerated cement blocks masonry with 150mm/230mm/300 mm thick AAC blocks in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made for separately).	Cum	2598.00	6994.15	18170801.70
Total of sub-head						27196089.80
5.00	MARBLE WORK					
5.01	8.2	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.				
a)	8.2.2	Granite stone slab colour black, Cherry/Ruby red				
(i)	8.2.2.2	Area of slab over 0.50 sqm	Sqm	60.00	4425.35	265521.00
5.02	8.3	Providing edge moulding to 18 mm thick marble stone counters, Vanities etc., including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.				
a)	8.3.2	Granite work	Metre	90.00	418.85	37696.50
5.03	8.4	Extra for fixing marble /granite stone, over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive, including cleaning etc. complete.	Metre	90.00	475.55	42799.50
5.04	8.5	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/ stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	Each	63.00	808.15	50913.45
5.05	8.10	Providing and fixing stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.				
a)	8.10.2	Granite Stone of approved shade	Sqm	11.00	3542.85	38971.35

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
5.06		Providing and fixing machine cut, mirror / eggshell polished , Granite stone work for wall lining (vener work) including dado, skirting, risers of steps etc., in required design and pattern wherever required, stones of different finished surface texture, on 12 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) laid and jointed with white cement slurry @ 3.3 kg/sqm including pointing with white cement slurry admixed with pigment of matching shade, including rubbing, curing, polishing etc. all complete as per Architectural drawings, and as directed by the Engineer-in-Charge.				
a)	Based on DSR item 8.11	18 mm thick Flamed/polished granite stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent	Sqm	536.00	6695.67	3588877.13
5.07	8.31	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	Sqm	982.00	1063.45	1044307.90
		Total of sub-head				5069086.83
6.00		WOOD WORK & PVC WORK				
6.01	9.12	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	Sqm	209.00	148.50	31036.50
6.02	9.21	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:				
a)	9.21.2	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	Sqm	470.00	1881.95	884516.50
6.03	9.83	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 35 kg and door width upto 700 mm), with necessary accessories and screws etc. complete.	Each	292.00	1025.65	299489.80
6.04	9.96	Providing and fixing aluminium sliding door bolts, ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete :				
a)	9.96.1	300x16 mm	Each	188.00	260.30	48936.40

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
6.05	9.97	Providing and fixing aluminium tower bolts, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :				
a)	9.97.1	300x10 mm	Each	359.00	117.65	42236.35
b)	9.97.2	250x10 mm	Each	635.00	104.40	66294.00
6.06	9.100	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :				
a)	9.100.1	125 mm	Each	693.00	60.05	41614.65
b)	9.100.2	100 mm	Each	618.00	53.25	32908.50
6.07	9.10	Providing and fixing aluminium hanging floor door stopper, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete.				
a)	9.101.2	Twin rubber stopper	Each	254.00	62.25	15811.50
6.08	9.102	Providing and fixing aluminium casement stays, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete.	Each	637.00	64.55	41118.35
6.09	9.127	Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt/ suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S, including cost of adhesive of approved quality.				
a)	9.127.2	1.0 mm thick	Sqm	936.00	764.00	715104.00
		Total of sub-head				2219066.55
7.00		STEEL WORK				
7.01	10.2	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	11109.00	78.20	868723.80
7.02		Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6 mm angle iron and 3 mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.				
a)	10.5.1	Using M.S. angels 40x40x6 mm for diagonal braces	sqm	4.00	4781.15	19124.60

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
7.03	10.6	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.				
a)	10.6.1	80x1.25 mm M.S. laths with 1.25 mm thick top cover	sqm	26.00	3008.80	78228.80
7.04	10.7	Providing and fixing ball bearing for rolling shutters.	each	10.00	424.20	4242.00
7.05	10.9	Extra for providing grilled rolling shutters manufactured out of 8 mm dia M.S. bar instead of laths as per design approved by Engineer-in- charge, (area of grill to be measured).	sqm	11.00	668.95	7358.45
7.06	10.25	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position, welding and applying a priming coat of approved steel primer using structural steel etc. as required.				
a)	10.25.1	In stringers, treads, landings etc. of stair cases, including use of chequered plate wherever required, all complete	Kg	217.00	102.25	22188.25
b)	10.25.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	Kg	625.00	142.30	88937.50
7.07	10.26	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.				
a)	10.26.1	M.S. tube	Kg	106.00	157.15	16657.90
7.08	10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-incharge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	Kg	2286.00	612.25	1399603.50
		Total of sub-head				2505064.80
8.00		FLOORING				
8.01	11.3	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete.				
a)	11.3.1	40 mm thick with 20 mm nominal size stone aggregate	Sqm	6.00	545.00	3270.00

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
8.02	11.6	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement.				
a)	11.6.1	18 mm thick	Sqm	2.00	570.75	1141.50
8.03	11.13	Providing and fixing glass strips in joints of terrazo/ cement concrete floors.				
a)	11.13.1	40 mm wide and 4 mm thick	Metre	14.00	79.50	1113.00
8.04	11.20	Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard, jointed with neat cement slurry mixed with pigment to match the shade of tiles, including rubbing and cleaning etc. complete, on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand).				
a)	11.20.1	Light shade pigment using white cement	Sqm	1160.00	1233.05	1430338.00
8.05	11.23	Marble stone flooring with 18 mm thick marble stone, as per sample of marble approved by Engineer-in-charge, over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with grey cement slurry, including rubbing and polishing complete with :				
a)	11.23.2	Raj Nagar plain	Sqm	50.00	1992.70	99635.00
b)	11.23.5	Udaipur green marble	Sqm	116.00	2100.40	243646.40
8.06	11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :				
a)	11.26.1	25 mm thick.	Sqm	1261.00	1706.60	2152022.60
8.07	11.27	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.				
			Sqm	41.00	2038.55	83580.55
8.08	11.31	Extra for pre finished nosing in treads of steps of Kota stone/ sand stone slab.	Metre	29.00	157.35	4563.15
8.09	11.32	Extra for Kota stone/ sand stone in treads of steps and risers using single length up to 1.05 metre.				
			Sqm	16.00	36.35	581.60
8.10	11.37	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc., complete.				
			Sqm	489.00	935.60	457508.40

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
8.11	11.41	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete.				
a)	11.41.2	Size of Tile 600x600 mm	Sqm	3654.00	1416.65	5176439.10
8.12	11.46	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joint with white cement & matching pigments etc. complete.				
a)	11.46.2	Size of Tile 600x600 mm	Sqm	2853.00	1466.50	4183924.50
8.13	11.56	Providing and laying Polished/flamed Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building, all complete as per the architectural drawings, with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand), laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade, including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.				
a)	11.56.1	Polished Granite stone slab colour of Black, Cherry/Ruby Red or equivalent	Sqm	2464.00	3908.80	9631283.20
		Total of sub-head				23469047.00
9.00		ROOFING				
9.01	12.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10 mm and down gauge), including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :				
a)	12.21.1	In 75x75 mm deep chase	Metre	279.00	260.20	72595.80
9.02	12.22	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.				
			Each	29.00	266.60	7731.40

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
9.03	12.45	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound , jointing tapes , finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with :				
a)	12.45.1	12.5 mm thick tapered edge gypsum plain board conforming to IS: 2095- (Part I) : 2011 (Board with BIS certification marks)	Sqm	1241.00	1145.95	1422123.95
9.04	12.47	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel rovigs incorporating minimum 0.3% ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.				
a)	12.47.1	2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2" or 3" or 6") as specified	Sqm	427.00	1179.25	503539.75

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
9.05	26.27	Providing and fixing mineral fibre false ceiling tiles at all heights of size 595X595mm of approved texture, design and pattern. The tiles should have Humidity Resistance (RH) of 99%, Light Reflectance > 85%, Thermal Conductivity k = 0.052 - 0.057 w/m K, Fire Performance as per (BS 476 pt - 6 &7) in true horizontal level suspended on interlocking T-Grid of hot dipped all round galvanized iron section of 0.33 mm thick (galvanized @120 gsm) comprising of main T runners of 15x32 mm of length 3000 mm, cross T of size 15x32mm of length 1200 mm and secondary intermediate cross T of size 15x32 mm of length 600 mm to form grid module of size 600x600 mm suspended from ceiling using galvanized mild steel item (galvanised @80gsm) 50 mm long 8mm outer diameter M-6 dash fasteners, 6 mm diameter fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 85x25x2 mm, spaced at 1200 mm centre to centre along main 'T'. The system should rest on periphery walls /partitions with the help of GI perimeter wall angle of size24x24X3000 mm made of 0.40 mm thick sheet, to be fixed to the wall with help of plastic rawl plug at 450 mm centre to centre & 40 mm long dry wall S.S. screws. The exposed bottom portion of all T-sections used in false ceiling support system shall be prepainted with polyester baked paint, for all heights. The work shall be carried out as per specifications, drawings and as per directions of the engineer-in-charge.				
a)	26.27.3	With 16 mm thick beveled tegular mineral fibre Antimicrobial false ceiling tile confirming to ISO 5 (class 100) specifications	Sqm	4788.00	2189.55	10483565.40
9.06		Providing and Fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture of size 595 x 595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanising @ 120 grams per sqm including both side) consisting of main 'T' runner suitably spaced at joints to get required length and of size 24x38 mm made from 0.33 mm thick (minimum) sheet, spaced 1200 mm centre to centre, and cross "T" of size 24x28 mm made out of 0.33 mm (Minimum) sheet, 1200 mm long spaced between main'T' at 600 mm centre to centre to form a grid of 1200x600 mm and secondary cross 'T' of length 600 mm and size 24 x28 mm made of 0.33 mm thick (Minimum) sheet to be inter locked at middle of the 1200x 600 mm panel to from grid of size 600x600 mm, resting on periphery walls /partitions on a Perimeter wall angle pre-coated steel of size(24x24X3000 mm made of 0.40 mm thick (minimum) sheet with the help of rawl plugs at 450 mm centre to centre with 25				
		mm long dry wall screws @ 230 mm interval and laying 15 mm thick densified edges calcicum silicate ceiling tiles of approved texture in the grid, including, cutting/ making opening"for services like diffusers, grills, light fittings, fixtures, smoke detectors etc., wherever required. Main 'T' runners to be suspended from ceiling using G.I. slotted cleats of size 25x35x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm G.I. adjustable rods with galvanised steel level clips of size 85 x 30 x 0.8 mm, spaced at 1200 mm centre to centre along main 'T', bottom exposed with 24 mm of all Tsections shall be pre-painted with polyester baked paint,for all heights, as per specifications, drawings and as directed byEngineer-in-Charge.				
		Note :- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/ opening (cut outs) having area less than 0.30 sqm.The calcium silicate ceiling tile shall have NRC value of 0.50 (Minimum), light reflection > 85%, non- combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity <0.043 w/mK.	Sqm	392.00	1718.70	673730.40

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
		Total of sub-head				13163286.70
10.00		FINISHING				
10.01	13.4	12 mm cement plaster of mix				
a)	13.4.2	1:6 (1 cement: 6 coarse sand)	Sqm	10859.00	294.35	3196346.65
10.02	13.5	15 mm cement plaster on rough side of single or half brick wall of mix:				
a)	13.5.2	1:6 (1 cement: 6 coarse sand)	Sqm	13214.00	339.10	4480867.40
10.03	13.3	20 mm cement plaster of mix :				
a)	13.3.1	1:4 (1 cement: 4 fine sand)	Sqm	4350.00	402.15	1749352.50
10.04	13.16	6mm cement plaster of mix				
a)	13.16.1	1:3 (1 cement : 3 fine sand)	Sqm	15338.00	253.05	3881280.90
10.05	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	39410.00	214.30	8445563.00
10.06	13.41	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :				
a)	13.41.1	New work (two or more coats) over and including water thinnable priming coat with cement primer	Sqm	8527.00	162.55	1386063.85
10.07	13.45	Finishing walls with textured exterior paint of required shade :				
a)	13.45.1	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm	Sqm	4350.00	245.00	1065750.00
10.08	13.60	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade :				
a)	13.60.1	Two or more coats on new work	Sqm	71.00	137.85	9787.35
10.09	13.61	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
a)	13.61.1	Two or more coats on new work	Sqm	1201.00	131.45	157871.45
10.10	13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	Sqm	4350.00	123.85	538747.50
10.11	13.98	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:				
a)	13.98.1	One or more coats on old work	Sqm	30813.00	90.85	2799361.05
		Total of sub-head				27710991.65

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
11.00		ALUMINIUM WORK				
11.01	21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
a)	21.1.1	For fixed portion				
i)	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg	10325.00	466.30	4814547.50
11.02	21.1.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				
a)	21.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg	4892.00	564.80	2763001.60
11.03	21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):				
a)	21.3.2	With float glass panes of 5.50 mm thickness	Sqm	1070.00	1325.55	1418338.50
11.04	21.8	Filling the gap in between aluminium frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.				
a)	21.8.1	Upto 5mm depth and 5 mm width	Metre	4888.00	85.25	416702.00
		Total of sub-head				9412589.60
12.00		WATER PROOFING				
12.01	22.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :				
i)	a)	First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours.				
ii)	b)	Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours.				
iii)	c)	(The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.)	Sqm	360.00	516.60	185976.00

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
12.02	22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:				
	i)	a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment.				
	ii)	b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.				
	iii)	c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineerin- charge.				
	iv)	d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineerin- charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep.				
	v)	e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test."All above operations to be done in order and as directed and specified by the Engineer-in-Charge :				
	a)	22.7.1 With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	Sqm	2052.00	1522.95	3125093.40
12.03	22.23	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.				
	a)	22.23.1 For vertical surface two coats @ 0.70 kg per sqm	Sqm	1950.00	406.25	792187.50
	b)	22.23.2 For horizontal surface one coat @1.10 kg per sqm.	Sqm	1863.00	311.50	580324.50
		Total of sub-head				4683581.40
13.00		STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL				

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
13.01	25.1	Providing and supplying aluminium extruded tubular and other aluminium sections as per the architectural drawings and approved shop drawings , the aluminium quality as per grade 6063 T5 or T6 as per BS 1474,including super durable powder coating of 60-80 microns conforming to AAMA 2604 of required colour and shade as approved by the Engineer-in-Charge. (The item includes cost of material such as cleats, sleeves, screws etc. necessary for fabrication of extruded aluminium frame work. Nothing extra shall be paid on this account). The weight of aluminium extruded section shall be taken for purpose of payment.	Kg	429.00	370.45	158923.05
13.02	25.2	Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including:				
	a)	Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminum sections for fixing glazing panels of various thicknesses, aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)- cum-smoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation & drainage and protection against fire hazard including:				
	b)	Fabricating and supplying serrated M.S. hot dip galvanised / Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimensional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/ masonry/structural steel framework of building structure using stainless steel anchor fasteners/ bolts, nylon seperator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.				
	c)	Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and controlled factory / work shop environment , including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacture, as per the approved sealant design, within and all around the perimeter for holding glass.				
	d)	Providing and fixing in position flashings of solid aluminium sheet 1 mm thick and of sizes, shapes and profiles, as required as per the site conditions, to seal the gap between the building structure and all its interfaces with curtain glazing to make it watertight.				

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
e)		Making provision for drainage of moisture/ water that enters the curtain glazing system to make it watertight, by incorporating principles of pressure equalization, providing suitable gutter profiles at bottom (if required), making necessary holes of required sizes and of required numbers etc. complete. This item includes cost of all inputs of designing, labour for fabricating and installation of aluminium grid, installation of glazed units, T&P, scaffolding and other incidental charges including wastages etc., enabling temporary structures and services, cranes or cradles etc. as described above and as specified. The item includes the cost of getting all the structural and functional design including shop drawings checked by a structural designer, dully approved by Engineer-in-charge. The item also includes the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working structural glazing as specified, cleaning and protection till the handing over of the building for occupation. In the end, the Contractor shall provide a water tight structural glazing having all the performance characteristics etc. all complete as required, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as				
		Note:- 1. The cost of providing extruded aluminium frames, shadow boxes, extruded aluminium section capping for fixing in the grooves of the curtain glazing and vermin proof stainless steel wire mesh shall be paid for separately under relevant items under this sub- head. However, for the purpose of payment, only the actual area of structural glazing (including width of grooves) on the external face shall be measured in sqm. up to two decimal places.				
		Note:- 2. The following performance test are to be conducted on structural glazing system if area of structural glazing exceeds 2500 Sqm from the certified laboratories accredited by NABL(National Accreditation Board for Testing and Calibration Laboratories), Department of Science & Technologies, India. Cost of testing is payable separately.				
		The NIT approving authority will decide the necessity of testing on the basis of cost of the work, cost of the test and importance of the work. Performance Testing of Structural glazing system Tests to be conducted in the NABL accredited lab or by any other accreditation body which operates in accordance with ISO / IEC 17011 and accredits labs as per ISO/ IEC 17025.				
1)		Performance Laboratory Test for Air Leakage Test (-50pa to - 300pa) & (+50pa to +300pa) as per ASTM E-283-04 testing method for a range of testing limit 1 to 200 mVhr				
2)		Static Water Penetration Test. (50pa to 1500pa) as per ASTM- 331-09 testing method for a range up to 2000 ml.				
3)		Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01- 05 testing method for a range upto 2000 ml				
4)		Structural Performance Deflection and deformation by static air pressure test (1.5 times desing wind pressure without any failure) as per ASTM-330-10 testing method for a range upto 50 mm				
5)		Seismic Movement Test (upto 30 mm) as per AAMA 501.4-09 testing method for Qualitative test. Tests to be conducted on site.				
6)		Onsite Test for Water Leakage for a pressure range 50 kpa to 240 kpa (35psi) upto 2000 ml	Sqm	58.00	3111.35	180458.30

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
13.03	25.3	Providing, assembling and supplying vision glass panels (IGUs) comprising of hermetically-sealed 6-12-6 mm insulated glass (double glazed) vision panel units of size and shape as required and specified, comprising of an outer heat strengthened float glass 6mm thick, of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade, an inner Heat strengthened clear float glass 6mm thick, spacer tube 12mm wide, dessicants, including primary seal and secondary seal (structural silicone sealant) etc. all complete for the required performances, as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer-in-Charge. The IGUs shall be assembled in the factory/ workshop of the glass processor.				
		(Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.25.2)				
		For payment, only the actual area of glass on face # 1 of the glass panels (excluding the areas of the grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm.				
a)	i)	Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, + 12mm Airgap + 6mm Heat Strengthened clear Glass of approved make having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m2 degree K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.	Sqm	58.00	3377.50	195895.00
13.04	25.4	Extra for openable side / top hung vision glass panels (IGUs) including providing and supplying at site all accessories and hardwares for the openable panels as specified and of the approved make such as heavy duty stainless steel friction hinges, min 4 -point cremone locking sets with stainless steel plates, handles, buffers etc. including necessary stainless steel screws/ fasteners, nuts, bolts, washers etc. all complete as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineerin- Charge.	Sqm	7.00	3309.05	23163.35
		Total of sub-head				558439.70
14.00		ROADWORK AND HORTICULTURE				
14.01	16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead upto 50 metres.	Sqm	1037.00	180.50	187178.50
14.02	16.78	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.				

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
a)	16.78.2	With material conforming to Grade-II (size range 53 mm to 0.075 mm) having CBR Value-25	Cum	156.00	2775.65	433001.40
14.03	16.80	Construction of dry lean cement concrete sub base over a prepared sub-grade with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per specifications, cement content not to be less than 150 Kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, for all leads & lifts, laid with a mechanical paver, compacting with 8-10 tonne vibratory roller, finishing and curing etc. complete as per direction of Engineer-in-charge.	Cum	104.00	4130.55	429577.20
14.04	16.43	"Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required, laying at site, spreading and compacting mechanically by using needle and surface vibrators, levelling to required slope/ camber, finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/expansion, construction & longitudinal joints (10 mm wide x 50 mm deep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in-charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be paid separately).				
		Note:- Cement content considered in M-30 is @ 340 kg/cum. Excess/less cement used as per design mix is payable/ recoverable separately.				
a)	16.43.2	Cement concrete manufactured in automatic batching plant (RMC plant) i/c transportation to site in transit mixer	Cum	208.00	10006.65	2081383.20
14.05		Providing and laying in position bitumen hot sealing compound for expansion joints etc.				
a)	16.46.1	Using grade 'A' sealing compound.	per cm depth per cm width per metre length	5183.00	7.50	38872.50
14.06	16.68	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	Sqm	208.00	951.00	197808.00

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
14.07	16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not be more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	Cum	52.00	8613.55	447904.60
14.08	16.60	Manufacturing, supplying and fixing retro reflective overhead signage boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type - III of ASTM-D-4956-01 as approved by Engineer-in-charge, letters, borders etc. as per IRC : 67-2001 in silver white with blue colour back ground and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminium alloys, rivets or bolts & nuts @ 300 mm centre to centre all along the periphery as well as in two vertical rows along with theft resistant measures, including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminium sheet including appropriate priming coat.				
		The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the engineer-in-charge.(Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment).				
a)	16.60.1	Overhead informatory road signage	Sqm	11.00	5609.55	61705.05
14.09	16.62	Providing and applying 2.5 mm thick road marking strips (retroreflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	Sqm	21.00	623.80	13099.80
14.10	2.1/H&L	Trenching in ordinary soil upto a depth of 60cm including removal and stacking of serviceable materials and then disposing surplus soil, by spreading and neatly levelling with in a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	Cum	311.00	78.10	24289.10
14.11	2.2/H&L	Supplying and stacking of good earth at site including royalty and carriage up to 5 Km (earth measured in stacks will be reduced by 20% for payment).	Cum	52.00	515.60	26811.20
14.12	2.3/H&L	Supplying and stacking sludge at site including royalty and carriage upto 5 km range (sludge measured in stacks will be reduced by 8% for payment).	Cum	16.00	294.00	4704.00

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
14.13	2.4.2/H &L	Supplying and stacking at site dump manure from approved source, including carriage complete (manure measured in stacks will be reduced by 8% for payment).	Cum	16.00	290.70	4651.20
a)		Screened through sieve of I.S. designation 16 mm				
14.14	2.5+2.6 /H&L	Rough dressing the trenched ground including breaking clods & Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.	Sqm	519.00	6.40	3321.60
14.15	2.7/H&L	Fine dressing the ground	Sqm	519.00	3.70	1920.30
14.16	2.8+2.9 /H&L	Spreading of sludge, dump manure or/and good earth in required thickness including mixing earth and sludge or manure in the required proportion specified or directed by the Officer in Charge (Cost of sludge, dump manure or/ and good earth to be paid separately).	Cum	83.00	88.90	7378.70
14.17	2.34	Proving & fixing Selection no.1 grass turf with earth 50 mm to 60 mm thickness of existing ground prepared with proper level and ramming with required tools wooden (Dhurmos) and than rolling the surface with light roller make the surface smoothening and watering.	Sqm.	519.00	87.50	45412.50
14.18	2.14	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately):				
a)	2.14.1/ H&L	Holes 1.2 m dia and 1.2 m deep.	Each	26.00	335.50	8723.00
b)	2.14.3/ H&L	Holes 60 cm dia, and 60 cm deep.	Each	26.00	43.75	1137.50
		Total of sub-head				4018879.35
15.00		NON DSR ITEM				
15.01	NS	Providing and installation of fully insulated wooden fire rated shutter of 120min. fire rating conforming to BS: 476 part 22 and IS:3614 Part II as per the prototype tested and certified by CBRI Roorkee, of minimum 50 mm thickness, comprising of 75mm x 44mm hardwood internal timber frame work, with infill of 96 kg/m3, ceramic fiber blankets, coated with intumuscent coating on both sides for insulation. The coated insulation shall be sandwiched between 12mm thick, Non combustible Boards (Calcium Silicate of approved quality and manufacture) on both sides (edge to edge on internal Hardwood frame) and cladded with 3mm thick commercial ply of approved quality & 1mm thick laminate of approved brand and manufacture on both sides, with 50mm x 14mm 2nd class teak wood lipping all round the shutter.				

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
		The shutter is suitable for mounted on the door frame, as per the item given below. Both frame and shutter shall be fitted with fire & smoke intumescent seal of Viper or equivalent make of size 20 x 4mm on all the three sides except bottom. The pasting of the ply/veneer/laminate should be done using automatic machine and should be free from any nails or perforations. The board shall be Resistant to vermin, mould growth, minor impact, abrasion and short term water attack. The shutter shall be fixed with the frame with the help of SS 304 grade ball bearing hinges of size 100x75x3mm of approved quality with necessary screws and making cut out for vision panel. Provisions/reinforcement for fixing all fixtures shall be built in on the door prior to the supply. The rate shall include all the materials, labour and T&P for the works described in the item above.				
	a)	Single/Double Shutter	Sqm	234.00	10034.60	2348096.40
15.02	NS	Providing and fixing door frames as per BS: 476 part 22, IS:3614 Part II as per the prototype certified by CBRI Roorkee made out of 2nd class Teak Wood (Ivory Coast) frame of section 120x70mm for fire resistant doors of 120 minutes fire rating, with heat activated intumescent fire seal strips of size 20 x 4 mm (for smoke sealing) provided in grooves on all three sides of the frame with one coat of approved brand of fire retardant primer including two coats of fire retardant paint FRS 881 un thinned on cleared hard wood surface of door frames (@3.5 sq.m. per litre per coat) including preperation of base surface as per recommendations of manufacturer to make the surface fire retardant, including fixing the frame with 8 nos. 100 mm long, 10 mm dia metal dash fastners complete as per directions of the Engineer in charge.	R.Mtr.	299.00	2609.00	780091.00
15.03	NS	Supply & fixing of Door Coordinator for proper coordination of double leaf door shutters so as to allow proper closing of door	Each	40.00	10034.60	401384.00
15.04	NS	Providing & fixing 11.0 mm thick sandwich clear glass of approved make tested upto 2 hours fire rating and complied with BS 476: Part 22 as vision panel including cost of fire rated ceramic tape and moulding/beading all complete.	Sqm	6.00	40807.10	244842.60
15.05	NS	Providing and fixing Panic Bar single / double leaf panic exit devices of approved quality and manufacture for 120 min fire rated door.				
	a)	Double Leaf Panic Bar	Each	21.00	19935.30	418641.30
15.06	NS	Supply & installation of door closers of approved quality and manufacture for 120 min fire rated door.	Each	40.00	3144.20	125768.00
15.07	NS	Supply & fixing of Mortise Lock With SS Lever Handle Of approved quality and manufacture for 120 min fire rated door	Each	40.00	4682.80	187312.00
15.08	NS	Supply & installation of a pair of SS D Type Pull Handle of size 300mm mm Long of approved quality and manufacture for 120 min fire rated door	Each	77.00	1070.40	82420.80
15.09	NS	Supply & installation of Panic Trim of approved quality and manufacture for 120 min fire rated door	Each	41.00	5284.90	216680.90

S. No.	Ref. No	Description	Unit	Total Quantity	DSR 21 Rate/ NS Rate	Total Amount (Rs.)
15.10	NS	P/L 8mm thick HDF laminated wooden Flooring including skirting of approved brand and manufacture(AC 4)plank size 1290 X 194 mm & groove construction with edge impregnate with seal to secure long lasting joints ,secured together with the help of suitable glue, conforming to EN 13329 including the cost of 0.6 mil. PE Film and 2 mm PU Foam with accessories like Skirting, T Profile, beading, stair nose etc all complete. Area of floor and skirting shall be measured for payment.	Sqm	57.00	2100.60	119734.20
15.11	NS	Proving and fixing glass Reinforced Concrete (G.R.C) Screens in approved size, pattern design, thickness and color of approved make .The Screen should be made from White Portland cement ,Quartz, Fine Silica Sand, Alkali Resistant Glass Fibre Super Plasticizer Polymer and U.V resistant Synthetic inorganic pigment for pigmentation. The material casting should take place in Synthetic Rubber /FRP moulds of approved make & shape. The fixing of screens to be done with Stainless Steel (SS-304) 'L' shaped Clamps, dash fasteners and pins, as required at site.				
		Technical specification of GRC Screens.				
a)		Internal member thickness 30 mm and border thickness 50 mm 1800 kg/m3 (min) Water absorption: Less than 6% of dry weight by immersion over a period of 24 hours. Compressive strength: (M-40 Grade) Wet Transverse Strength: 7 N/mm (min) Abrasion Resistance: Less than 2.0 for E.H.D Thermal Conductivity: 1.63 W/MK at 3% moisture content : 1.80W/MK at 5% moisture content	Dry Density:			
			Sqm	66.00	6478.30	427567.80
15.12	NS	Providing and Plantation of trees of required species (Base rate Rs 200 per tree without GST) at site i/c watering and removal of unserveiceable material's as per direction of officer in charge (including cast of plant)	Each	53.00	274.28	14536.69
		Total of sub-head				5367075.69

ABSTRACT**Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh**

S.No.	DESCRIPTION	DSR Amount (Rs)	Market Amount(Rs)
A	INTERNAL PLUMBING		
1	SANITARY FIXTURES	10,23,399.25	22,10,936.98
2	SOIL, WASTE AND VENT PIPES	12,27,527.20	13,08,939.94
3	WATER SUPPLY	27,98,136.65	37,82,372.00
4	SEWERAGE AND DRAINAGE(Around Building)	24,15,894.60	3,00,000.00
5	SOLAR WATER HEATING SYSTEM & RECIRCULATING SYSTEM	-	16,75,000.00
6	RAIN WATER PIPING	3,76,534.40	3,14,066.92
	EXTERNAL PLUMBING		
7	EXTERNAL WATER SUPPLY	6,91,498.85	5,96,017.00
8	BOREWELL	4,67,396.15	2,20,000.00
9	RAIN WATER HARVESTING	1,64,201.65	1,60,000.00
10	EXTERNAL SEWERAGE AND DRAINAGE(except Around Building)	3,80,182.35	1,57,500.00
11	EARTH WORK(Plumbing work)	1,79,889.50	-
12	WATER SUPPLY PUMPS-ELECTRICAL PANEL		2,97,606.00
	Total	97,24,660.60	1,10,22,438.83
	Grand total	2,07,47,100.00	

Design & Engineering Department								
Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
		Note: Based on the tender drawing the agency has to prepare the internal & external plumbing shop drawing and obtain the approval of the same before execution						
1.00		SANITARY FIXTURES						
1.01	17.10	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required:						
a)	17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests	Each	4	5,781.35	23,125.40		-
				-		-		-
1.02	17.30	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :						
a)	17.3.2	W.C. pan with ISI marked black solid plastic seat and lid	Each	43	6,827.55	2,93,584.65		-
				-		-		-
1.03	17.70	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. Brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:						
a)	17.7.4	White Vitreous China Flat back wash basin size 550x 400 mm with single 15 mm C.P. brass pillar tap	Each	41	2,731.45	1,11,989.45		-
				-		-		-
1.04	17.7A	Providing and fixing wash basin with C.I. brackets, 15 mm dia CP Brass single hole basin mixer of approved quality and make, including painting of fittings and brackets, cutting and making good the walls wherever required:-						
a)	(a)	White Vitreous China Wash basin size 550x400 mm with a 15 mm CP Brass single hole basin mixer	Each	24	4,542.40	1,09,017.60		-
				-		-		-
1.05	17.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	Each	6	1,500.05	9,000.30		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
1.06	17.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS:13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required		-		-		-
a)	17.10.1	Kitchen sink with drain board		-		-		-
	17.10.1.2	510x1040 mm bowl depth 225 mm	Each	6	6,677.40	40,064.40		-
b)	17.10.2	Kitchen sink without drain board		-		-		-
	17.10.2.2	610x460 mm bowl depth 200 mm	Each	4	3,337.85	13,351.40		-
1.07	17.16A	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to European type W.C. of quality and make as approved by Engineer - in - charge.	Each	12	299.35	3,592.20		-
1.08	17.22A	Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineer-in-charge.	Each	18	886.25	15,952.50		-
1.09	17.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.		-		-		-
	17.28.1	Semi rigid pipe		-		-		-
	17.28.1.1	32 mm dia	Each	52	90.95	4,729.40		-
	17.28.1.2	40 mm dia	Each	13	104.35	1,356.55		-
1.10	17.32	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :		-		-		-
a)	17.32.2	Rectanqular shape 453x357 mm	Each	47	1,158.95	54,470.65		-
b)	17.32.4	Rectanqular shape 1500x450 mm	Each	18	1,817.20	32,709.60		-
1.11	17.33	Providing and fixing 600x120x5 mm glass shelf with edges round off, supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.	Each	25	573.30	14,332.50		-
1.12	17.34	Providing and fixing toilet paper holder :		-		-		-
a)	17.34.1	C.P. brass	Each	65	680.80	44,252.00		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
1.13	17.78	Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete.	Each	6	13,036.55	78,219.30		-
1.14	17.80	Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.	Each	11	7,004.45	77,048.95		-
1.15	17.81	Providing and fixing floor mounted, white vitreous china single piece, double traps syphonic water closet of approved brand/make, shape, size and pattern including integrated white vitreous china cistern of capacity 10 litres with dual flushing system, including all fittings and fixtures with seat cover, cistern fittings, nuts, bolts and gasket etc including making connection with the existing P/S trap, complete in all respect as per directions of Engineer-in-Charge.	Each	6	16,100.40	96,602.40		-
1.16	NS-1	Extra for Providing and fixing wall hung water closet with seat cover of approved model and slim concealed flushing cistern of 9 litre capacity, body with floor mounted frame and installation kit with SS actuating panel with dual flush with fittings in place of pedestal type water closet 10 lits. & vitreous china cistern ,complete of approved make as approved by Engineer-in-charge.	Each	10			16,890.00	1,68,900.00
1.17	NS -2	Providing and fixing health faucet with pipe and hook complete of approved make as approved by Engineer-in-charge.	Each	53			2,653.00	1,40,609.00
1.18	NS -3	Extra for providing and fixing white vitreous china oval shape wash basin in place of normal wash basin of size 580x440						
a)		under Counter oval shape wash basin size 600x390mm approx. (centre tap hole) along with , single 15 mm CP brass pressmatic type pillar tap of approved make as approved by Engineer-in-charge.	Each	40			7,817.00	3,12,680.00

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
1.19	NS-6	Providing and fixing white vitreous china urinal of approx. size 797x 425 mm having top inlet urinal with CP brass pressmatic urinal valve auto closing system with built in control cock & wall flanged complete including fixing to wall with suitable brackets all as per manufacturers specification from approved make.	Each	10		-	20,634.00	2,06,340.00
1.20	NS-7	Extrafor providing and fixing Sentronic Concealed Urinal Sensor Powered by 220 volts-AC. Concealed box dimension: 110x110x92 mm Front plate dimation :120 x120 mm in place of pressmatic urinal valve of approved make as approved by Engineer-in-charge.	Each	6		-	5,347.50	32,085.00
1.21	NS -9	P&F wall Soap Holder with brackets', complete fittings of of approved make as approved by Engineer-in-charge.	Each	18		-	1,200.00	21,600.00
1.22	NS-10	Providing and fixing Liquid Soap Dispenser all complete of approved make as approved by Engineer-in-charge.	Each	53		-	2,579.00	1,36,687.00
1.23	NS -11	Providing and fixing CP brass towel rail complete of approve quality and colour of approved make as approved by Engineer-in-charge.		-		-		-
	a	600 mm long towel rail	Each	71		-	750.00	53,250.00
1.24	NS-13	providing and fixing CP Brass bottle trap for sink and urinal basin including CP waste fittings complete 40 mm dia complete in all respect of approved quality.	Each	6		-	1,211.00	7,266.00
1.25	NS -14	providing & fixing double robe hook with all complete fittings as per approved makeas approved by Engineer-in-charge.	Each	46		-	850.00	39,100.00
1.26	NS-16	Providing and fixing beveled edge mirror 6 mm thick of superior glass(of approved quality) complete with 6 mm thick hard board ground fixed to woen cleats with ss studs complete approved make as approved by Engineer-in-charge.	Sqm	6		-	1,620.00	9,720.00
1.27	NS (a)	Providing and fixing white vitreous china Laboratory sink approx. size Size 450x300x150 mm & drain board with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete, including painting of fittings and brackets, cutting and making good the wall wherever required	Each	16		-	10,920.50	1,74,728.00
	(b)	P & F Chromium plated Swan-neck Laboratory Cock of approved quality / make:	Each	-		-		-
	(i)	One Way.		10		-	468.00	4,680.00

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
	(ii)	Two Way.		6			578.00	3,468.00
1.28	NS-17	Supply and Installation of Grab Bar S , type-304, 18-gauge (1 mm) stainless steel tubing with satin-finish. 1-1/2" (25.4mm) outside diameter. Concealed Mounting Flanges — 18-8 S, type-304, stainless steel plate; end flanges with two holes for attachment to wall. Snap Flange Covers — 18-8 S, type-304, 22-gauge (0.8mm) drawn stainless steel with satin-finish. Each cover snaps over mounting flange to conceal mounting screws.	Each	11		-	3,136.31	34,499.41
1.29	NS-19	Providing & fixing SS body solid state fully hygienic no touch Hand Drier of approved make rated for continuous repeat usage with solid state time delay LSF protection, with independent ambient light level & seasonal control temperatures including providing necessary C.I./M.S. brackets painted with two or three coats of enamel paint of approved shade over a coat of primer, wiring cables from drier to plug, plug tops etc. complete including cutting and making good the walls wherever required.	Each	41		-	13,780.00	5,64,980.00
1.30	NS-5	Providing and fixing WC connector socket(for vitreous china & CI pipe) of EDPM good quality with polypropelene body 100x150/100x250 of approved quality and make complete in all respect.	Each	10			1,034.46	10,344.57
1.30	NS	Supply , installation, testing and commissioning of compact floor mounted pedestal base surgical scrub sink tailor made to suit the site available compatible with all the regular and standard plumbing system, with inbuilt geyser designed for use in operation theatre fabricated from 16 gauge 304 type stainless steel seamless welded,polished to satin finish including connecting to drainage and water points and making good cutting of walls and floor surface all complete and as directed		-				
a)		Tailor made surgical scrub sink (2 bay) Approximate size 1.4 mX0.54mX0.84m with 1 user elbow operated mixture tap, soap dispensers, drain outlet ,thermostatic control of water temperature	Each	1			2,90,000.00	2,90,000.00
SUB TOTAL(SANITARY FIXTURES)				-			10,23,399.25	22,10,936.98
2.00		SOIL, WASTE AND VENT PIPES		-				
2.01	17.35	Providing and fixing soil, waste and vent pipes- Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905		-				

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
a)	17.35.1.3	100 mm dia-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	Meter	592	1,061.25	6,28,260.00		
b)	NS	150 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Meter	300		-	2,336.86	7,01,058.00
				-		-		
2.02	17. 38	Providing and fixing bend of required degree with access door , insertion rubber washer 3 mm thick, bolts and nuts complete.		-		-		
a)	17.38.1.3	100 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	33	550.80	18,176.40		
b)	NS	150 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	10		-	1,390.26	13,902.60
				-		-		
2.03	17. 39	Providing and fixing plain bend of required degree.		-		-		
a)	17.39.1.3	100 mm -Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	Each	86	346.05	29,760.30		
b)	NS	150 mm dia-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	30		-	1,001.51	30,045.30
				-		-		
2.04	17.42	Providing and fixing double equal plain junction of required degree.		-		-		
a)	17.42.1.3	100x100x100x100 mm Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	33	720.70	23,783.10		
b)	NS	150x150x150x150 mm Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	10		-	1,822.00	18,220.00
				-		-		
2.05	17. 43	Providing and fixing single equal plain junction of required degree with access door , insertion rubber washer 3mm thick, bolts and nuts complete.		-		-		
a)	17.43.1.2	100x100x100mm - S & S/H.L.C.C.I	Each	60	731.40	43,884.00		
b)	NS	150x 150x 150 mm-H.L.C.C.I	Each	16		-	2,912.29	46,596.64
				-		-		
2.06	17. 44	Providing and fixing single equal plain junction of required degree		-		-		
a)	17.44.1.3	100x100x100mm -Hubless centrifugally cast (spun) iron epoxy coated inside & outside	Each	20	573.50	11,470.00		
b)	NS	150x150x150-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	10		-	2,213.87	22,138.70
				-		-		
2.07	17. 56	Providing and fixing terminal guard .		-		-		
a)	17.56.1.3	100 mm-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	29	399.60	11,588.40		
b)	NS	150 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	10		-	1,166.23	11,662.30
				-		-		
2.08	17. 57A	Providing and fixing shielded coupling for Hubless centrifugally cast iron pipe of same manufactureing.		-		-		
a)	17.57A.1.1	100 mm dia-SS 304 grade coupling with EPDM rubber gasket	Each	176	406.30	71,508.80		

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
b)	NS	150 mm dia	Each	80		-	869.73	69,578.40
2.09	17.60	Providing and fixing Trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:		-		-		
a)	17.60.1.3	100/150 mm inlet and 100/150mm outlet-Hubless centrifugally cast (spun) iron epoxy coated inside & outside	Each	152	760.85	1,15,649.20		
2.10	17.65	Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate, grey, or buff etc. over a coat of primer (of approved quality) for new work:		-		-		
a)	17.65.1	100 mm/150 mm diameter pipe	Metre	892	69.55	62,038.60		
2.11	17.59	Providing and fixing M.S. holder bat clamp of approved design to sand cast iron/ cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5 mm flat of specified shape, projecting 75 mm outside the wall surface and fixed on wall with 4nos, 6mm dia expansion hold fasteners, including drilling necessary holes in brick wall/ CC/ RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30 mm x1.6 mm galvanised M.S. flats of specified shape and of total length 420 mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6 mm, one bolts on each side of the pipe.		-		-		-
a)	17.77.1	Total bracket length 580 mm of approved shape and design (for single 100 mm dia pipe)	Each	61	247.95	15,124.95		-
b)	17.77.2	Total bracket length 810 mm of approved shape and design (for two 100 mm dia pipes)	Each	35	306.90	10,741.50	140.00	4,900.00
c)	17.77.3	Total bracket length 1040 mm of approved shape and design (for three 100 mm dia pipes)	Each	25	365.65	9,141.25		
				-				

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
2.12	17. 61	Cutting chases in brick masonry walls for following diameter sand cast iron/centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 12.5 mm nominal size), including necessary plaster and pointing in cement mortar 1:4 (1 cement : 4 coarse sand) :		-		-		-
a)	17.61.1	100 mm diameter pipe	Metre	46	615.70	28,322.20		-
b)	NS	150 mm diameter pipe	Metre	20	775.00	15,500.00		-
				-		-		-
2.13	17. 59	Providing and fixing M.S. stays and clamps for sand cast iron / centrifugally cast (spun) iron pipes of diameter :		-		-		-
a)	17.59.1	100 mm	Each	65	128.65	8,362.25		-
				-		-		-
2.14	18.10	Providing and fixing CPVC/ GI pipes complete with CPVC/GI fittings and clamps, i/c cutting and making good the walls etc and making good the same for waste water disposal complete as per direction of engineer incharge.		-		-		-
a)	18.10.4	32 mm dia nominal bore (Wash basin to floor trap/floor drain)	Metre	70	563.60	39,452.00		-
b)	18.10.5	40 mm dia nominal bore (Sink,Urinal to floor trap)	Metre	59	725.15	42,783.85		-
c)	18.10.6	50 mm dia nominal bore (Floor Drain to Floor Trap)	Metre	47	893.20	41,980.40		-
				-		-		-
2.15	NS -1	Providing and fixing floor drain & balcony drain made of cPVC 100 x 50 mm dia elbow / tee as applicable connected with 50 mm dia GI pipe complete in all complete including cutting and making good the walls and floor wherever required	Each	43		-	600.00	25,800.00
				-		-		-
2.16	NS -3	Providing and fixing dash fastner made of rust proof plated steel for holding the soil/waste supply pipes complete in all respect		-		-		-
a)		Dash fastner for pipe more than 25 mm dia to 150 mm dia pipe of size 25 mm dia and 75 mm long minimum & shall be capable of taking 6 tonnes load and also include the supporting angles 35x35x5 mm/ of required size or MS bars steel structures as per drawing.	Each	362		-	379.46	1,37,365.26
				-		-		-
2.17	NS-4	Providing and fixing SS floor trap (FD+FT) grating 143x143x5 mm thick screwable with SS fixed framed of 150x150 mm size as per approved make and model	Each	63		-	513.93	32,377.84
				-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
2.18	NS-8	Providing and laying Laboratory / hospital Effluent waste pipe and fitting of high density polyethelene (HDPE),CLASS -PE 80 ,pressure rating PN-6,conforming to IS :4427, electric fusion joints/flanged joints , fittings which includes bends,,junctions,cowls,offsets,access pieces.etc. complete including jointing.		-		-		
a)	i	50 mm dia	Metre	50		-	192.92	9,646.14
b)	ii	90 mm dia	Metre	100		-	379.52	37,952.04
c)	iii	110 mm dia	Metre	150		-	517.62	77,643.56
c)	iii	160 mm dia	Metre	75		-	934.04	70,053.15
SUB TOTAL(SOIL, WASTE AND VENT PIPES)				-		12,27,527.20		13,08,939.94
3.00		WATER SUPPLY		-				
3.01	18.70	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes , having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. INTERNAL WORK - EXPOSED ON WALL		-				
		Internal work – Exposed on wall		-				
a)	18.7.1	15 mm nominal outer dia Pipes(SDR-11)	Metre	10	255.90	2,559.00		
b)	18.7.2	20 mm nominal outer dia Pipes(SDR-11)	Metre	130	325.10	42,263.00		
c)	18.7.3	25 mm nominal outer dia Pipes(SDR-11)	Metre	205	408.55	83,752.75		
d)	18.7.4	32 mm nominal outer dia Pipes(SDR-11)	Metre	210	500.95	1,05,199.50		
e)	18.7.5	40 mm nominal outer dia Pipes(SDR-11)	Metre	180	674.35	1,21,383.00		
f)	18.7.6	50 mm nominal outer dia Pipes(SDR-11)	Metre	150	927.00	1,39,050.00		
g)	NS	62.5 mm nominal inner dia Pipes(SCH-80)	Metre	75		-	1,080.00	81,000.00
				-		-		
				-		-		
3.02	18.80	Providing and fixing Chlorinated Polyvenyl Chloride(CPVC)pipes having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.0 m spacing.This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in charge.		-				
		Concealed work including cutting chases and making good the walls etc.		-				
a)	18.8.1	15 mm nominal outer dia pipes (SDR-11)	Metre	50	441.15	22,057.50		
b)	18.8.2	20 mm nominal outer dia pipes (SDR-11)	Metre	1,380	513.75	7,08,975.00		
c)	18.8.3	25 mm nominal outer dia pipes (SDR-11)	Metre	465	626.05	2,91,113.25		
d)	18.8.4	32 mm nominal outer dia pipes (SDR-11)	Metre	250	712.75	1,78,187.50		
	NS	40mm nominal outer dia pipes (SDR-11)	Metre	150		-	850.00	1,27,500.00

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
3.03	18.9	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes , having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.		-		-		-
		External Work		-		-		-
a)	18.9.4	32 mm nominal dia Pipes	Metre	30	435.05	13,051.50		-
b)	18.9.5	40 mm nominal dia Pipes	Metre	135	559.20	75,492.00		-
c)	18.9.6	50 mm nominal dia Pipes	Metre	160	811.85	1,29,896.00		-
d)	18.9.7	65 mm nominal dia Pipes	Metre	125	1,576.90	1,97,112.50		-
e)	18.9.8	80 mm nominal dia Pipes	Metre	55	1,990.40	1,09,472.00		-
3.04	18.13	Making connection of G.I./CPVC distribution branch with G.I./D.I main of following sizes by providing and fixing tee, including, cutting and threading the pipe etc. complete including obtaining approval for connection from Municipal corporation , if required		-		-		-
a)	18.13.2	25 to 150 mm nominal bore	Each	1	1,513.70	1,513.70		-
3.05	18.17	providing and fixing Gun metal gate valve with C.I. wheel of approved quality (screwed end)		-		-		-
a)	18.17.1	25 mm nominal bore	Each	12	532.35	6,388.20		-
b)	18.17.1A	20 mm nominal bore	Each	15	461.75	6,926.25		-
c)	18.17.2	32 mm nominal bore	Each	10	589.90	5,899.00		-
d)	18.17.3	40 mm nominal bore	Each	8	707.30	5,658.40		-
e)	18.17.4	50 mm nominal bore	Each	6	878.25	5,269.50		-
f)	18.17.5	65 mm nominal bore	Each	6	1,490.70	8,944.20		-
3.06	18.18	Providing and fixing Ball valve (brass) of approved quality, High or low pressure with plastic floats complete		-		-		-
a)	18.18.1	15 mm	Each	4	348.85	1,395.40		-
b)	18.18.2	20mm.	Each	12	397.45	4,769.40		-
3.07	18.19	Providing and fixing Gun metal non-return valve of approved quality (screwed end)		-		-		-
	18.19.1	25 mm nominal bore		-		-		-
a)	18.19.1.1	Horizontal	Each	8	506.65	4,053.20		-
	18.19.3	40 mm nominal bore		-		-		-
b)	18.19.3.1	Horizontal	Each	6	815.05	4,890.30		-
	18.19.4	50 mm nominal bore		-		-		-
c)	18.19.4.1	Horizontal	Each	8	1,173.65	9,389.20		-
	18.19.6	80 mm nominal bore		-		-		-
d)	18.19.6.1	Horizontal	Each	4	3,134.80	12,539.20		-
3.08	18.20	Providing and fixing brass Ferrule with C.I. mouth cover including boring and tapping the main		-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
a)	18.20.3	25 mm nominal bore or as per required size	Each	1	447.00	447.00		-
b)	NS	40mm to 65 mm dia bore	Each	1		-	1,050.00	1,050.00
3.09	18. 21	Providing and fixing unplasticised PVC connection pipe with brass unions:		-		-		-
a)	18.21.2	45 cm length		-		-		-
a i)	18.21.2.1	15 mm nominal bore	Each	128	85.20	10,905.60		-
3.10	18.32	Constructing masonry chamber 30x30x50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement: 4 coarse sand) for stop cock, with C.I. surface box 100x100x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement: 2 coarse sand:4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement:5 fine sand: 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement :3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design		-		-		-
a)	18.32.1	With F.P.s bricks	Each	8	1,712.15	13,697.20		-
3.11	18. 48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI:12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank		-		-		-
a)		Treated water Tank and Untreated water tank	per litre	31,000	7.25	2,24,750.00		-
3.12	18. 49	Providing and fixing C.P brass Bib Cock of approved quality.		-		-		-
a)	18.49.1	15 mm nominal bore	Each	35	434.20	15,197.00		-
3.13	18.51	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.		-		-		-
a)	18.51.1	15 mm nominal bore	Each	60	708.40	42,504.00		-
3.14	18. 53	Providing and fixing C.P. brass Angle Valve for basin mixer and geyser/cisterns points of approved quality conforming to IS:8931.		-		-		-
a)	18.53.1	15 mm nominal bore	Each	220	500.35	1,10,077.00		-
3.15	18.53A	Providing and fixing C.P. Brass extension nipple (size 15mmx50mm) of approved make and quality as per direction of Engineer-in-charge.	Each	37	61.70	2,282.90		-
				-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
3.16	18.59	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc. if required will be paid separately):		-		-		-
a)	18.59.1	50 mm dia	Each	2	5,171.75	10,343.50		-
b)	18.59.2	80 mm dia	Each	2	6,255.45	12,510.90		-
				-		-		-
3.17	18.60	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by municipal board complete with bolts,nuts rubber, insertions etc. (the tail plases if required will be paid seprately)		-		-		-
a)	18.60. 1	80 mm dia nominal bore	Each	1	3,266.10	3,266.10		-
				-		-		-
3.18	18.62	Providing and fixing PTMT ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./H.P.H.D. plastic ball.		-		-		-
a)	18.62.4	40 mm nominal bore, 206 mm long weighin not less than 690 gms	Each	6	646.70	3,880.20		-
b)	18.62.5	50 mm nominal bore, 242 mm long weighin not less than 1240 gms	Each	4	1,125.25	4,501.00		-
				-		-		-
3.19	18.76	Cutting holes upto 30x30 cm in walls including making good the same		-		-		-
a)	18.76.1	with F.P.S bricks	Each	64	362.40	23,193.60		-
				-		-		-
3.20	18.77	Cutting holes up to 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement:2 coarse sand: 4 graded stone aggregate 20 mm nominal size) including finishing complete so as to make it leak proof	Each	62	377.10	23,380.20		-
				-		-		-
3.21	NS-4	Providing and fixing Ball valve (SS) as per specifications of PN 10 rating.		-		-		-
a)		25 mm	Each	7		-	2,400.00	16,800.00
b)		32 mm	Each	7		-	2,950.00	20,650.00
c)		40 mm	Each	5		-	3,800.00	19,000.00
d)		50 mm	Each	5		-	5,200.00	26,000.00
				-		-		-
3.22	NS-6	Providing and fixing Indian make CP brass air valves with gunmetal isolation valve fixed on pipe lines.		-		-		-
a)		15mm n.b air vent with 15mm isolation valve.	Each	2		-	1,440.00	2,880.00
b)		20mm n.b air vent with 20mm isolation valve.	Each	3		-	1,804.00	5,412.00
				-		-		-
3.23	NS-8	Providing and Fixing concealed Bath & Shower Mixer and diverter cutting and making good the wall complete as per instructions of the engineer-in-charge.	Each	6		-	4,680.00	28,080.00
				-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
3.24	NS-9	Providing and Fixing Over head shower 100 mm dia having aerators/flow restrictor to achieve the desired flowrate with Shower Arm complete as per instructions of the engineer-in-charge (Flowrate : 8.4 LPM at 45 Psi pressure)	Each	6		-	1,650.00	9,900.00
				-		-		-
3.25	NS-10	Providing and Fixing CP Bath spout with wall flange having aerators/flow restrictor to achieve the desired flowrate complete as per instructions of the engineer-in-charge or as per equivalent make. (Flowrate : 8.4 LPM at 45 Psi pressure)	Each	6		-	1,200.00	7,200.00
				-		-		-
3.26	NS -15	Providing fixing testing and commissioning of CP brass wall/counter mounted sink mixer with C.P. wall flange, overhead swinging spout/goose neck complete as required having aerator/flow restrictor to achieve the desired flow rate and making good including necessary wall cutting/chasing and making as required as per direction of engineer in_charge(flowrate:6.4 LPM at Psi Pressure)	Each	6		-	4,250.00	25,500.00
				-		-		-
3.27	NS -15	Supplying, fixing, testing and commissioning of storage type water heater (Geyser) etc. with outer body of ABS, 2 MM Thick Mild Steel inner Tank with glass line coating,option of 1/2/3 KW electrically operated single phase 230V, including Glass Lined Double Heating Element,Digital Display, Multifunction Safety Device, ELCB, Anode Rod System, and Brackets for fixing on wall with connecting Wire & plug etc. conforming to IS: 2082 and energy efficient star rated model.		-		-		-
a)		15 Litre Capacity	Each	2		-	6,800.00	13,600.00
b)		25 Litre Capacity	Each	21		-	7,800.00	1,63,800.00
c)		35 litre capacity	Each	4		-	9,500.00	38,000.00
				-		-		-
3.28	NS -16	Providing & fixing water storage cooler of approved make and brand with SS body Complete in respects-230V Single Phase. (Voltas/Shriram/BLUE-STAR)		-		-		-
a)		minimum flow rate of 40 ltrs. Per hour and storage capacity 80 ltrs.	Each	9		-	75,000.00	6,75,000.00
				-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
3.29	NS-17	Providing and fixing approved make & suitable model of R.O. plant 100 ltrs. Per hour flow rate having capacity to treat the raw water having TDS 1200 ppm and not less than 40%. The treated water should have TDS less than 100 ppm and hardness less than 50 ppm. The operating voltage to 230 volt AC +/- 10% alongwith required capacity pump and solenoid valves, dry run protection of pump, automatic tank level control, inbuilt auto flush timer for periodic flushing of membranes, hydro pneumatic tank, over voltage and over current protection with switch mode power supply system antiscaling dosing system complete in all respects including installation and fittings with the following provisions: (IONIEXCHANGE/ KENT/AQUAPROCESS/Pantair)		-		-		-
a)		10 micron polypropylene sediment pre filter		-		-		-
b)		10 micron bacteriostatic activated carbon block on line micron filter with 5 micron rating		-		-		-
c)		3 Nos. of reverse osmosis memberane with 0.0001 micron pore size energy saving poly amide type		-		-		-
d)		UV lamp of minimum capacity 100 LPM and minimum lamp wattage 9W	Each	5		-	1,75,000.00	8,75,000.00
				-		-		-
3.30	NS-18	Providing and fixing approved make & suitable model of R.O. plant (fully automatic operation) 600ltrs. Per hour flow rate having capacity to treat the raw water and average recovery not less than 35% . The operating voltage to 230 volt AC +/- 10% alongwith required capacity on line SS pump of approved make (3HP minimum) and solenoid valves, dry run protection of pump, automatic tank level control, inbuilt auto flush timer for periodic flushing of membranes, storage tank (3.0 mm (minimum) thick S.S. 304 sheet) 1500 lts of suitable size and ita supporting structure, over voltage and over current protection with switch mode power supply system complete in all respects including installation and fittings with the following provisions: (IONIEXCHANGE/ KENT/AQUAPROCESS,Pantair)		-		-		-
		10 micron polypropylene sediment pre filter		-		-		-
		10 micron bacteriostatic activated carbon block on line micron filter with 5 micron rating		-		-		-
		Required Nos. and size of reverse osmosis memberane with 0.0001 micron pore size energy saving poly amide type		-		-		-
		UV lamp of minimum capacity 600LPH and minimum lamp wattage 15W		-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
		MS powder coated frame efficient of TDS removal more than 90%. Antiscalant dosing and acid dosing system for self flushing/cleaning.Pressure switches and gauges, pH correction dosing system, Digital TDS meter, Digital pH meter, electric panel and necessary instrumentation included Rotameter.MS structure and fibre glass sheet weather protection cover as per site condition.	Each	2		-	3,50,000.00	7,00,000.00
3.31		Supplying, installing, testing and commissioning vertical in line multi stage centrifugal pumping system with mechanical seal, C.I. suction & discharge, SS 304 impeller, SS -304 stage casing & SS -316 shaft connected to a TEFC induction motor with IE2 efficiency class of suitable HP for 415 volts, 3 phase, 50 cycles A.C. supply with 150 mm dia pressure gauge, Pumps should be connected to MS Galvenised Suction & Discharge Header, should be mounted on a common base plate. Complete system should be supplied with IP 55 protection class control panel for water level controller to start and stop the pump automatically at predecided levels of the water in the tank with provision of protection for dry run etc. complete in all respect. The efficiency of the pump shall be more than 60% (The shop drawing or the pumps along with its characteristics curves, model and technical data etc. are to be submitted for approval before purchase of pump).		-		-		-
	a)	Treated Water Pump Capacity : 100 LPM (Each) Head 65 m Power :3 HP(minimum) with 100% standby pumps complete pump set as above- 2 Nos. (1 W+ 1S)	Nos.	2		-	2,45,000.00	4,90,000.00
	b)	Raw Water Pump Capacity : 80 LPM (Each) Head 65 m Power :2.5 HP(minimum) with 100% standby pumps complete pump set as above- 2 Nos. (1 W+ 1S)	Nos.	2		-	2,28,000.00	4,56,000.00
		SUB TOTAL(Water Supply)					27,98,136.65	37,82,372.00
4.00		SEWARAGE & DRAINAGE						
4.01	19.10	Providing laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the pro-portion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete.						
a)	19.1.1	100 mm diameter	Metre	100	375.75	37,575.00		

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
4.02	19.20	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design:		-		-		-
a)	19.2.1	100 mm diameter S.W. pipe/RCC NP2	Metre	100	895.50	89,550.00		-
b)	19.2.2	150 mm diameter S.W. pipe/RCC NP2	Metre	788	1,095.15	8,62,978.20		-
c)	19.2.4	250 mm diameter S.W. pipe/RCC NP2	Metre	360	1,476.35	5,31,486.00		-
				-		-		-
4.03	19.4	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:		-		-		-
a)	19.4.2	150x100mm size P type		-		-		-
a.i)	19.4.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	12	2,474.40	29,692.80		-
				-		-		-
4.04	19.6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :		-		-		-
a)	19.6.2	150 mm dia R.C.C. pipe	Metre	788	493.10	3,88,562.80		-
b)	19.6.3	250 mm dia R.C.C. pipe	Metre	360	811.15	2,92,014.00		-
				-		-		-
4.05	19.9	Constructing brick masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement: 3 coarse sand: 6 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design:		-		-		-
a)	19.9.1	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :		-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
a i)	19.9.1.1	With F.P.S. bricks class designation 75	Each	7	11,886.45	83,205.15		-
4.06	19. 10	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m		-		-		-
a)	19.10.1	With F.P.S. bricks class designation 75	Metre	1	6,986.80	6,986.80		-
4.07	19. 7	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand), R.C.C. top slab with 1:2:4 mix (1cement : 2 coarse sand : 4graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 (1cement : 4 coarse sand : 8graded stone aggregate 40 mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, and making necessary channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design.		-		-		-
a)	19.7.1	Inside size 90x80 cm and 45 cm deep including C.I. Cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :		-		-		-
a i)	19.7.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	4	11,687.10	46,748.40		-
4.08	19. 8	Extra depth for manholes		-		-		-
a)	19.8.1	Size 90 x 80 cm		-		-		-
a i)	19.8.1.1	With F.P.S. bricks class designation 75	Metre	1	8,127.45	8,127.45		-
4.09	19. 16	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS: 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	80	487.10	38,968.00		-
				-				-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
4.10	NS-5	Supply, installing, testing and commissioning vertical fully floodable type submersible sewage pump of non-corrosive material with shredder/cutter in close coupled design single stage, suitable for handling minimum 10 mm dia solids for transferring raw sewer from sump to outside the building with float switch for automatic start and stop arrangement with panel and wiring, chain and pulley, mechanical seal complete in all respect as per instruction of the Engineer in charge. (The shop drawing or the pumps along with its characteristics curves, model and technical data etc. are to be submitted for approval before purchase of pump).Star delta suitable starter complete in all respect for automatic/manual operation of pump,start and stop push button contactor with required overload production and single phase preventor.Electicl panal complet as per instruction of the Engineer in charge		-				
		Material of Construction (M.O.C): Corrosion Resistant in general		-				
		: Casinc — SS 316		-				
		: Impeller — SS 316		-				
		: Pump Shaft - SS 410		-				
		: Bearings — Anti friction, prelubricated ball bearings, packed with arease for life.		-				
		Motor: — Dry Motor with built in over load protection		-				
		Protection - IP68.		-				
		Insulation Class - H		-				
		Duty of each pump		-				
		150 LPM against 10 M head (Sewage pump for Basement)	Each	2			1,50,000.00	3,00,000.00
				-				
				-				
		SUB TOTAL(Sewerage , Storm & Drainage)		-		24,15,894.60		3,00,000.00
5.00		SOLAR WATER HEATING SYSTEM		-				
5.01	NS -4	Supply, installation, testing and commissioning of solar water heating system , Thermosyphon type/ force circulation , all complete based on Flat plat collector system (Cu-Cu Type only) comprising of but not limited to the following:		-				
	a)	Requisite number of Flat plate collectors of 2.30 sq. mtr. collector area. Collector absorber plate to be made of copper tubes & copper fins only		-				
				-				

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
	b)	Hot water storage tank made of stainless steel 304- food grade quality minimum 3mm thick with 2 coats of 3M epoxy anti corrosive paint inside the tank with 100 mm Glass wool insulation and cladding with 24 SWG Aluminum sheet. One temperature measuring device and suitable inlet, outlet and drain connections on the storage tank to be provided. Suitable Electrical Heater backup to be provided inside the tank along with thermostat		-		-		
	c)	Heat Exchanger - plate type external heat exchanger of SS316 plates (make Gea echo flex/Alfalavel/transfer) with MS Flanges for transfer of heat minimum 1000 K Calories/collector/hr with necessary pressure guage and temperature guage and isolation valve etc. complete . Suitable make up tank for the Heat Exchanger circuit shall also be provided		-		-		-
	d)	Primary Pumps between Collector and Heat Exchanger---Providiing of Recirculation Pumps (between Collectors and Heat Exchanger) with SS Impellers and Shaft for Temperature Application upto 90 Deg.C of Required Flow 100 Ltrs./Collector for Minimum Pressure drop of 2 Kg./Cm2 with Isolation Valves, NRVs and Stainer(1W+1S) Pumps.		-		-		-
	e)	Secondary Pump between Hot Water Tank and Heat Exchanger--Providiing of Recirculation Pumps (between Hot Water Tank and Heat Exchanger) with SS Impellers and Shaft for Temperature Application upto 90 Deg.C of Required Flow 100 Ltrs./Collector for Minimum Pressure drop of 2 Kg./Cm2 with Isolation Valves, NRVs and Stainer(1W+1S) Pumps.		-		-		-
	f)	Interconnecting system piping shall consist of B Class insulated GI/CPVC pipes covered with 50mm thick glasswool & clad with 26 SWG Aluminium Sheet. All Gate/Ball valves shall be of ISI make.		-		-		-
	g)	Electrical control panel, cabling from panel to pumps shall also be provided, Electrical panel:16 SWG sheet powder coated electrical panel for outdoor application IP-65, with Digital differential temperature controller for automatic ON/OFF at primary and secondary pumps (3ph) with necessary contractors, relays, control fuse, isolation switches. The cable beyond 100 m if required will be paid seperately in electrical head.		-		-		-
	h)	The solar collector shall be arranged on roof of building in such a way that shadow can be avoided and requisite number of MS support for collector/tanks of minimum 40x40x5 MS angle adequate for 150 Km/Hr wind speed.		-		-		-
				-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
	i)	Solar water heating system based on Flat plat collector system technology with output capacity of as mentioned below with hot water at 60 degree centigrade having required Nos. solar collectors as per complete item as per technical specification of make BHEL/TATA/EMMVEE/INTER-SOLAR. The system has to be installed by Manufacturers authorised distributors/approved specialised firms of Solar water heating of approved make The shop drawing of the systems shall be provided by the agency as per site condition obtain the proper efficiency The system shall be procured after obtaining the approval of shop drawings from HSCC / Engineer-in-charge.(Electric heating element shall not be provided in the system as the solar hot water system will supply the hot water to the individual geyser).		-		-		-
5.02	j)	Supply, Installation, Testing and commissioning of the system complete with necessary Temperature gauge, Temperature sensor, Thermostat with rubber gaskets, Electrical & Control wiring		-		-		-
	k)	Compleat Solar System as above of Capcity 5000 Litre/day (With minimum 38 nos of Collector) of 2.30 Sqm area	Each	1		-	16,75,000.00	16,75,000.00
				-		-		-
		SUBTOTAL(SOLAR WATER HEATING SYSTEM)		-		-		16,75,000.00
6.00		RAIN WATER PIPING		-		-		
6.01	12. 44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	Each	28	47.90	1,341.20		-
6.02	17.35	Providing and fixing rain water ,soil, waste and vent pipes.		-		-		-
a)	17.35.1	100 mm dia.		-		-		-
a i)	17.35.1.2	Centrifugally cast (spun) iron socketed pipe as per IS:3989	Metre	236	1,077.40	2,54,266.40		-
b)	NS	150 mm dia pipe as per IS:3989	Metre	140		-	1,500.00	2,10,000.00
6.03	17. 37	Providing and fixing M.S holder-bat clamps of approved design to Sand Cast iron/ cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc.		-		-		-
a)	17.37.1	for 100 mm dia. pipe	Each	120	308.45	37,014.00		-
b)	NS	for 150 mm dia pipe	Each	56		-	425.00	23,800.00

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
6.04	17.39	Providing and fixing plain bend of required degree.		-		-		-
a)		100 mm	Each	24	439.75	10,554.00		-
a ii)	17.39.1.2	Sand cast iron S&S as per IS:3989		-		-		-
b)	NS	150 mm	Each	10		-	1,191.79	11,917.92
6.05	17.40	Providing and fixing heel rest sanitary bend .		-		-		-
a)	17.40.1	100 mm dia		-		-		-
a.ii)	17.40.1.2	sand cast iron S&S as per IS-3989	Each	24	439.75	10,554.00		-
b)	NS	150 mm dia	Each	10		-	925.20	9,251.96
6.06	17.57	Providing and fixing collar		-		-		-
a)	17.57.1	100 mm	Each	18	439.75	7,915.50		-
a.ii)	17.57.1.2	Sand cast iron S&S as per IS-3989		-		-		-
b)	NS	150 mm	Each	5		-	935.83	4,679.14
6.07	17.58	Providing lead caulked joints to sand cast iron /centrifugally cast (spun) iron pipes and fittings of diameter:		-		-		-
a)	17.58.1	100 mm	Each	70	549.65	38,475.50		-
b)	NS	150 mm	Each	30		-	685.00	20,550.00
6.08	NS	Providing Drip seal joint of approved make for the sand cast iron/centrifugally cast iron pipes where the workability of lead joint can be effected due to space constraints.		-		-		-
a)		100 mm	Each	50		-	338.31	16,915.50
b)		150 mm	Each	20		-	532.62	10,652.40
6.09	17.65	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with two coats of synthetic enamel paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :		-		-		-
a)	17.65.1	100 mm diameter pipe	Metre	236	69.55	16,413.80		-
b)	NS	150 mm diameter pipe	Metre	140		-	45.00	6,300.00
				-		-		-
		SUB TOTAL(Rain Water pipe & fitting)		-		3,76,534.40		3,14,066.92
7.00		EXTERNAL WATER SUPPLY		-		-		-
7.01	18.10	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. (For Pump Room)		-		-		-
		Internal work - Exposed on wall		-		-		-
a)	18.10.4	32 mm dia nominal bore	Metre	15	563.60	8,454.00		-
b)	18.10.5	40 mm dia nominal bore	Metre	50	725.15	36,257.50		-
c)	18.10.6	50 mm dia nominal bore	Metre	70	893.20	62,524.00		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
d)	NS	80 mm dia nominal bore	Metre	60		-	1,004.00	60,240.00
7.02	18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.		-		-		-
a)	18.12.3	25 mm dia nominal bore	Metre	10	417.95	4,179.50		-
b)	18.12.4	32 mm dia nominal bore	Metre	15	457.70	6,865.50		-
c)	18.12.5	40 mm dia nominal bore	Metre	50	558.35	27,917.50		-
d)	18.12.6	50 mm dia nominal bore	Metre	240	654.20	1,57,008.00		-
e)	18.12.7	65 mm dia nominal bore	Metre	240	768.60	1,84,464.00		-
7.03	18.17	Providing and fixing gunmetal gate valve with CI wheel of approved quality (Screwed end) (For Garden Hydrant)		-		-		-
a)	18.17.1	25 mm NB	Each	10	532.35	5,323.50		-
7.04	18.19	Providing and fixing gun metal non-return valve of approved quality (screwed end)		-		-		-
a)	18.19.1	25 mm nominal bore		-		-		-
	18.19.1.1	Horizontal	Each	7	506.65	3,546.55		-
b)	18.19.3	40 mm nominal bore		-		-		-
	18.19.3.1	Horizontal	Each	7	815.05	5,705.35		-
c)	18.19.4	50 mm nominal bore		-		-		-
	18.19.4.1	Horizontal	Each	6	1,173.65	7,041.90		-
d)	18.19.6	80 mm nominal bore		-		-		-
	18.19.6.1	Horizontal	Each	6	3,134.80	18,808.80		-
7.05	18.33	Constructing masonry chamber 60x60x75 cm , inside with 75 class designation brick work in cement mortar 1:4 (1 cement: 4 coarse sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement: 2 coarse sand:4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement:5 fine sand: 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement :3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design		-		-		-
a)	18.33.1	With F.P.S. bricks	Each	3	10,102.50	30,307.50		-
				-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
7.06	18.34	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :		-		-		-
a)	18.34.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	3	17,577.90	52,733.70		-
7.07	18.40	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :		-		-		-
a)	18.40.4	32 mm dia nominal bore	Metre	15	10.85	162.75		-
b)	18.40.5	40 mm dia nominal bore	Metre	55	20.95	1,152.25		-
c)	18.40.6	50 mm dia nominal bore	Metre	240	25.25	6,060.00		-
d)	18.40.7	65 mm dia nominal bore	Metre	235	31.30	7,355.50		-
7.08	18.41	Providing and filling sand of grading zone V or coarser grade, allround the G.I. pipes in external work :		-		-		-
a)	18.41.4	32 mm dia nominal bore	Metre	3	168.35	505.05		-
b)	18.41.5	40 mm diameter pipe	Metre	6	170.50	1,023.00		-
c)	18.41.6	50 mm diameter pipe	Metre	22	176.90	3,891.80		-
d)	18.41.7	65 mm diameter pipe	Metre	22	279.20	6,142.40		-
7.09	18.47	Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required:		-		-		-
a)	18.47.3	25 mm nominal bore	Each	2	789.95	1,579.90		-
b)	18.47.4	32 mm nominal bore	Each	3	830.10	2,490.30		-
c)	18.47.6	50 mm diameter pipe	Each	11	1,280.30	14,083.30		-
d)	18.47.7	65 mm diameter pipe	Each	11	1,567.95	17,247.45		-
7.10	18.59	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc. if required will be paid separately):		-		-		-
a)	18.59.1	50 mm dia	Each	1	5,171.75	5,171.75		-
b)	18.59.2	80 mm dia	Each	1	6,255.45	6,255.45		-
				-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
7.11	18.60	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :		-	-	-		-
a)	18.60.1	80mm dia nominal bore (25 to 80 mm)	Each	1	3,104.90	3,104.90		-
7.12	18.61	Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :		-		-		-
a)	18.61.1	80 mm nominal bore	Each	1	4,135.75	4,135.75		-
7.13	NS-1	Supply installation, testing & commissioning of cast iron (CI) Butterfly Valves of PN 16 rating		-		-		-
a)		65 mm nominal bore	Each	3		-	2,080.00	6,240.00
b)		80 mm nominal bore	Each	3		-	2,650.00	7,950.00
7.14	NS-2	Providing and fixing Ball valve (SS) as per specifications of PN 10 rating.		-		-		-
a)		25 mm	Each	5		-	2,400.00	12,000.00
b)		32 mm	Each	5		-	2,950.00	14,750.00
c)		40 mm	Each	7		-	3,800.00	26,600.00
d)		50 mm	Each	4		-	5,200.00	20,800.00
7.15	NS-3	Providing and fixing gun metal foot valve with stainer of approved quality/model complete in all respect		-		-		-
a)		50 mm dia	Each	1		-	2,069.00	2,069.00
b)		80 mm dia	Each	1		-	4,005.00	4,005.00
c)		100 mm dia	Each	1		-	8,325.00	8,325.00
7.16	NS-4	Supply, installation, testing and commissioning of heavy duty Pop-up type irrigation sprinkler with working pressure range of 2-6 Bar	Each	20		-	10,000.00	2,00,000.00
7.17	NS-5	Providing and fixing of C.I. 'Y' type strainer flanged with SS 304 perforated screen including nuts, bolts and rubber insertions etc		-		-		-
a)		80 mm dia	Each	2		-	4,600.00	9,200.00
b)		100 mm dia	Each	1		-	6,200.00	6,200.00
7.18	NS-6	Supplying and installing Bourden type pressure gauges range 0 to 20 bar 10mm brass gauge cock brass pipe snubber etc complete.	Each	5		-	2,000.00	10,000.00
				-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
7.19	NS-7	Providing fixing and testing water flow meters in CI/brass body flanged at both ends with companion flanges,gaskets, bolts nuts and washers, with electronic digital type display for real time & totalized flow rate of water with panel and cabinet ,memory facility, flow switches and sensors and required accessories complete including cutting and making good the pipeline, and making all electrical connections, water meters should be BMS compatible testing to be carried out at 200 lbs/psi with cold water for consistent quality.(with bypass arrangements with 3 valves)		-		-		-
a)		Sizes of valve 65 mm dia	Each	1		-	18,000.00	18,000.00
b)		Sizes of valve 80 mm dia	Each	1		-	19,500.00	19,500.00
				-		-		-
7.20	NS-8	Providing and fixing puddle flanged including 40 cm long GI pipe piece welded/threaded with MS plates 450x450x6 mm thick with both end screwed/flanged.		-		-		-
a)		For 80 mm dia pipe	Each	1		-	1,764.00	1,764.00
b)		For 100 mm dia pipe	Each	2		-	1,887.00	3,774.00
				-		-		-
7.21	NS -9	Providing and fixing double seal type D.I. Manhole cover of 560 mm clear internal diameter of over all heavy duty with locking arrangement complete in all respects.	Each	5		-	6,000.00	30,000.00
				-		-		-
7.22	NS-11	Providing and fixing motorized butterfly valve/rotary actuator (CI body, SS316 disc, EPDM boot seat, SS416 shaft, RPTEF bushing @PN16 rating) for filling of water tank complete with electrical water level control panel, including by-pass connection for the same dia with manually operated butterfly valve and all piping and accessories complete in all respects - For Cluster Level UG Domestic and Flushing Tanks Clusterwise		-		-		-
a)		50 mm dia	Each	2		-	20,500	41,000.00
b)		65 mm dia	Each	2		-	22,600	45,200.00
c)		80 mm dia	Each	2		-	24,200	48,400.00
				-		-		-
		SUB TOTAL(External Water Supply)		-		6,91,498.85		5,96,017.00
8.00		BOREWELL(1 No.)		-				
8.01	4.10	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level ::Providing and laying cement concrete 1:2:4 mix (for sanitary sealing of well at top.)		-				
a)	4.1.3	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources).	Cum	1	7,365.15	7,365.15		-
				-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
8.02	18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc		-		-		-
a)	18.12.7	65 mm dia nominal bore	Metre	50	768.60	38,430.00		-
b)	18.12.8	80 mm dia nominal bore	Metre	60	919.10	55,146.00		-
				-		-		-
8.03	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)		-	-	-		-
a)	18.17.6	80 mm dia(horizontal)	Each	1	2,227.60	2,227.60		-
				-		-		-
8.04	18.19	Providing and fixing gunmetal non return valve of approved make tested to a pressure of 21ka/sqcm.		-	-	-		-
a)	18.19.6.1	80 mm dia(horizontal)	Each	1	3,134.80	3,134.80		-
				-		-		-
8.05	23.10	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level.		-	-	-		-
		All types of soil		-		-		-
a)	23.1.1.3	400mm	Metre	80	592.05	47,364.00		-
	23.1.2	Rocky strata including Boulders		-		-		-
b)	23.1.2.3	400 mm dia	Metre	10	1,777.90	17,779.00		-
				-		-		-
8.06	23.2	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level.		-		-		-
	23.2.1	All types of soil		-		-		-
a)	23.2.1.3	400 mm dia	Metre	20	648.70	12,974.00		-
	23.2.2	Rocky strata including Boulders		-		-		-
b)	23.2.2.3	400 mm dia	Metre	10	2,082.35	20,823.50		-
				-		-		-
8.07	23.8	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	Cum	1	1,175.60	1,175.60		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
8.08	23.10	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.		-	-	-		-
a)	23.10.3	200 mm nominal size dia having minimum wall thickness 5.40 mm	Metre	60	2,082.10	1,24,926.00		-
8.09	23.11	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed/ plain bevel ended pipe (type A) of required dia, conforming to IS: 8110, of reputed and approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive bitumestic paint of approved brand and manufacture, including hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer -in-charge.		-	-	-		-
a)	23.11.3	200 mm nominal size dia	Metre	40	2,194.85	87,794.00		-
8.10	23.12	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc.,all as per requirement and direction of Engineer-in-charge..	Hour	50	916.80	45,840.00		-
8.11	23.13	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:		-	-	-		-
a)	23.13.3	200 mm dia	Each	1	280.95	280.95		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
8.12	23.14	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.		-		-		-
a)	23.14.3	200 mm clamp	Each	1	1,827.00	1,827.00		-
8.13	23.15	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).		-		-		-
a)	23.15.3	150 mm dia	Each	1	308.55	308.55		-
8.14		Submersible pumps		-	-	-		-
		Providing and installing submersible pump and electrical panel suitable for 200 mm dia casing of bore with SS impeller, high tensile SS shaft, copper wound squirrel cage wet type induction motor 2880 rpm, 415 V, 50 Hz,3 phase A.C. supply, conforming to ISS: 8034-1976, capacity 300-500 LPM at 80-150 m head along with a directly coupled submersible type squirrel cage electric induction 10 H.P(minimum) . motor suitable for operation on 400 V, 3 phase, 50 c.p.s. A.C. supply, water lubricated bearings and provided with pivoted segment type thrust bearings to withstand non-vertical lead with minimum wear and tear and duly fitted with device to take up the expansion of water with heating of motor, including supply, testing and commissioning of elctrical panel from the same manufacturer, complete with all accessories in all respects. The contractor to obtain approval for model and make of pumpset & suitable Electrical panel after having yield report of fully developed tube well and submit actual bore strata chart.		-	-	-		-
		including supplying laying and fixing water proof PVC insulated flat submersible cable 3x10 sqmm with end termination with its accessories. complete in all respect as required. 1 No. 3 Phase, fully automatic star-delta starter, type - II of 15 HP with thermal overload relay, contactor, Timer, Push Buttons and Auto-manual selector switch etc complete as required.	Set	1		-	1,80,000.00	1,80,000.00
8.15	NS	Carrying out Electrical logging of Borewell before lowering of pipe for analysiing of water quality including Electrical logging report, calculation etc. including carry out hydrological survey report before boring & getting the approval based on Hydrogeological survey before start of the work.Also getting approval from local authority if any required	Job	1		-	40,000.00	40,000.00
				-		-		-
SUBTOTAL (BOREWELL)							4,67,396.15	2,20,000.00

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
9.00		RAIN WATER HARVESTING		-				
9.01	23.1	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level.		-				
		All types of soil		-				
a)	23.1.1.3	400mm	Metre	65	828.85	53,875.25		-
	23.1.2	Rocky strata including Boulders		-		-		-
b)	23.1.2.3	400 mm dia	Metre	25	1,777.90	44,447.50		-
				-		-		-
9.02	23.3	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.		-		-		-
a)	23.3.2	150 mm dia	Metre	15	668.50	10,027.50		-
				-		-		-
9.03	23.40	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.		-		-		-
a)	23.4.2	150 mm nominal size dia	Metre	15	681.90	10,228.50		-
				-		-		-
9.04	23.5	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm , in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	Cum	8	1,302.30	10,418.40		-
				-		-		-
9.05	23.6	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm , in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	Cum	8	1,309.00	10,472.00		-
				-		-		-
9.06	23.7	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -incharge.	Cum	8	1,309.00	10,472.00		-
				-		-		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
9.07	23.8	Gravel packing in tubewell construction in accordance with IS: 4097,including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge	Cum	8	1,479.25	11,834.00		-
9.08	23.9	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineerin-charge	Each	2	1,213.25	2,426.50		-
9.09	NS-1	Constructing bar screen / settling tank, of sizes 4500x2500 with suitable depth up to 2.0 m in 1: 4 Cement Mortar (one cement : 4 coarse sand) height as per site requirement, in brick masonry 350mm thick walls upto water level and 230mm thick walls above water level & upto ground level, including all excavation, 20 cm thick bed concrete in 1:4:8 (one cement 4 fine sand 8 stone aggregate 40 mm), cement plaster 1:3 (one cement :3 coarse sand) with a floating coat of neat cement as inside finish , top slab in RCC 1:2:4, including centring, shuttering and steel work, also providing and fixing D.I. manhole cover & frame of size 605mm x 450mm of weight not less than 38 kg (frame + cover) and cost of 100mm dia C.I. vent pipe with C.I. Ventilating Cowl and suitable wire mesh provision for inlet, 115mm baffle walls extending 2/3 the width spaced@500mm c/c including finishing with 1:3 cement plaster 15mm thick with floating coat of neat cement slurry , all complete in every respect as per drawing and as directed to suit site condition.	Each	2		-	80,000.00	1,60,000.00
SUBTOTAL (RAIN WATER HARVESTING)				-		1,64,201.65		1,60,000.00
10.00		EXTERNAL SEWERAGE AND DRAINAGE(except Around Building)		-				-
				-				-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
10.01	19.11	Constructing brick masonry circular manhole 1.22 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement: 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 mix (1 cement :3 coarse sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20mm nominalsize) finished with a floating coat of neat cement complete as per standard design.		-				-
a)	19.11.1	1.68 m deep with SFRC cover and frame(heavy duty HD-20 grade designation) 560 mm internal diameter conforming to IS: 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20mm nominalsize) including centering shuttering all complete. (Excavation, foot rests and 12 mm tick cement plaster at the external surface shall be paid for separately)		-		-		-
a.i)	19.11.1.1	With F.P.S. bricks with class designation 75	Each	10	22,951.95	2,29,519.50		-
10.02	19.12	Extra depth for circular type manhole 1.22 m internal dia (at bottom) with beyond 1.68 m to 2.29 m		-				-
a)	19.12.1	With F.P.S. bricks with class designation 75	Metre	1	9,068.35	9,068.35		-
10.03	19.27	Constructing brick masonry road gully chamber 50x45x60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement:4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design:		-				-
a)	19.27.1	With F.P.S. bricks	Each	5	5,589.45	27,947.25		-
10.04	19.29	Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :		-				-
a)	19.29.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	5	10,596.95	52,984.75		-
10.05	23.9	Providing and fixing factory made precast RCC perforated drain covers , having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations@ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineerin-charge	Each	50	1,213.25	60,662.50		-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
10.06	NS -1	Constructing brick masonry open surface drain including with edge protected with MS plate of 3 mm thick with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 fine sand) including earth excavation, 10cm thick bed concrete 1:5:10 (1 cement: 5 fine sand :10 graded stone aggregate 40mm nominal size) and 25mm thick cement concrete 1:2:4 (1 cement:2 coarse sand:4 graded stone aggregate 12.5 mm nominal size) for filling hunches including 12mm cement plaster 1:4 (1 cement:4 coarse sand) with a floating coat of neat cement inside the drain, its top and exposed side including disposal of surplus earth complete as per standard design.		-				-
a)		300mm drain 450 mm average depth With F.P.S bricks	Metre	75		-	2,100.00	1,57,500.00
SUB TOTAL External (Sewerage , Storm & Drainage)				-		3,80,182.35		1,57,500.00
11.00		EARTH WORK		-				
11.01	2. 6	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.		-				
a)	2.6.1	All kinds of soil	Cum	30	205.45	6,163.50		-
11.02	2. 10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:		-				
a)	2.10.1	All kinds of soil		-		-		-
	a.i	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	Metre	650	255.55	1,66,107.50		-
11.03	2. 25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m	Cum	30	253.95	7,618.50		-
SUB TOTAL(EARTH WORK)				-		1,79,889.50		-
12.00		Water Supply Electrical Panel		-				
	NS	Water Supply Pump		-				-

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
		Supply, installation, testing and commissioning of following M.V. cubicle type totally enclosed, powder coated, Free standing type, dust, damp and vermin proof, indoor type Distribution Board/Panel complete with busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads/solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, and having following incoming and outgoing switchgears complete as technical specification & as required.		-				
		Note : All MCCBs shall have Ics=Icu =100%		-				
		INCOMER : 160 Amp 415 volts, 35 KA (Ics=Icu), FP MCCB microprocessor based, with O/L, S/C & inbuilt E/F protection release.		-				
		Phase indicating lamp (LED type) with 6A control SP MCB		-				
		"ON" ,"OFF" and "TRIP" LED indicating lamp and 6A control SP MCBs		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		1 no. Digital voltmeter.		-				
		1 no Digital ammeter with one set of suitable C.T. s		-				
		BUSBARS : 300 Amp TPN busbars of Aluminium		-				
		OUTGOINGS :		-				
i		4 Sets of following (pump for treated water, pump for Raw water,)		-				
		32 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings of O/L, S/C protection and E/ F Module.		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		1 no 3 Phase,DOL starter of 5 HP with thermal overload relay with inbuilt single phase preventor , contactor, Push Buttons and Switches etc complete as required.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP".		-				
		Digital ammeter with one set of suitable cast resin C.T' s		-				
ii		2 Sets of following (Tube Well Pump 25 HP)		-				

Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sl. No.	Item no. (DSR-21)	Description of Item	Unit	Total QTY	DSR 2021 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
		63 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. of O/L, S/C protection and E/ F Module.		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		Digital ammeter with one set of suitable CT,s.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP".		-				
				-				
iii		2 Sets of following (Sumersible and spare)		-				
		32 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. of O/L, S/C protection and E/ F Module.		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		Digital ammeter with selector switch with one set of suitable CT,s.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP" .		-				
		Digital ammeter with one set of suitable CT,s.		-				
				-				
iii		Water supply PUMP PANEL in pump room as above	Set	1			2,48,324.00	2,48,324.00
				-				-
1.02		Starter- for tubwell		-				-
		1 nos . 3 Phase, fully automatic star Delta starter of 25HP with thermal overload relay with inbuilt/separate single phase preventer , contactor, Timer, Push Buttons and Auto-manual selector switch etc including its mounting on the wall and control cables for starting of the motor complete as required.	each	2			22,774.00	45,548.00
1.03		Starter- for Submersible		-				-
		1 nos . 3 Phase, fully automatic DOL starter of 1HP with thermal overload relay with inbuilt/separate single phase preventer , contactor, Timer, Push Buttons and Auto-manual selector switch etc including its mounting on the wall and control cables for starting of the motor complete as required.	each	2			1,867.00	3,734.00
				-				
		Total						2,97,606.00

ABSTRACT OF COST**Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh**

S. No.	DESCRIPTION	DSR/AOR Amount(Rs)	Market Amount (Rs.)
I	SUB HEAD -I (Hydrants, Sprinkler, Piping, Accessories & Fire Extinguishers etc.)	7649665.05	2671379
II	SUB HEAD - II (Pumps & Panel)	403784.00	81484
	TOTAL	8053449.05	2752863.00
	Total (I+II)	1,08,06,313.00	Lacs
	Grand Total	1,08,06,313.00	Lacs

Design & Engineering Department- Fire Fighting Works								
Name of Work : Construction of Additional Blocks(New Lab Block, BMW & Mortury) at Atal Institute of Medical Super Specialties, Chamyana at Shimla, Himachal Pradesh								
Sr. No.	Ref. No.	Description of Items	Unit	Total Qty	DSR 2021/AOR 2019/ Rate(Rs.)	DSR 2021/AOR 2019 Amount(Rs.)	Market Rate(Rs.)	Market Amount(Rs.)
		SUB HEAD -I (Hydrants, Sprinkler, Piping, Accessories & Fire Extinguishers etc.)						
1.00		FIRE FIGHTING SYSTEM						
1.01	18.72	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :						
a	18.72.15	100 mm dia Ductile Iron Double Flanged pipe- class K-9	Metre	20	1081.35	21,627.00		-
b	18.72.16	150 mm dia Ductile Iron Double Flanged pipe- class K-9	Metre	240	1625.05	3,90,012.00		-
						-		-
1.02	18.68	Providing and laying D.I. specials of class K-12 suitable for push -on jointing (Flange Joint) as per IS : 9523				-		-
a	18.68.1	Upto 600 mm dia	Quintal	11	17155.9	1,88,714.90		-
						-		-
1.03	18.70	Providing push on - joints to centrifugally (spun) Ductile Iron Pipes including testing of joints and the cost of rubber gasket etc complete in all respect.				-		-
a	18.70.1	100 mm dia pipes	Joints	9	96.15	865.35		-
b	18.70.2	150 mm dia pipes	Joints	110	156.05	17,165.50		-
						-		-
1.04	18.73	Providing and laying Double Flanged (Screwed/Welded) Centrifugally(Spun) Ductile Iron pipes of Class K-9 conforming to IS:8329				-		-
a	18.73.1	100 mm dia pipes	Metre	20	1541.60	30,832.00		-
b	18.73.2	150 mm dia pipes	Metre	10	2312.90	23,129.00		-
						-		-
1.05	2.10	Excavating trenches of required width for pipes, cables etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5m including getting out the excavated soil, and then returning the soil as required, inlayers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed within a lead of 50 m				-		-
a	2.10.1.2	Pipes, cables etc exceeding 80 mm dia but not exceeding 300 mm dia	Metre	240	417.35	1,00,164.00		-
						-		-
1.06	6(AOR)	Providing laying, testing & commissioning of *C* class heavy duty MS Pipe conforming to IS 1239/3589 i/c fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. in ground including welding, excavation & providing cement concrete blocks as supports, anticorrosive treatment with coaltar/asphalt tape as per IS 10221, refilling the trench etc. of following sizes complete as required.				-		-
	6.1	200 mm. dia (wall thickness = 6.3 mm) m	Metre	20	3169	63,380.00		-
	6.2	150 mm. Dia	Metre	20	2376	47,520.00		-

1.07	7(AOR)	Providing, laying, testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 3589/IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :					-		-
i	7.8- MR	150 mm dia	Metre	400	2064.00	8,25,600.00			-
ii	7.7-MR	100 mm dia	Metre	125	1499.00	1,87,375.00			-
iii	7.6- MR	80 mm dia	Metre	160	1122.00	1,79,520.00			-
iv	7.5- MR	65 mm dia	Metre	250	1004.00	2,51,000.00			-
v	7.4- MR	50 mm dia	Metre	365	787.00	2,87,255.00			-
vi	7.3-MR	40 mm dia	Metre	375	651.00	2,44,125.00			-
vii	7.2- MR	32 mm dia	Metre	450	527.00	2,37,150.00			-
viii	7.1- MR	25 mm dia	Metre	2150	471.00	10,12,650.00			-
1.08	11 (AOR)	Supplying, fixing, testing and commissioning of butterflyvalve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required :					-		-
ii	11.4-MR	80 mm dia	Nos.	6	4842.00	29,052.00			-
iii	11.5-MR	100 mm dia	Nos.	8	6454.00	51,632.00			-
ii	11.6- MR	150mm dia	Nos.	8	8699.00	69,592.00			-
1.09	9(AOR)	Supplying and fixing single headed internal hydrantvalve with instantaneous Gunmetal/Stainless Steel coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (Type -A) with blank Gunmetal/Stainless Steel cap and chain as required :					-		-
	9.2	Single headed Stainless steel	Set	13	5987.00	77,831.00			-
1.10	10(AOR)	Supplying and fixing Single headed external yardhydrant valve with 1 No. 63 mm dia instantaneous FM Gunmetal/Stainless Steel coupling and cast iron wheel, ISI marked, conforming to IS 5290 (type A) with blank Gunmetal/Stainless Steel cap and chain as required					-		-
	10.2	Single headed Stainless steel	Set	6	5987.00	35,922.00			-
1.11	16(AOR)	Supplying and fixing 63 mm dia, 15 m long RRL hosepipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636(type-A) as required :					-		-
	16.2	Stainless Steel (Grade 304)	Set	26	4434.00	1,15,284.00			-
1.12	17(AOR)	Supplying and fixing first-aid Hose Reel with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required. 20 mm nominal internal dia water hose thermoplastic(Textile reinforced) type -2 as per IS: 12585 20 mm nominal internal dia gun metal globe valve & nozzle.Drum and brackets for fixing the equipments on wall.Connections from riser with 25 mm dia stop gun metal valve & M.S. Pipe and socket.					-		-
i)	17.1	30 m	Set	13	8413	1,09,369.00			-
							-		-

1.13	18(AOR)	Supplying & fixing 63 mm dia gun metal short branch pipe with 20 mm nominal internal diameter size nozzle conforming to IS 903 suitable for instantaneous connection to interconnect hose pipe coupling as required :					-		-
	18.2	Stainless Steel (Grade 304)	Nos.	13	1648.00	21,424.00	-		-
							-		-
1.14	21(AOR)	Providing, fixing, testing & commissioning of 15mm dia quartzoid bulb type sprinklers of rating 68 degree centigrade with required accessories :					-		-
	i	21.1 Pendent Sprinkler	Nos.	450	484	2,17,800.00			-
	ii	21.2 Upright Sprinkler	Nos.	450	484	2,17,800.00			-
	iii	21.3 Horizontal side wall sprinkler	Nos.	150	579	86,850.00			-
							-		-
1.15	15(AOR)	Providing, installation, testing and commissioning of stainless steel Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange.					-		-
	i	15.3-MR 150mm dia	Each	2	10659.00	21,318.00			-
							-		-
1.16	22 (AOR)	Providing & fixing of pressure switch in M.S. pipe line including connection etc. as required.	Each	4	1190.00	4,760.00			-
							-		-
1.17	25(AOR)	Supplying, installation, testing & commissioning of sprinkler flexible pipe (UL Listed) of stainless steel complete with 15 NPT on reducer thread with maximum working pressure of 175 PSI test pressure of 875 PSI (Burst) with branch line (Inlet) 25mm NPT male thread to sprinkler head (Outlet) 15mm NPT female thread with reducer, nipple, 2 side brackets, center bracket, stockbar of following sizes complete as required.					-		-
	i	25.1-MR 700 mm	Set	50	1341.00	67,050.00			-
	ii	25.2-MR 1000 mm	Set	400	1540.00	6,16,000.00			-
	iii	25.3-MR 1200 mm	Set	650	1633.00	1061450			-
							-		-
1.18	29(AOR)	Providing, installation, testing & commissioning of adjustable rosette plate for 15mm dia in white finish UL Listed or FM approved complete as required.	Each	1050	207	2,17,350.00			-
							-		-
1.19	12(AOR)	Supplying, fixing, testing & commissioning of double flanged sluice valve of rating PN 1.6 with non rising spindle, bronze/gun metal seat, ISI marked complete with nuts, bolts, washers, gaskets and conforming to IS 780 of following sizes as required					-		-
	i)	12.6-MR 150 mm dia	Each	2	22550.00	45,100.00			-
							-		-
1.20	13(AOR)	Supplying and fixing orifice plate made out of 6 mm thick stainless steel (Grade 304) with orifice of required size to be fitted between flange & landing valve of external and internal hydrants to reduce pressure at the outlet to the level of 3.5 kg/cm ² complete as required.	Each	2	1,291.00	2,582.00			-
							-		-
1.21	14(AOR)	Providing, installation, testing and commissioning of non-return valve of following sizes conforming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc. as required :					-		-
	a)	14.7-MR 150 mm dia	Each	6	17577	1,05,462.00			-

b)	14.4-MR	80 mm dia	Each	4	7539	30,156.00			-
									-
1.22	19(AOR)	Supplying and fixing of fire brigade connection of cast iron body with gun metal male instantaneous inlet couplings complete with cap and chain as reqd. forsuitable dia MS pipe connection conforming to IS 904as required :							-
	i	19.1	2 way-100 mm dia M.S. Pipe	Set	1	6,590.00	6,590.00		-
		ii	19.2	4 way - 150 mm dia M.S. Pipe	Set	2	13,822.00	27,644.00	-
									-
1.23	23(AOR)	Providing & fixing flow switch in following sizes M.S. pipe including connection etc as required.							-
		23.1	100mm dia	Each	2	7,362.00	14,724.00		-
	i)	23.2	150 mm dia	Each	4	8,869.00	35,476.00		-
									-
1.24	24(AOR)	Providing, fixing, testing & commissioning of installation control valve of cast iron body, brass/bronze working parts comprising of water motor alarm, bronze seat clapper, clapper arm and hydraulically driven mechanical gong bell to sound continuous alarm when the wet riser/sprinkler system activates, pressure gauges, emergency releases, strainer, pressure switch, cock valve complete with drain valve and bypass, test control box, ball valves, MS pipe of required size, flanges, orifice plate, gasket etc of follwing sizes as required :150mm dia							-
		1.25	24.3	150mm dia	Each	1	47898.00	47,898.00	-
									-
1.26	NS	Supplying, installing, testing and commissioning of Inspection and testing assembly with sight glass, valves and accessories. (25 mm dia)	Each	1			7693.00	7,693.00	
									-
1.27	MR	SITC of Fire Man's Axe							-
	MR	Supplying, Installation, Testing and Commissioning of standard Fire Man's axe with heavy insulated rubber conforming to IS : 926	Each	13			818.00	10,634.00	
									-
1.28	NS	Providing & fixing fire authority approved Aluminium shutter (size 1200 (L) x 2100 (H) mm), The shutter size shall be as per approved drawing capable of accommodating fire hose reel, fire hydrant, hose pipe, fittings & accessories. The box shall have a single or double glazed front glass door (with 4 mm thick glass) with lock & key arrangement & shall be painted with Fire red as per IS:5, shade no. 536 complete in all respects. (For Internal Hydrant) (Excluding the cost of alluminium work which will be paid as per civil work items)	Each	4			16,930.00	67,720.00	
									-
1.29	NS	Supplying and fixing of weather proof hose cabinet of size 750 mm x 600mm x 300mm made of 2mm thick SS sheet with 4 mm thick glazed glass doors i/c necessary locking arrangement suitable to accommodate external hydrant with butterfly valve, 2 nos. 15 mtr. Long Hose Pipe, 1 No. branch pipe, mounted on wall or raised brick platform & duly painted with Post office red externally and White internally with Synthetic enamel paint complete in all respect, for Terrace/External Hydrant , as required complete in all respects.	Each	2			6,634.00	13,268.00	
									-
									-

1.30	NS	Supply, Installation, Testing and Commissioning External Yard Hydrant Stand Post comprising of GI pipe 80 mm dia (heavy duty C class) from existing ringmain to about 1 meter above ground level and Single Headed Yard Hydrant Valve with 80 mm dia flanged inlet, instantaneous gunmetal coupling of 63 mm dia with cast iron wheel ISI marked, conforming to IS : 5290 (Type A), with ABS cap and chain etc.complete with all accessories as required.	Each	6		-	10,082.00	60,492.00
						-		-
1.31		Providing & fixing Puddle Flanged including 60 to 90 cm long GI pipe piece welded / threaded with MS plates 450x450x6mm thick with both end screwed / flanged				-		-
a)	NS	For 100 mm dia pipe	Each	2		-	8,752.00	17,504.00
b)	NS	For 80 mm dia pipe	Each	1		-	7,208.00	7,208.00
c)	NS	for 150 mm dia pipe	Each	2		-	12,870.00	25,740.00
						-		-
1.32	MR	Providing,fixing,testing and commissioning 100 mm dia pressure gauge of range 0 -015 Kg / sqcm conforming to IS - 3624 having bourdon tube of stain steel 310 in cast aluminium, stove enamelled, black, weather proof case with outer, screwed aluminium bezel and complete with necessary U-type stainless steel siphon tube and cock complete as required.	Nos.	6		-	2150.00	12,900.00
						-		-
1.33	NS	Providing and fixing Set of " Siamese " quadruplet instantaneous fire brigade connections comprising of two gunmetal instantaneous male inlet coupling 63mm dia with plug and cap, chain bends, tees etc for inlet to the static tank.	Each	1		-	13,870.00	13,870.00
						-		-
1.34	18.48	Providing and placing on Terrace Polyethylene Water Storage Tank ISI : 12701 MARKED indicating the BIS license No with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	Ltrs.	20000	9.7	1,94,000.00		-
						-		-
1.35	NS	Providing and fixing Sand Bucket with Stand (6 Bucket) as per site conditions	Each	2		-	9,267.00	18,534.00
						-		-
1.36	18.34	Constructing Masonry chamber 90x90x100 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement: 4 fine sand) for sluice valve, with C.I. surface box 100mm top diameter, 160mm bottom diameter and 180mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design.				-		-
i	18.34.1	with F.P.S. bricks	Each	1	11464.3	11,464.30		-
						-		-
1.37	NS	Providing and fixing heavy duty floating flange EPDM rubber expansion joint with unit control(tie rod & gusset plate) as per manufactures specifications of standard length complete with all accessories and a working pressure not less than 16 kg/sqcm including rubber gaskets, flanges, nuts, bolts & washers complete as required.	-			-		-
a)	NS	100 mm dia	No.	2		-	8,752.00	17,504.00

b)	NS	150 mm dia	No.	4		-	10,811.00	43,244.00
								-
1.38	NS	Providing and fixing complete Automatic Gas Suppression system CO2 flooding system of approved make and model for main LT panel including two nos. 22 kg seamless cylinder required quantity of MS seamless pipe, manifold, NRV, high pressure flexible hose, weighing arrangement, pneumatic valve, CO2 nozzles & for detection linear heat detection tube from required detection tube boq including painting and MS support. The size of main LT panel will be as per Electrical scope of work. The shop drawing/datasheet of CO2 flooding system shall be provided by Agency for approval of HSCC before start of the work. The CO2 flooding panel shall also meet out the local Fire Officers latest requirement and anything extra or any modification required by Fire Officer shall be carried out by Agency without any extra cost. Make: FIRETREX/ SEIMENS/ UTC/ TYCO	Each	1			3,80,000.00	3,80,000.00
1.39	NS	Providing and fixing complete Automatic Gas Suppression system CO2 flooding system of approved make and model for main HT panel including two nos. 45 kg seamless cylinder required quantity of MS seamless pipe, manifold, NRV, high pressure flexible hose, weighing arrangement, pneumatic valve, CO2 nozzles & for detection linear heat detection tube from required detection tube boq including painting and MS support. The size of main HT panel will be as per Electrical scope of work. The shop drawing/datasheet of CO2 flooding system shall be provided by Agency for approval of HSCC before start of the work. The CO2 flooding panel shall also meet out the local Fire Officers latest requirement and anything extra or any modification required by Fire Officer shall be carried out by Agency without any extra cost. Make: FIRETREX/ SEIMENS/ UTC/ TYCO	Each	1			410000.00	4,10,000.00
				0				
1.40		Fire Supression System						-
(i)		S/F 10 LB capacity Novec 1230 DLP Assembly with BAM approved Automatic valve, connector for tube, 10 LB Novec Gas filled in Seamless PESO & UL Approved Cylinder, UL Listed Pressure Gauge, Pressure Switch for monitoring system activation complete as required as job. Make: FIRETREX/ SEIMENS/ UTC/ Tyco	JOB	2			1,30,000.00	2,60,000.00
								-
(ii)		S/F 2.5 LB capacity Novec 1230 DLP Assembly with BAM approved Automatic valve, connector for tube, 2.5 LB Novec Gas filled in Seamless PESO & UL Approved Cylinder, UL Listed Pressure Gauge, Pressure Switch for monitoring system activation complete as required as job. Make: FIRETREX/ SEIMENS/ UTC/ Tyco	JOB	4			70,000.00	2,80,000.00
(iii)		S/F Linear Heat detection Tube UL approved and suppression system operated less than 170 deg celsius temprature, having water Absorbtion ≤ 1.5% @ 20oC and 50% RH as tested per ISO62 with all necessary fittings and supports fixing in existing electrical panel board, complete as required at site. Make: FIRETREX / Tyco Hygood / Seimens / UTC.	MTR	220			1,600.00	3,52,000.00
(iv)		S/F audio visual alarm system for automatic linear fire trace tube detection system, complete etc as required at site Make: FIRETREX / Tyco Hygood / Seimens / UTC.	Each	6			3,800.00	22,800.00

1.41	NS	Supplying, Installation, Testing & Commissioning modular construction master control annunciation panel for sprinkler with provision for requirer No. of Zone (30% additional spares),eachsprinkler hydrant will have atleast 4 zone on each floor as approved by engineer.The panel shall have but not limited to the following arrangement.					-	-	-
a)		Indication of Zone sprinkler					-		-
b)		Indication of zone fault					-		-
c)		Fire/fault hooter					-		-
d)		Alarm cancel for fire/fault					-		-
e)		Battery for emergency back up of 4 Hrs.	Set	1			-	56,000.00	56,000.00
1.42		Fabricating, Supplying, Installation, Testing and Commissioning Air Vessel of continuous welded construction with flanged discharge header on the top of each riser fabricated out of 10 mm thick dished ends and 8 mm thick MS sheet. Air Release Valve complete with suitable drain arrangement with 25 mm dia gun metal wheel valve complete with all accessories etc. as required of the following sizes					-		-
a)	NS	1.2 Metre high and 250 mm dia	Each	2			-	39,127.00	78,254.00
1.43	NS	Supply, erection, testing & commissioning of Exit Glow Sign Board of size 200mm x 350 mm wall mounting signage consisting of photo luminescent coating, non radioactive on acrylic cover					-		-
a)	NS	Single sided luminescent exit glow sign board	Each	13			-	1,236.00	16,068.00
b)	NS	Double sided luminescent exit glow sign board	Each	13			-	1,442.00	18,746.00
1.44	MR	Providing and fixing CO2 extinguisher consisting of seamless MS cylindrical body squeeze lever discharge valve, internal discharge tube, 30 cms long high pressure discharge hose, discharge nozzle ISI marked as per IS:15683 including fixing with dash fasteners etc. complete.							
		Capacity 4.5 Kg	Each	14				9500.00	1,33,000.00
1.45	MR	Providing and fixing Mechanical Foam (AB) Type Fire Extinguisher 9 Ltr. Capacity ISI Mark IS 15683 with G.M. Cap. . Long Hose, complete with Gas Cartridge ISI Mark IS 4947 ISI and IS Mark Refill IS 4989 Part-II Complete in all respect.							
		Capacity 9 lit.	Each	2				7500.00	15,000.00
1.46		Providing and fixing modular type ceiling mounted clean agent (FE-36) Hexaflouropropane type fire extinguisher, ISI Marked IS 15683:2006, Gas listed under EPA SNAP, having sprinkler with glass bulb rated at 68 deg.C, CE MArked Valve, suitable for Class A,B and C type of fires, conforming to ISO 14520, FM approved and UL listed.- For Electrical, UPS, Server, Battery Rooms etc.							
a)	NS	Capacity 10 Kg	Each	4				40500.00	1,62,000.00
1.47	NS	Providing and fixing 9 liters capacity fire extinguisher Water type Gas pressure , fixed to wall. With EPDM Rubber Hose pipe with test certificate of helium leak detection complete to IS 15683-2006 & ISI marked	Each	7				5600.00	39,200.00

1.48	NS	6 Kg. ABC MAP-90% Powder type fire extinguishers are manufactured and marked to Indian standard IS: 15683. Hose shall made of EPDM Rubber, CE Marked Valve, Suitable first aid appliance for fighting fires in Class A, B & C fire that is wood, textile, flammable liquids & gases. -	Each	24			5500.00	1,32,000.00
		TOTAL					76,49,665.05	26,71,379.00
2		SUB HEAD - II (Pumps & Panel)						
		PUMPS						
							-	-
2.1	4 (As per AOR)	Supplying, installation, testing and commissioning of electric driven terrace pump suitable for automatic operation and consisting of following, complete in all respects, as required: (Terrace Pump)					-	-
	a)	Horizontal type, multistage, centrifugal, split casing pump of cast iron body& bronze impeller with stainless steel shaft, mechanical confirming to IS : 1520					-	-
	b)	Suitable HP squirell cage induction motor TEFC type suitable for operation on 415 volts, 3 phase, 50 Hz, AC supply with IP55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.					-	-
	c)	M.S.fabricated common base plate, coupling, coupling guard, foundation bolts etc.as required.					-	-
	d)	Suitable cement concrete foundation duly plastered					-	-
		and with anti vibration pads.					-	-
	4.2	900 lpm at 35 m Head	each	4	100946		4,03,784.00	-
3		PANEL						
		Fire Terrace Pumps Panel						
		Terrace Pump Starter						
							-	-
		1 nos . 3 Phase, fully automatic star Delta starter of 15HP with thermal overload relay with inbuilt/separate single phase preventer , contactor, Timer, Push Buttons and Auto-manual selector switch etc including its mounting on the wall and control cables for starting of the motor complete as required.	each	4			20371	81,484.00
		TOTAL					4,03,784.00	81,484.00

SUMMARY OF COST ESTIMATE OF ELECTRICAL WORKS FOR CONSTRUCTION OF LAB BLOCK , MORTUARY & BMW BLOCK AT CHAMIYANA SHIMLA

S.No.	Description	DSR Amount In Figure (In Rs.)	Market Amount In Figure (In Rs.)	Total Amount In Figure (In Rs.)
1	SUBHEAD 1: EXPANSION OF EXISTING LT PANEL.		716498	716498
2	SUBHEAD 2: RISING MAINS		1341335	1341335
3	SUB HEAD 3 :MV PANELS		6036335	6036335
4	SUB HEAD 4: MCB DISTRIBUTION BOARDS.	977514	179548	1157062
5	SUB HEAD 5: WIRING	6619286	1026878	7646164
6	SUB HEAD 6: LIGHT FIXTURE AND FANS	309244	4920941	5230185
7	SUB HEAD 7: TELEPHONE SYSTEM	441536	424316	865852
8	SUB HEAD 8 CCTV SURVEILLANCE SYSTEM	72000	1329639	1401639
9	SUBHEAD 9: FIRE ALARM SYSTEM	1897066	957880	2854946
10	SUBHEAD 10: PUBLIC ADDRESS:	297000	751976	1048976
11	SUB HEAD 11: LIFTS		5199458	5199458
12	SUB HEAD 12: LT CABLES	937097	2140650	3077747
13	SUBHEAD 13: EARTHING & MISC ITEM	210760	644474	855234
14	SUBHEAD 14: LIGHTNING PROTECTION	69988	46064	116052
15	SUBHEAD 15:OUT DOOR LIGHTING		407159	407159
	GRAND TOTAL FOR ELECTRICAL WORKS			3,79,54,642

COST ESTIMATE OF ELECTRICAL WORKS FOR CONSTRUCTION OF LAB BLOCK , MORTUARY & BMW BLOCK AT CHAMIYANA SHIMLA									
S No.		Description of Items	Unit.	Total Quantity	DSR(2018)		Market Rate		
					Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	
1.00		SUBHEAD 1: EXPANSION OF EXISTING LT PANEL.							
		EXPANSION OF EXISTING LT PANEL.							
		Expansion of Existing LT Panel with the Following Outgoing , made up of CRCA sheet, complete with aluminum busbars, danger notice plate, interconnections with suitable capacity aluminum leads/solid aluminum strips/rods. Complete as per technical specifications and as required.							
		i) 1 No. ACB Panels each having following:							
		1250 A, 415V, Fully Motorised, Fully Drawout type (EDO), FP, Air Circuit Breaker with microprocessor based overload, short circuit, instantaneous & earth Fault trip including lockable trip push button. ACB should have Icw=Ics=Icu=50 KA for 1 sec.							
		Indicating lamps with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB							
		Push button to CLOSE the ACB							
		Intelligent Panel Meter as mention above							
		ii) 1 No. ACB Panels each having following:							
		800 A, 415V, Fully Motorised, Fully Drawout type (EDO), FP, Air Circuit Breaker with microprocessor based overload, short circuit, instantaneous & earth Fault trip including lockable trip push button. ACB should have Icw=Ics=Icu=50 KA for 1 sec.							
		Indicating lamps with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB							
		Push button to CLOSE the ACB							
		Intelligent Panel Meter as mention above							
		Main LT Panel as mentioned above.	Set	1			716498	716498	
		TOTAL SUBHEAD 1: LT PANEL AS MENTIONED ABOVE.							716498
		SUBHEAD 2: RISING MAINS							
2.00		RISING MAINS							
2.01		Supply, installation, testing and commissioning of plug in type , indoor sandwich type with high conductivity Aluminium Conductor , 415 V,3 phase, 4 wire, vertical Aluminium Rising main Class B or better in following sizes including bends, flexible, provision of the tap off's as per requirement , Adoptor boxes for cable connection if required are inclusive, 2 nos of aluminium earthing strips 50 X 6mm through out the length of the rising mains, end cover, including all types of support and necessary hardware for installation of the rising main etc. complete as per specifications and as required. (Exact lengths to be measured at site).							
		i) 630 A , 415 volts	Metre	30			12,354	370620	
		ii) 800 A, 415 volts	Metre	30			12,354	370620	
							-		

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
2.02		Supply, fixing, testing and commissioning of Direct End Feed Unit of following ratings, wall mounted, dust, damp and vermin proof complete with M.V. danger notice plate, interconnections with suitable capacity aluminium strips / bars, connection of incoming cables with thimbles, powder coat painted and having following incoming switchgears for rising main complete as required.						
								-
		i) 1 No. MCCB Panels each having following						-
		1 no.630 Amps, 415 volts,four pole, Moulded Case Circuit Breaker with microprocessor based release with variable current settings and having O/L, S/C & inbuilt E/F protection . Separate fault indication for O/L, S/C, & E/F to be provided on Panel Door. Indicating lamps with 6 A protection MCBs to indicate OPEN, CLOSE, TRIP for MCCB. Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers. 1 No. 0 to 500 V digital voltmeter with selector switch. 1 No. 0 to 250 Amp digital ammeter with selector switch with 630/5A C.T.'s.	Set	1			61,785	61785.2238
								-
		ii) 1 No. MCCB Panels each having following						-
		1 no. 800 Amps, 415 volts,four pole, Moulded Case Circuit Breaker with microprocessor based release with variable current settings and having O/L, S/C & inbuilt E/F protection . Separate fault indication for O/L, S/C, & E/F to be provided on Panel Door. Indicating lamps with 6 A protection MCBs to indicate OPEN, CLOSE, TRIP for MCCB. Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers. 1 No. 0 to 500 V digital voltmeter with selector switch. 1 No. 0 to 800 Amp digital ammeter with selector switch with 800/5A C.T.'s.	Set	1			93,372	93371.88727
								-
2.03		Supply, fixing, testing and commissioning of distribution tap off box of following Capacity on the existing rising mains complete with Four Pole, Moulded Case Circuit Breaker, interconnection, earthing etc. complete as required.						
								-
		i) 63 Amps with MCCB 50 KA	Nos	2			17,280	34559.77634
		ii) 125 Amps with MCCB 50 KA	Nos	12			19,409	232903.3033
		iii) 160 Amps with MCCB 50 KA	Nos	2			21,026	42052.87229
		vi) 400 Amps with MCCB 50 KA	Nos	4			33,856	135422.0987
		TOTAL SUB HEAD 2: RISING MAINS AS MENTIONED ABOVE						1341335.162
3.00		SUB HEAD 3 :MV PANELS						
		Supply, installation, testing and commissioning of following M.V cubicle type totally enclosed, wall mounted/Free standing type, powder coated, dust, damp and vermin proof, indoor type Distribution Board/Panel complete with busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads/solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, and having following incoming and outgoing switchgears complete as per technical specification and as required.						
		NOTE						
		All MCCBs shall have Ics=Icu=100%						
3.01		Main Building Panel Normal as mentioned above.						
		A INCOMER:						
		i) 1 No. ACB Panels each having following:						

S No.	Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
	1250 A, 415/V, Motorised, Fully Drawout type (EDO), Four Pole, Air Circuit Breaker with microprocessor based overload, short circuit, Instantaneous & earth Fault trip including under voltage release and lockable trip push button. ACB should have Icw=Ics =Icu=50KA for 1 sec.						
	Indicating lamps with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB						
	Push button to Close the ACB						
	R, Y & B Phase indicating lamps (LED type) with 6A control SP MCBs						
	Intelligent Panel Meter As Mention Above including one set of C.T						
	B. BUSBARS :						
	1250 Amps TPN busbars of Aluminium with temperture rise of 40 degree celsius over and above ambient temperture of 45 degree Celsius, 50kA for 1sec.						
	D. OUTGOING.						
	i) 3 No. ACB Panels each having following:						
	800 A, 415V, Fully Motorised, Fully Drawout type (EDO), FP, Air Circuit Breaker with microprocessor based overload, short circuit, instantanious & earth Fault trip including lockable trip push button. ACB should have Icw=Ics=Icu=50 KA for 1 sec.						
	Indicating lamps with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB						
	Push button to CLOSE the ACB						
	Digital ammeter with selector switch with one set Suitable C.Ts.						
	ii) 1 Nos. MCCB FEEDER as per following details/ specifications:						
	630 Amp, 415 volts, 50 KA, Four Pole, Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection.						
	Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.						
	Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP .						
	Digital ammeter with selector switch with one set Suitable C.Ts.						
	iii) 1 Nos. MCCB FEEDER as per following details/ specifications:						
	250 Amp, 415 volts, 50 KA, Four Pole, Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection.						
	Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.						
	Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP .						
	Digital ammeter with selector switch with one set Suitable C.Ts.						
	iv) 2 Nos. MCCB as per following details/ specifications:						
	160 Amp 415 volts, 50 KA (Isc), FP, Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection.						

S No.	Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
	Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.						
	Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP .						
	Digital ammeter with selector switch with one set Suitable C.Ts.						
	v) 2 Nos. MCCB as per following details/ specifications:						
	100 Amp 415 volts, 50 KA (Isc), FP, Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection.						
	Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.						
	Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP .						
	Digital ammeter with selector switch with one set Suitable C.Ts.						
	Main Panel Normal as mentioned above.	Set	1			18,47,159	1847159
3.02	MAIN EMERGENCY PANEL						
	A INCOMER:						
	i) 1 No. ACB Panels each having following:						
	1000A, 415/V, Motorised, Fully Drawout type (EDO), Four Pole, Air Circuit Breaker with microprocessor based overload, short circuit, Instantaneous & earth Fault trip including under voltage release and lockable trip push button. ACB should have Icw=Ics=Icu=50KA for 1 sec.						
	Indicating lamps with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB						
	Push button to Close the ACB						
	R, Y & B Phase indicating lamps (LED type) with 6A control SP MCBs						
	Intelligent Panel Meter As Mention Above including one set of C.T						
	B. BUSBARS :						
	1000 Amps TPN busbars of Aluminium with temperture rise of 40 degree celsius over and above ambient temperture of 45 degree Celsius, 50ka for 1sec.						
	D. OUTGOING.						
	i) 1 No. ACB Panels each having following:						
	800 A, 415V, Fully Motorised, Fully Drawout type (EDO), FP, Air Circuit Breaker with microprocessor based overload, short circuit, instantaneous & earth Fault trip including lockable trip push button. ACB should have Icw=Ics=Icu=50 KA for 1 sec.						
	Indicating lamps with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB						
	Push button to CLOSE the ACB						
	Digital ammeter with selector switch with one set Suitable C.Ts.						
	ii) 2 Nos. MCCB FEEDER as per following details/ specifications:						
	630 Amp, 415 volts, 50 KA, TP+NL, Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection.						
	Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.						
	Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP .						

S No.	Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
	Digital ammeter with selector switch with one set Suitable C.Ts.						
	iii) 1 Nos. MCCB FEEDER as per following details/ specifications:						
	250 Amp, 415 volts, 50 KA, TP+NL, Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection.						
	Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.						
	Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP .						
	Digital ammeter with selector switch with one set Suitable C.Ts.						
	iv) 3 Nos. MCCB as per following details/ specifications:						
	200 Amp 415 volts, 50 KA TP+NL MCCB with thermal magnetic release having variable current settings						
	R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						
	Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
	Digital ammeter with selector switch with one set Suitable C.Ts.						
	v) 2 Nos. MCCB as per following details/ specifications:						
	125 Amp, 415 volts, 50 KA, TP+NL , Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection.						
	R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						
	Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
	1 No. 0 to 500 V Digital voltmeter with selector switch.						
	Digital ammeter with selector switch with one set Suitable C.Ts.						
	vi) 2 Nos. MCCB as per following details/ specifications:						
	100 Amp 415 volts, 50 KA TP+NL MCCB with thermal magnetic release having variable current settings						
	Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.						
	ON, OFF, TRIP indication (LED Type).						
	Digital ammeter with selector switch with one set Suitable C.Ts.						
	Main Emergency Panel as mentioned above.	Set	1			14,28,265	1428265
3.03	MV PANEL EMEREGNCY (Light Panel) (Basement 1 &2 Ground , First , Second & Third Floor)						
	a) INCOMER:						
	125 Amp 415 volts, 35 KA (Ics=Icu) FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection and E/ F Module.						
	R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		1 No. 0 to 500 V Digital voltmeter with selector switch.						
		Digital ammeter with selector switch with one set Suitable C.Ts.						
		b) BUSBARS:						
		300 Amp TPN Aluminium busbars						
		c) OUTGOING:						
		i) 6 no. 40 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.						
	MR	MV PANEL EMEREGNCY (Light Panel) (Basement 1 &2 Ground , First , Second & Third Floor) as mentioned above	Set	6			66,952	401712
3.04		MV PANEL - Normal (Basement 1 &2 Floor)						
		a) INCOMER:						
		160 Amp 415 volts, 35 KA (Ics=Icu) FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection and E/ F Module.						
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		Digital Multi Function Meter switch with one set Suitable C.Ts.						
		b) BUSBARS:						
		300 Amp TPN Aluminium busbars						
		c) OUTGOING:						
		iv) 8 no. 63 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.						
	MR	MV PANEL -NORMAL (Basement 1 &2 Floor) as mentioned above	Set	2			85,108	170216
3.05		MV PANEL - Normal (Ground , First , Second & Third Floor)						
		a) INCOMER:						
		400 Amp, 415 volts, 35 KA, Four Pole, Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection.						
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		Digital Multi Function Meter switch with one set Suitable C.Ts.						
		b) BUSBARS:						
		500 Amp TPN Aluminium busbars						
		c) OUTGOING:						
		i) 2 Nos. MCCB as per following details/ specifications:						
		63 Amp, 415 volts, 35 KA, TP+NL , Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection.						

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		1 No. 0 to 500 V Digital voltmeter with selector switch.						
		Digital ammeter with selector switch with one set Suitable C.Ts.						
	ii)	10 no. 63 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.						
	MR	MV PANEL -NORMAL (Ground , First , Second & Third Floor) as mentioned above	Set	4			2,16,742	866968
3.06	MR	Computer UPS Panel Ground floor						
	a)	INCOMER: 125 Amp 415 volts, 35 KA TP+NL MCCB with thermal magnetic release having variable current settings.						
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		1 No. 0 to 500 V Digital voltmeter with selector switch.						
		Digital ammeter with selector switch with one set Suitable C.Ts.						
	b)	BUSBARS: 300 Amp TPN Aluminium busbars						
	c)	OUTGOING:						
	i)	6 Nos. MCCB as per following details/ specifications: 63 Amp 415 volts, 35 KA TP+NL MCCB with thermal magnetic release having variable current settings.						
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.						
		ON, OFF, TRIP indication (LED Type).						
		Digital Ampere Metre of suitable range with suitable set of CT's and ASS.						
	ii)	6 no. 40 Amps , 415 volts, 10 KA ,Four Pole, Miniature Circuit Breaker.						
	MR	Computer UPS Panel Ground floor section -1 2 & 3, as mentioned above	Set	1			2,14,472	214472
3.07		Sub Computer Panel (Basement 2, Ground , First , Second, Third Floor)						
	a)	INCOMER: 63 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection and E/ F Module.						
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB to indicate ON, OFF, TRIP .						
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		1 No. 0 to 500 V Digital voltmeter with selector switch.						
		Digital ammeter with selector switch with one set Suitable C.Ts.						
	b)	BUSBARS: 300 Amp TPN Aluminium busbars						
	c)	OUTGOING:						
	i)	6 no. 40 Amps , 415 volts, 10 KA ,Four Pole, Miniature Circuit Breaker.						

S No.	Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
	Sub UPS Panel (Basement 2, Ground , First , Second, Third Floor) as mentioned above	Set	5			62,413	312065
3.08	Lift Power Panel						
	a) INCOMER:						
	i) 1 Nos. MCCB as per following details/ specifications: 125 Amp 415 volts, 35 KA FP MCCB with microprocessor based release having variable current settings of O/L, S/C & inbuilt E/F protection release. R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type). Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers. 1 No. 0 to 500 V Digital voltmeter with selector switch. Digital ammeter with selector switch with one set Suitable C.Ts.						
	b) BUSBARS: 200 Amp TPN Aluminium busbars						
	c) OUTGOING:						
	i) 2 Nos. MCCB as per following details/ specifications: 63Amp 415 volts, 35 KA TP+NL MCCB with thermal magnetic release having variable current settings of O/L, S/C protection Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers. ON, OFF, TRIP indication (LED Type). Digital Ampere Metre of suitable range with suitable set of CT's and ASS.						
	ii) 6 no. 63 Amps , 415 volts, 10 KA ,Four Pole, Miniature Circuit Breaker.						
	Lift Power Panel as mentioned above	Set	1			1,41,847	141847
3.09	MV PANEL -HVAC(Emergency ventilation)						
	a) INCOMER:						
	200 Amp 415 volts, 35 KA (Ics=Icu) FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection and E/ F Module. R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type). Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers. 1 No. 0 to 500 V Digital voltmeter with selector switch. Digital ammeter with selector switch with one set Suitable C.Ts.						
	b) BUSBARS: 300 Amp TPN Aluminium busbars						
	c) OUTGOING:						
	i) 5 Nos. MCCB as per following details/ specifications: 63 Amp, 415 volts, 35 KA, TP+NL , Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection. R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		1 No. 0 to 500 V Digital voltmeter with selector switch.						
		Digital ammeter with selector switch with one set Suitable C.Ts.						
	i)	6 no. 32 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.						
	i)	6 no. 63 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.						
	MR	MV PANEL as mentioned above	Set	1			2,87,098	287098
3.10		Floor Ventilation Panel(Basement 1 ,2)						
	a)	INCOMER: 63 Amp 415 volts, 35 KA (Ics=Icu) FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection and E/ F Module. R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		1 No. 0 to 500 V Digital voltmeter with selector switch.						
		Digital ammeter with selector switch with one set Suitable C.Ts.						
	b)	BUSBARS: 300 Amp TPN Aluminium busbars						
	c)	OUTGOING:						
	i)	6 no. 32 Amps , 415 volts,10 KA ,Four Pole, Miniature Circuit Breaker.						
	MR	Floor Ventilation Panel -(Basement 1 ,2)as mentioned above	Set	2			62,413	124826
3.11		MV PANEL -LIGHT & POWER (Mortuary) Emeregency						
	a)	INCOMER: 125 Amp 415 volts, 35 KA (Ics=Icu) FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection and E/ F Module. R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		Digital Multi Function Meter switch with one set Suitable C.Ts.						
	b)	BUSBARS: 300 Amp TPN Aluminium busbars						
	c)	OUTGOING:						
	i)	2 Nos. MCCB as per following details/ specifications: 63 Amp, 415 volts, 35 KA, TP+NL , Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection. R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		1 No. 0 to 500 V Digital voltmeter with selector switch.						
		Digital ammeter with selector switch with one set Suitable C.Ts.						
		i) 4 no. 40 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.						
		ii) 4 no. 63 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.						
	MR	MV PANEL -LIGHT & POWER (Mortuary) as mentioned above	Set	1			1,67,947	167947
3.12		MV PANEL -LIGHT & POWER (BWM)-Normal						
		a) INCOMER:						
		63 Amp 415 volts, 35 KA (Ics=Icu) FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection and E/ F Module.						
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).						
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		Digital Multi Function Meter switch with one set Suitable C.Ts.						
		b) BUSBARS:						
		300 Amp TPN Aluminium busbars						
		c) OUTGOING:						
		i) 4 no. 40 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.						
		ii) 4 no. 63 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.						
	MR	MV PANEL -LIGHT & POWER (Mortuary) as mentioned above	Set	1			73,760	73760
		TOTAL SUB HEAD 3: MV PANEL AS MENTIONED ABOVE						6036335
		SUB HEAD 4: MCB DISTRIBUTION BOARDS.						
4.00		MCB DISTRIBUTION BOARD						
4.01		Supplying & fixing following way, three pole and neutral sheet steel, MCB distribution board, 415 volts,on recess/surface complete with loose wire box, terminal blocks, tinned copper busbar, neutral link, earth bar,din bar, detachable gland plate, interconnections, phosphatized and powder coated including earthing connection bolt etc. as per technical specifications and as required.(but without MCB & RCCB).						
	DSR 2.4.1	i 4 way (8+12), Double door	Each	16	3068	49088		
	DSR 2.4.2	ii 6 way (8+18) Double door	Each	30	3693	110790		
	DSR 2.4.3	iii 8 way (8+24), Double door	Each	36	4601	165636		

S No.			Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
4.02			Supplying & fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on recess/surface complete with loose wire box, terminal blocks, tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. Before procurement of DB the contractor has to take approval of DB schedule/ drawing of each DB from the Electrical Engineer, HSCC, as per technical specifications and as required. (but without MCB & RCCB),						
	DSR 2.3.3	ii	12 way Double door	Each	4	2053	8212		
4.03			Supplying & fixing 6 Amps to 32 Amps rating, 240 volts, 'B' series, miniature circuit breaker suitable for lighting & other loads of following poles in the existing MCB DB complete with connections, testing & commissioning etc. as per technical specifications & as required.						
	DSR 2.10.1	i	Single pole	Each	1636	199	325564		
	DSR 2.10.5	ii	Triple pole & neutral	Each	8	1092	8736		
4.04			Supplying & fixing following rating, four pole, 415 volts, Miniature Circuit Breaker (MCB), in the existing MCB DB complete with connections, testing & commissioning etc. as per technical specifications and as required.						
	MR	i	25 Amps	Each	20			1,209	24180
	MR	iii	40 Amps	Each	34			1,682	57188
	MR	iv	63 Amps	Each	52			1,682	87464
4.05			Supplying & fixing following rating, four pole, 415 volts, Residual Current Circuit Breaker (RCCB) having a sensitivity current upto 300 mA in the existing MCB DB complete with connections, testing & commissioning etc. as per technical specifications and as required.						
	DSR 2.15.1	i	25 Amps	Each	20	2526	50520		
	DSR 2.15.2	iii	40 Amps	Each	34	2626	89284		
	DSR 2.15.3	iii	63 Amps	Each	52	2777	144404		
4.04			Supplying and fixing following rating, double pole, 240 volts, MCB (B/C/D/ Curve) in the existing MCB DB complete with connections, testing and commissioning etc. as required.						
	MR	ii	40 amp	Each	12			893	10716
4.06			Supplying & fixing following rating, Double pole, 240 volts, Residual Current Circuit Breaker (RCCB) having a sensitivity current upto 300 mA in the existing MCB DB complete with connections, testing & commissioning etc. as per technical specifications and as required.						
	DSR 2.14.3	ii	40 amp	Each	12	2095	25140		
4.08	DSR 2.11		Supplying and fixing Single pole Blanking plate in the existing MCB DB complete as required.	Each	20	7	140		
TOTAL SUB HEAD-4: MCB DISTRIBUTION BOARDS AS MENTIONED ABOVE								977514	179548
SUB HEAD 5: WIRING									

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
5.00		WIRING						
5.01		i Wiring for light point/fanpoint/ exhaust fan point/call bell point with 1.5 sq.mm. PVC insulated, fire retardant low smoke (FRLS) copper conductor cable, single core/ multi strand, in steel conduit (Including supplying & recess laying of MS conduit and accessories) including the following and complete as required.						
		ii Supplying and Fixing Modular type switches (modular Bell push in case of call bell points) in suitable size modular metal boxes, base plate & modular cover plates, space for fixing electronic fan regulator in case of fan point wiring & space for fixing 5A socket on the board etc.						
		iii Supplying and fixing Hexagonal fan Boxes with 3 mm thick hylem sheet covers in case of Fan Points						
		iv Supplying & Fixing Ceiling Rose in case of Exhaust Fan Points etc.						
		Note :						
		i) Unless otherwise specified all the conduiting work to be done in recess						
	DSR 1.3.3	Point wiring as mentioned above Group C	Point	1790	1213	2171270		
5.02		i Wiring for twin control light points with 1.5 sq.mm. PVC insulated, FRLS copper conductor cable in MS conduit (including supplying and recess laying of MS conduit) including the following and complete as required.						
		ii Supplying and Fixing Modular type two numbers 2 Way switches in suitable size modular metal boxes, base plate & modular cover plates etc.						
		Note :						
		i) Unless otherwise specified all the conduiting work to be done in recess						
	DSR 2.4	Wiring for twin control light points as mentioned above	Point	100	1290	1,29,000		
5.03		Wiring for Submain/ circuit wiring with following size of PVC insulated FRLS copper conductor single core/multi strand cable in recessed steel conduit (including supply & laying of recessed conduit) as required.				-		
	DSR 1.7.1	i 2X1.5 Sqmm with 1 No. 1.5 sqmm PVC FRLS insulated, copper conductor for earthing.	Metre	2270	208	4,72,160		
	DSR 1.7.2	ii 2X2.5 Sqmm with 1 No. 2.5 sqmm PVC FRLS insulated, copper conductor for earthing.	Metre	2536.00	229	5,80,744		
	DSR 1.7.3	iii 2X4 Sqmm with 1 No. 4 sqmm PVC insulated FRLS copper conductor for earthing	Metre	5840	263	15,35,920		
	DSR 1.7.4	iv 2X6 Sqmm with 1 No. 6 sqmm PVC insulated FRLS copper conductor for earthing	Metre	198	356	70,488		
	DSR 1.7.5	v 2X10 Sqmm with 1 No. 6 sqmm PVC insulated FRLS copper conductor for earthing	Metre	200	426	85,200		
	DSR 1.7.6	vi 4X4 Sqmm with 2 No. 4 sqmm PVC insulated FRLS copper conductor for earthing	Metre	240	404	96,960		
	DSR 1.7.8	vii 4X6 Sqmm with 2 No. 6 sqmm PVC insulated FRLS copper conductor for earthing	Metre	240	529	1,26,960		
	DSR 1.7.10	viii 4X10 Sqmm with 2 No. 6 sqmm PVC insulated FRLS copper conductor for earthing	Metre	520	670	3,48,400		
	DSR 1.7.11	ix 4X16 Sqmm with 2 nos 6 sq mm PVC insulated FRLS copper conductor for earthing.	Metre	610	946	5,77,060		

S No.			Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
5.04	DSR 1.31		Supplying and fixing suitable Module GI box on surface or in recess including providing and fixing 3 pin 5/6 amps. modular socket outlet with shutters and 5/6 amps. modular type switch with indicator type, base plate, modular cover plate, connections etc. and all civil works 'complete as required.	Each	200	401	80200		
5.05	DSR 1.32		Supplying and fixing suitable modular GI box on surface or in recess including providing and fixing 6 pin 15/16 A modular socket outlet with shutters and 15/16 A modular switch with indicator, base plate, modular cover plate, connections, etc. and all civil works complete as required.	Each	550	495	272250		
5.06	MR		Supplying and fixing suitable Modular metal box on surface or in recess including providing and fixing three nos 3 pin 5/6 amps. modular socket outlet with shutters and one no. 10 amps. modular type switch, base plate, modular cover plate, connections etc. and all civil works 'complete as required. (For computer Points)	Each	129			781	100749
5.07	MR		Supplying and fixing suitable Module metal box on surface or in recess including providing and fixing two nos 3 pin 5/6 amps. & one 6 pin 15/16 amp modular socket outlet with shutters and one no. 20 amps. modular Indicating type switch, base plate, modular cover plate, connections etc. and all civil works 'complete as required. (For Comb-2)	Each	34			961	32674
5.08	MR		Supplying and fixing suitable Module metal box on surface or in recess including providing and fixing two nos 3 pin 5/6 amps. with 2 no 5A modular switch on 6 Module modular plate & two 6 pin 15/16 amp modular socket outlet with 2 no. 16A/15A modular switch on 6 Module modular plate . , base plate, modular cover plate, connections etc. and all civil works 'complete as required. (For Comb-1/ Bed Point)	Each	230			1189	273470
5.09	DSR 1.56		Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 2 nos. 3 pin 5/6 A modular socket outlet and 2 nos. 5/6 A modular switch, connections etc. as required.. (COMBO POINT-3/ TV Point)	Each	27	582	15714		
5.10	DSR 2.18		Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.d.	Each	9	1232	11088		
5.11	DSR 2.20		Supplying and fixing 32 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 amps "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	14	3048	42672		
5.12	MR		Supplying, providing & fixing cordless musical bell with batteries etc of approved make complete as required.	Each	20			500	10000
5.13	MR	i	Supply and fixing following FP MCCB, 415 volts, 35 KA (Isc), Four Pole with thermal magnetic release having variable current setting (0.8 to 1.0 In) with Extended rotary operating mechanism including door interlocking with defeat feature and padlock facility in a sheet steel enclosure on surface complete with all accessories including , connections, testing and commissioning etc. as required.	Each	1			12,993	12993
	MR	ii	63 Amp MCCB with 63 Amp RCCB	Each	2			16,731	33462

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
5.14	DSR 1.26	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	100	32	3200		
5.15		Supply and installation of single or multi compartment GI raceway of cross section given below laid in floor complete as specified. a) Raceway b) All bends, joints, supports, end plates couplers earth conductivity.						
		i 100 x 50 Single compartment	Metre	200			642	128400
		ii 150 x 50 Single compartment	Metre	200			740	148000
5.16		Supply, Installation, Testing & Commissioning of Standalone Ceiling Mounted Motion PIR sensor 360 degree.	Nos.	30			3,697	110910
5.17		Supply, Installation, Testing & Commissioning of Standalone Wall Mounted Motion PIR sensor 90 degree.	Nos.	30			5,874	176220
TOTAL SUBHEAD: 5- WIRING AS MENTIONED ABOVE						6619286	1026878	
6.00		SUB HEAD 6: LIGHT FIXTURE AND FANS						
6.01		LIGHT FIXTURES						
		Supply of following Commerical LED light fixture with high efficiency with Driver , tubes/lamps, reflector, diffuser, body/housing holder etc. complete with all fixing accessories as required.						
	MR	i Supply of IP 20 LED tube light 20 watt with external batten made from CRCA sheet steel suitable to replace T-B/T-12 tube light, integral driver, 2000 luman + 5olo tolerarree system luman efficiacy of 100 Lm/ watt minimum expected life time of 25000 burning hours, CCT 5700 I(ANSI, CRI 80, driver efficiency >850/o, Life expectancy of driver rmin 30000 hrs. PF 0,95 at full load/ 230 volt AC.	Each	110			754	82940
	MR	ii Supply of Aluminum batten of 4ft length suitable for Surface , wall mounted, fixture should have minimum efficacy at System level >=100lumens/watt with Minimum system Lumens 4000, CCT of 6500K (SDCM<=5) , CRI >80, PF >0.90, Operating working temp range - 0°C < Ta < 45°C, an operating Voltage Range of 140 - 277 VAC.	Each	195			1,330	259350
	MR	iii Supply of 36 Watt IP 20 LED 2'x2'/1'X4 fixture, Recessed / surface type, having efficacy of not less than 100 lumen / watt, made out from CRCA housing and with high purity / transmissivity duffuser for uniform light distribution high efficiency driver electronics and irr compliance to IEC standard fintegral with light fixture) , life time of more than 50000 burnins hours, CCT 6000K fminimum], CRI>80 driver maintainine PF>0.9	Each	800			4,257	3405600
	MR	iv Supply of 10W Bulk Head light fixture Pressure Die Cast with IP66 protection & IK09 impact Resistance ,fixture should have minimum efficacy at System level>=100lumens/watt with Minimum system Lumens 1000, CCT of 6500K (SDCM<=5) ,	Each	41			1,419	58179
	MR	v Supply of Wall mounted 10W LED mirror light made up of extrusion aluminum housing, LED Used shall be SMD type and fixture should have minimum efficacy at System level (Not Chip Level) >=100lumens/watt with Minimum system Lumens 1000, Life of fixture (Including Driver) : 25000 burning Hrs. @ L70B50 Lumen maintenance, CCT of 6500K (SDCM<=5) , CRI >80, PF >0.90, Operating working temp range - 0°C < Ta < 45°C, an operating Voltage Range of 140 - 277 VAC.	Each	73			506	36938
	MR	vi Surface mounted Batten holder (Plastic) with 9 watt LED	Each	20			300	6000

S No.			Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
		vii	Supply of IP20 LED Recessed / Surface /Mounted, Round / Square NonDimmable Downlight with die-cast aluminum housing & Heat Sink for heat dissipation, high purity reflector with external BIS certified 2'5 KV surge BSVo and in compliance to IEC standards. System Lumen efficacy of > 1.00 lm /watt and life time of minimum 35000 Burning Hours with 700/o of initial Lumen maintained, CCT 3000°K / 4000°K / 6000°K , maximum Power consumption should not more than the Specified rating and Fixture shall be of CE complianed.						
			Surface mounted						
	MR	a	LED Downlight 18/20w	Each	80			1,747	139760
	MR	b	LED Downlight 12w	Each	24			1,064	25536
			Recessed mounted						
	MR	c	LED Downlight 12w	Each	114			1,951	222414
		d	LED Downlight 20 w	Each	40			2,927	117080
	MR	viii	Supply of Decorative Wall Light,Metal base, ,fixture should have minimum efficacy at System level \geq 100lumens/watt with Minimum system Lumens 1000, CCT of 6500K (SDCM \leq 5) , CRI >80, PF >0.90, Operating working temp range - 0°C < Ta < 45°C, an operating Voltage Range of 140 - 277 VAC.	Each	10			1,657	16570
	Mr	ix	Supply of High Bay Circular Form With All Necessary Cover & Accessories Philips model . MAXOLID BY415 P LED 145S CW WB FG PSU GR S5 or approved equivalent from list of Makes)	Each	2			16,123	32246
6.02			Supply of following ceiling fans (BEE -1 Star Rated) complete with double ball bearing, motor, blades, downrod, canopies, capacitor, suitable for operation on 230 volts, 50 Hz., 1 phase, AC supply complete as required.						
	MR	i	1200 mm Sweep	Each	281			1,563	439203
6.03	DSR 1.26		Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.and modular type electronic fan regulator	Each	270	342.00	92340		
6.04	MR		Supply of 1380 RPM, 300 mm (Crompton Greaves Trans Air or approved equivalent) exhaust fan suitable for single phase 230 volts, 50 Hz., AC supply complete with motor, louvers/shutters etc. complete as required.	Each	19			2,715	51585
6.05	MR		Supply of 1250 RPM, 250 mm (Crompton Greaves Brisk Air or approved equivalent) exhaust fan suitable for single phase 230 volts, 50 Hz., AC supply complete with motor, louvers/shutters etc. complete as required.	Each	14			1,563	21882
6.06	MR		Supply of 400 mm sweep, Crompton greaves model high flow 16" wall mounted fan complete with double ball bearing, motor, blades, capacitor etc suitable for single phase 230 volts, 50 Hz., AC supply, complete as required.	Each	2			2,679	5358

S No.			Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
6.07	DSR 1.35		Installation, testing and commissioning of wall bracket /ceiling fittings of all sizes and shapes containing LED lamps per fitting, complete with all accessories including connections etc. as required.	Each	1509	98	147882		
6.08	DSR 1.45		Installation, testing and commissioning of ceiling fan including wiring the down rod and connection with 1.5 sqmm FR PVC insulated, copper conductor single core/multi strand cable including providing & fixing phenolic laminated sheet cover on the fan box, etc. as required.	Each	281	203	57043		
6.09	DSR 1.50.1		Installation, testing and commissioning of exhaust fan up to 400 mm sweep in the opening, including making the hole to suit the size of the above fan including , fixing of louvers/ shutters with frame making good the damages etc. as required.	Each	33	363	11979		
6.10	MR		Installation, testing and commissioning of wall mounted fan up to 400 mm sweep including supply and fixing wall bracket arrangement complete as required.	Each	2			150	300
TOTAL SUBHEAD 6 : LIGHT FIXTURE & FANS AS MENTIONED ABOVE							309244	4920941	
SUB HEAD 7: TELEPHONE SYSTEM									
7.00	TELEPHONE SYSTEM								
7.01	Supplying drawing, connecting and testing of 0.5mm dia annealed copper conductor PVC insulated PVC sheathed telephone Wire/cables in Existing M.S/ PVC conduit or a racks as required.								
	DSR 1.18.2	i	2 pair Telephone cable. (0.5 mm)	Meter	2500	20.00	50000		
7.02	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.								
		i	20 mm	Metre	1880	146.00	274480		
		ii	25 mm	Metre	620	165.00	102300		
7.03	Supply, fixing, connecting and testing of telephone modular sockets modular plate anodised MS box and blanking plate in surface / recessed including connectionetc as required.								
	DSR 1.24.7	i	Telephone socket outlet (RJ-11 telephone Jack Single with Shutter)	Each	124	119	14756		
7.04	Supplying, Installation, testing and commissioning of following sizes of telephone distribution board in M.S. hinged type lockable box duly painted complete with Krone type tag block etc. including terminations of cable as required.								
	MR	iii	10 Pair	Each	6			1,000	6000
	MR	iv	20 Pair	Each	5			1,500	7500
7.05	Supplying and drawing of following pairs 0.5mm dia annealed bare copper conductor Polythene insulated, core twisted into pairs armoured telephone cable on surface/tray with saddels including termination of cables at both sides in Krone Tag Block etc. complete as required.								
	MR	i	50 Pair	Metre	200			695	139000
	MR	ii	10 Pair	Metre	200			102	20400
7.06	Supplying and drawing of following pairs 0.5 mm dia annealed bare copper conductor Polythene insulated, core twisted into pairs armoured jelly filled telephone cable in the existing trench/ hume pipe/ GI pipe etc with saddels etc. including termination of cables in both sides at krone tag block complete as required.								
			100 pair	Metre	200			445	89000

S No.	Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
	10 pair	Metre	200			445	89000
7.07	Supply of Analog phones Without display having following features ; Pulse or tune Dailing 3 repertory Keys, 10 Speed Dailing Number, Last Number redial , Manual Pause, Adjustable volume etc (Before procurement of this item, the contractor shall have necessary approval approval of quantity from HSCC/Client.	Set	114			644	73416
TOTAL SUBHEAD 7: TELEPHONE SYSTEM AS MENTIONED ABOVE						441536	424316
SUB HEAD 8 CCTV SURVEILLANCE SYSTEM							
8.01	Supply, installation & testing of 1080p HD Indoor IP Dome camera with 1/2.7-inch CMOS, Sensor pixels 1920 x 1080, Sensitivity-0.24 lx (color) 0.05 lx (mono) , Dynamic range, True day/night, Automatic Electronic Shutter, Video compression H.264 MP (Main Profile); M-JPEG, White balance, BLC, H.264 quad-streaming, Motion/tamper/audio detection, Privacy Mask, Motion detection, Tamper alarm, Auto Varifocal Lens 3 to 10 mm lens, Built-in microphone, Two-way, full duplex Audio, Audio compression AAC, G.711, L16 (live and recording), Memory card slot (support upto 1TB), 3-axis adjustment (pan/tilt/ rotation), ONVIF Profile S, CE, UL, FCC Certified.	Nos.	20			32,437	648740
8.02	Supply of 32 IP channels with 320 Mbps incoming bandwidth,Maximum12 MP IP camera support for view and playback.The recorder only supports IP cameras with a firmware version 6.30 or higher.that use the latest H265/H264 high-resolution video technology and state-of-the-art compression techniques,Video inputs, audio inputs/output, and alarm inputs/ outputs a, Use the PC software or built-in web application via a network for live viewing, playback, and configuration. A DIVAR Viewer App from Bosch for iOS and Android devices is available for: • live and playback viewing • recorder configuration • PTZ control With 4 Sata HDD port , each port support 6 TB HDD , WITH 24 TB HDD , RJ-45 Ethernet Connection (10/100/1000 base-T), 2 USB (3.0), 1 USB (2.0), with PC software ,Vedio client, web client, iPhone Android , ONVIF as per UL FCC & UL, CE .	Nos.	1			1,86,682	186682
8.03	Supply, Installation & Commissioning of Workstation latest Intel® i7 7th Generation, processor, Intel Chipset motherboard, 8GB DDR3 RAM, 500 GB SATA HDD at 7200 rpm, Graphic card with 2 GB dedicated RAM with display ports/DVI/ HDMI port, DVD writer, Giga LAN Card, Keyboard, optical Mouse as per list of approved makes.	Nos.	1			1,40,318	140318
8.04	Supply, Installation & Commissioning of 32" Monitor complete as required	Nos.	1			3,642	3642
8.05	Supply, Installation, Testing and commissioning of Managable 24 port Switch with Power on Ethernet (PoE) enabled, 10/100/1000, with SFP port , complete as required	Nos.	2			64,291	128582
8.06	Supply, Installation, Testing & Commissioning of 24 Port Patch Panel	Nos.	2			11,558	23116
8.07	Supply, Installation, Testing & Commissioning of 6U rack indoor/outdoor for switch Mounting with Fan and power Strip, PDU, Hardware Mounting Kit	Nos.	1			9,209	9209
8.08	Supply, Installation, Testing & Commissioning of 24U rack for switch Mounting with Fan and power Strip, PDU, Hardware Mounting Kit	Nos.	1			36,553	36553

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
8.08		Supply,Installation,Testing & Commissioning of 3 Core Power Cable 1.5 sqmm .	Meter	250			81	20250
8.10		Supply, Installation, Testing & Commissioning of CAT 6 Cable complete in all respect up to entire satisfaction Engineer in charge of works.	Meter	1000			92	92000
8.11		Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.						
	i	25mm	Meter	800	90	72000		
8.12		Supply, Installation, Testing and Commissioning of 3 KVA UPS On Line With 15 Minute Backup complete in all respect up to entire satisfaction Engineer in charge of works	Nos.	1			40,547	40547
TOTAL SUBHEAD 8 : CCTV SYSTEM AS MENTIONE ABOVE						72000		1329639
SUBHEAD 9: FIRE ALARM SYSTEM								
9.00		ADDRESSABLE FIRE ALARM SYSTEM						-
9.01	DSR 17.2.1	Supplying, installation, testing and commissioning of microprocessor based intelligent addressable main fire alarm panel, central processing unit with the following loop modules and capable of supporting not less than 240 devices (including detectors) and minimum 120 detectors per loop and loop length up to 2 km, network communication card, minimum 320 character graphics/ LCD display with touch screen or other keypad and minimum 4000 events history log in the non volatile memory (EPROM), power supply unit (230 ± 5% V, 50 hz), 48 hrs back-up with 24 volt sealed maintenance free batteries with automatic charger. The panel shall have facility to connect printer to printout log and facility to have seamless integration with analog/digital voice evacuation system (which is part of the schedule of work under SH: PA System) and shall be complete with all accessories . The panel shall be compatible for IBMS system with open protocol BACnet/ Modbus over IP complete as per specifications.						-
	DSR 17.2.2	i 10 loop Panel	Nos.	1	238907	238907		-
9.02	DSR 17.2.3	Supplying, installation, testing & commissioning of repeater panel wih 320 character/ Touch screen LCD display with inbuilt reset, acknowledge and silence switches complete as required	Nos.	1	108572	108572		-
9.03	DSR-17.2.4	Supplying, installation, testing & commissioning of intelligent analog addressable photothermal detector complete with mounting base complete as required.	Nos.	220	2846	626120		-
9.04		Supply,Installation Testing and Commissioning of Addressable Multi-criteria Photo-Thermal Detector with sensitivity range of 0.5 to 2.5% obs/ft.The intelligent multi criteria detection device shall include the ability to combine the signal of the thermal sensor with the signal of the photoelectric signal in an effort to react hastily in the event of a fire situation. It shall also include the inherent ability to distinguish between a fire condition and a false alarm condition by examining the characteristics of the thermal and smoke sensing chambers and comparing them to a database of actual fire and deceptive phenomena. The detector shall adapt to its environment by utilizing a built-in microprocessor to determine its environment and choose the appropriate sensing settings for early detection and reduction in false alarm. The detector shall have twin bi-colour LED for 360 deg viewing. Addressing shall be with user friendly rotary decimal switches..UL Listed & FM Approved	Nos.	270			3,044	821880
								-
								-

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
9.05	DSR-17.2.5	Supplying, installation, testing & commissioning of response indicator on surface/recessed MS Box having two LED, metallic cover complete with all connections etc as required.	Nos.	140	263	36820		-
								-
9.06	DSR-17.2.7	Supplying, installation, testing & commissioning of fault isolator complete with base as required.	Nos.	30	3257	97710		-
								-
9.07	DSR-17.2.9	Supplying, installation, testing & commissioning of intelligent addressable thermal detector with rate of rise cum fixed temperature thermistor complete with base as required.	Nos.	10	2713	27130		-
								-
9.08	DSR-17.2.10	Supplying, installation, testing & commissioning of addressable fire control module complete as required.	Nos.	1	2990	2990		-
								-
9.09	DSR-17.2.11	Supplying, installation, testing & commissioning of addressable phone control module complete as required.	Nos.	10	3255	32550		-
								-
9.10	DSR-17.2.14	Supplying, installation, testing & commissioning of addressable manual call point complete as required.	Nos.	16	3859	61744		-
								-
9.11	DSR-17.2.15	Supplying, installation, testing & commissioning of addressable horn cum strobe complete as required.	Nos.	16	3494	55904		-
								-
9.12	DSR-17.2.17	Supplying, installation, testing & commissioning of fire fighter telephone handset complete as required.	Nos.	1	5727	5727		-
								-
9.13	DSR-17.2.19	Supplying, installation, testing & commissioning of fire fighter phone jack complete as required	Nos.	16	1587	25392		-
								-
9.14	i	Supply and drawing of 2 C X 1.0 Sq mm multi stranded twisted unshielded FRLS Copper cable	Rmt.	4000			34	1,36,000
								-
9.15	DSR 1.20.2	Supply and fixing of following sizes of MS conduit along with the accessories in surface/ recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required						-
	i	25 mm dia	Metre	3500	165	577500		-
								-
		TOTAL SUB HEAD 9 : FIRE ALARM SYSTEM AAS MENTIONED ABOVE				1897066		9,57,880
								-
		SUBHEAD 10: PUBLIC ADDRESS:						-
								-

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
10.01	MR	Supply , installation , testing and commissioning of 8 channel controller , with 14x 4 Audio matrix with full DSP functionality. 8 audio inputs, 4 audio outputs, 4 channel output matrix. Shall support single line switching or redundant group A/B switching, amplifier redundancy, 4 x 100V audio inputs and 12 speaker line outputs. 8000 fault, warning and event conditions log. Built in message manager for 100 emergency/business calls up to 85 minutes. 10 control inputs and 13 control outputs. Should be able to send 2 different pre-recorded messages simultaneously. Impedance measurement and Pilot Tone supervision for speaker line monitoring. Shall be able to handle up to 2000Watt load, 20 routers, 16 call stations, 7492 speaker zones. Frequency response (ref. 1 kHz) 20 Hz to 20 kHz (-0.5 dB) Signal-to-noise ratio (A-weighted): Line in to line out: 106 dB typical THD+N < 0.05% Crosstalk (line level) Line in to line out (0 dB gain): < 100 dB at 1 kHz Sample rate 48 kHz DSP processing resolution 24-bit linear A/D and D/A conversion, 48-bit processing	No.	1			1,65,399	1,65,399
								-
10.02	MR	Supply , installation , testing and commissioning of EN-54 certified 1x 500W Class D, high efficiency amplifier. 70/100V loudspeaker output voltages, galvanically separated, 4 automatic selectable audio inputs on RJ45, local input. THD ≤1%. Frequency response, ref. 1 kHz, rated load, -3 dB : 50 Hz to 25 kHz. Signal-to-noise ratio (A-weighted) > 104 dB, Output noise (A-weighted) < -62 dBu, Crosstalk , ref. 1 kHz < -85 dB. Audio input level limiter, RMS output power limiter, high temperature, DC, short circuit, mains undervoltage protection, DC supply undervoltage protection, inrush current limiter, ground fault.	Nos.	2			68,355	1,36,710
								-
10.03	MR	Supply , installation , testing and commissioning of EN-54 certified Call Station with built in numerical keypad, Multilanguage LCD display , gooseneck microphone with supervised electret microphone, pop shield and permanent monitoring, integrated loudspeaker for system sounds. Five menu/function keys, 15 customizable function and speed dial buttons. Possible to use keys for Zone select, source select, level control, emergency on/off, message on/off, failure acknowledge/reset, Switching output trigger on/off or 0 to 10V, select scheduled events, scheduled event on/off. Call Station is supervised by system controller can be expanded by connecting 5 additional extension keypads with Power supply AC to DC output Voltage 24 V rated current 1.67A. Complete as required.	No.	1			55,363	55,363
								-
10.04	MR	Supply , installation , testing and commissioning of 6W ceiling mount speaker with excellent speech & music reproduction Max Power: 9W, Rated Power: 6Watts, Power Tapping: 6/3/1.5W Effective frequency range(-10 dB) : 150 Hz to 15KHz SPL at rated power (1Khz at 1 m) 108 dB Opening Angle 1 KHz / 4 KHz (-6 dB): 180/45	No.	82			871	71,422
								-
10.05	MR	Supply , installation , testing and commissioning of 6W wall mount speaker with excellent speech & music reproduction Max Power: 9W, Rated Power: 6Watts, Power Tapping: 6/3/1.5W Effective frequency range(-10 dB) : 200 Hz to 15KHz SPL at rated power (1Khz at 1 m) 96 dB Opening Angle 1 KHz / 4 KHz (-6 dB): 150/70	Nos.	6			1,239	7,434
								-
10.06	MR	Supply , installation , testing and commissioning of 19" 18 U Rack with power supply and all accessories Make-Omnitech/Datarack /Rittal	No.	1			31,848	31,848
								-
10.07	MR	Supply , laying , testing and commissioning of Multi Stranded 2 core Twin twisted Flexible Multistrand copper cable 1.5 sqmm Armoured Cable complete as required.	Mtrs.	2200			129	2,83,800
								-

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
10.08		Supply and fixing of following sizes of MS conduit along with the accessories in surface/ recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required						-
		25 mm dia	Mtrs.	1800	165	297000		-
		TOTAL SUB HEAD 10 : PUBLIC ADDRESS: AS MENTIONED ABOVE				297000		7,51,976
11.00		SUB HEAD 11: LIFTS						
11.01		LIFTS Design, manufacture, supply, installation, testing and commissioning of following 20 passenger Lift (1360 kg), serving different floors in the lift shaft including machine room at top. The lift should be Gearless as per detailed specification/ drawing enclosed as required and as under: Lift Panel Should be with Backnet / Mod Bus for its intergration with BMS						
		- Travel: As per architectural drawing.						
		- Controller: A.C. variable voltage & variable frequency						
		- Automatic rescue device complete with dry maintenance free batteries as required.						
		- Operation: Microprocessor based single automatic push button/ simplex selective collective/duplex collective selective with / without attendant.						
		- All push buttons will have Brail also.						
		- 415 V, 3 phase, 50 Hz, 4 wire system						
		- Type of doors: a) Car : Power operated, telescopic opening, horizontal sliding stainless steel Hairline mat finish(b) Landing doors: Stainless steel Hairline mat finish. Lift landing doors shall have a fire resistance of one hour.						
		- SS Plate finishing on all around the lift Jamb opening including overlapping of front facia all LOP (Local operating Panel) alarm , fire man switch,will be on landing frame the finishing of frame will be as that of door.						
		- Car Enclosure : Stainless Steel hairline mat finish						
		Stretcher Guard on all the three side						
		Mirror above stercher guard level on rear wall.						
		25mm groove to be left for flooring.						
		Provision for CCTV in Car						
		- Voice announcement system in the car to announce the position of the elevator in the hoistway as the car passes or stops at a floor served by the elevator.						
		- Telephone with minimum two connections one at operator's room and other at guard/ security room and the emergency signal with re-chargeable batteries as source of supply be made in the lift car.						
		- Toe guard, IR curtain on full height, two phase fireman's drive control/ switch and potential free contacts etc to be provided.						
	MR	i Floors : B1+B2+G+3, (6 stops & 6 openings) Speed -1 MPS	Each	1			26,69,992	2669992
11.02		Design, manufacture, supply, installation, testing and commissioning of goods lift of 1000 Kg , serving different floors in the existing lift shaft including lift well pressurization. The lift should be as per detailed specification/ drawing enclosed as required and as under:						
		Speed : 0.5 MPS						

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
		Travel: As per architectural drawing.						
		Controller: A.C. variable voltage & variable frequency						
		Automatic rescue device complete with dry maintenance free batteries as required.						
		Operation: Microprocessor based single automatic push button/ simplex selective collective/with / without attendant.						
		415 V, 3 phase, 50 Hz, 4 wire system						
		Type of doors: a) Car : Power operated, central opening horizontal sliding M.5 finish (b) Landing doors: M.5 finish.						
		All push buttons will have Brail also.						
		Voice announcement system in the car to announce the position of the elevator in the hoistway as the car passes or stops at						
		IR curtain on full height, fireman's switch and potential free contacts etc to be provided in the lift.						
		Floors: B1+B2+G+3 (6 stops & 6 openings)	Each	1			25,29,466	2529466
TOTAL SUB HEAD 11: LIFTS AS MENTIONED ABOVE								5199458
		SUB HEAD 12: LT CABLES						
12.00		LT CABLES						
12.01		Supply of following sizes of 1.1 kV grade multicore aluminium conductor PVC sheathed armoured XLPE cable as per IS 7098.						
	MR	i 3.5 Core 25 Sqmm.	Metre	500			225	112500
	MR	ii 3.5 Core 70 Sqmm.	Metre	200			496	99200
	MR	iii 3.5 Core 95 Sqmm.	Metre	200			619	123800
	MR	iv 3.5 Core 120 Sqmm.	Metre	150			771	115650
	MR	v 3.5 Core 300 Sqmm.	Metre	900			1,759	1583100
	MR	viii 4 Core 16Sqmm	Meter	100			184	18400
	MR	ix 4 Core 6 Sq mm	Metre	100			133	13300
	MR	x 3 Core 4 Sqmm.	Metre	100			94	9400
	MR	xi 2 Core 10 Sq mm	Metre	200			121	24200
	MR	xii 2 Core 16 Sq mm	Metre	300			137	41100
12.02		Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required						
	DSR 7.1.1	i Up to 35 sq.mm	Metre	630	323	2,03,490		
	DSR 7.1.3	iii Above 95 Sq mm and up to 185 Sq mm	Metre	245	352	86,240		
	DSR 7.1.4	iv Above 185 Sq mm and up to 400 Sq mm	Metre	630	396	2,49,480		
12.03		Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade direct in the existing RCC/ Hume/Stoneware/Metal pipe as required						
	DSR 7.5.1	i Up to 35 sq.mm	Metre	190	31	5,890		
	DSR 7.5.3	iii Above 95 Sq mm and up to 185 Sq mm	Metre	53.00	64	3,392		
	DSR 7.5.4	iv Above 185 Sq mm and up to 400 Sq mm	Metre	135	112	15,120		
12.04		Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade on surface or on existing cable tray complete as required.						
	DSR 7.8.1	i Up to 35 sq.mm	Metre	680	33	22,440		
	DSR 7.8.3	iii Above 95 Sq mm and up to 185 Sq mm	Metre	53.00	93	4,929		
	DSR 7.8.4	iv Above 185 Sq mm and up to 400 Sq mm	Metre	135	150	20,250		

S No.			Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
12.05			Supplying and making end termination with suitable size Aluminum lugs including double compression glands of following sizes of 1.1. kv grade multicore aluminium conductor PVC insulated and PVC sheathed				-		
	DSR 9.1.20	i	3.5 Core 25 Sqmm.	Each	26	250	6,500		
	DSR 9.1.23	ii	3.5 Core 70 Sqmm.	Metre	6	368	2,208		
	DSR 9.1.23	iii	3.5 Core 95 Sqmm.	Metre	4	473	1,892		
	DSR 9.1.25	iv	3.5 Core 120 Sqmm.	Each	6	489	2,934		
	DSR 9.1.30	v	3.5 Core 300 Sqmm.	Each	8	936	7,488		
	DSR 9.1.33	vi	4 Core 16Sq mm	Each	30	250	7,500		
	DSR 9.1.34	vii	4 Core 6 Sq mm	Each	8	250	2,000		
	DSR 9.1.7	viii	3 Core 4 Sqmm.	Each	4	211	844		
	DSR 9.1.2	ix	2 Core 10 Sq mm	Each	10	198	1,980		
	DSR 9.1.3	x	2 Core 16 Sq mm	Each	10	212	2,120		
12.06	DSR No 14.14		Providing, laying and fixing following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc as required.				-		
	DSR No	i)	150 mm dia	Metre	200	598	1,19,600		
	DSR No	i)	300 mm dia	Metre	200	854	1,70,800		
							-		
			TOTAL SUBHEAD 12: LT CABLES AS MENTIONED ABOVE				9,37,097		21,40,650
			SUBHEAD 13: EARTHING & MISC ITEM						
13.00			EARTHING						
13.01	MR		Supply and installation of one number earth pit with advance maintenance free Earthing System consisting of one Number, CPRI tested copper bonded steel electrode of minimum 19 mm dia (as per IE C62561-2) With a minimum. coating thickness of 250 microns and length of 3 meters. 25 kg/Electrode of earth enhancing compound (tested as per IEC-62561-7) fill the 100mm augered hole surrounding to the electrode , SS Universal Clamp of Size 175X50X3 mm for terminal Connection including Poly Propylene Heavy duty Pit cover including all accessories , excavation of earth, filling with back fill compound, and earth pit marking. The Complete installation shall be as per the drawing, technical specifications and as required	Set	2			11,516	23032
13.02	MR		Supply and installation of one number earth pit with of advance maintenance free Earthing System consisting of one Number UL Listed CPRI tested copper bonded steel electrode of minimum 13 mm dia . (as per IE C62561-2) With a minimum. coating thickness of 250 microns and length of 3 meters. 25 kg/Electrode of earth enhancing compound (tested as per IEC-62561-7) fill the 100mm augered hole surrounding to the electrode , SS Universal Clamp of Size 175X50X3 mm for terminal Connection including Poly Propylene Heavy duty Pit cover including all accessories , excavation of earth, filling with back fill compound, and earth pit marking. The Complete installation shall be as per the drawing, technical specifications and as required	Set	4			9,859	39436
13.03	MR		Supply and installation of one number earth pit with of maintenance free earthing system consisting of 1250 mm long copper bonded steel electrode of 14.2 mm dia.tested as per IEC 62561-2.Minimum copper coating thickness on Rod is 100 microns. 5 kg/Electrode of earth enhancing compound tested as per IEC 62561-7 fill the 75-100mm augered hole surrounding to the electrode.It consist the following Item opper Alloy clamp suitable Poly PropyleneHeavy duty Pit cover including all accessories , excavation of earth, filling with back fill compound, and earth pit marking. The Complete installation shall be as per the drawing, technical specifications and as required	Set	2			5,283	10566

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
13.04	DSR 5.9	Supplying and laying 25mmX5mm GI strip at 0.5m below ground level as strip earth electrode, including soldering etc. as required.	Metre	50	131	6550		
13.05	DSR 5.15	Providing and fixing 25mmX5mm GI strip on surface/on existing cable trench/RCC pipe/GI pipe or in recess for earth electrode as required.	Metre	30	206	6180		
13.06	MR	Supplying and laying 50mmX6mm GI strip at 0.5m below ground level as strip earth electrode, including soldering etc. as required.	Metre	30			273	8190
13.07	MR	Providing and fixing 50mmX6mm GI strip on surface/on existing cable trench/RCC pipe/GI pipe or in recess for earth electrode as required.	Metre	50			368	18400
13.08	DSR 5.14	Providing and fixing 25mmX5mm Copper strip on surface/on existing cable trench/RCC pipe/GI pipe or in recess for earth electrode as required.	Metre	50	1,009	50450		
13.09	DSR 5.9	Supplying and laying 25mmX5mm Copper strip at 0.5m below ground level as strip earth electrode, including soldering etc. as required.	Metre	50	853	42650		
13.09	DSR 5.10	Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required	Metre	50	1,224	61200		
13.10	DSR 5.11	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	Metre	50	483	24150		
13.11	DSR 5.18	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Metre	200	37	7400		
		CABLE ROUTE MARKER						
13.12	DSR 7.10	Supplying and fixing cable route marker with 10 cm x 10 cm x 5 mm thick G.I. plate with inscription there on, bolted /welded to 35 mm x 35 mm x 6 mm angle iron, 60 cm long and fixing the same in ground as required.	each	20	383	7660		
		SAFETY EQUIPMENT						
13.13	DSR 2.21	a) Providing and fixing M.V. danger notice plate of 200 mm X 150 mm, made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single red colour on front side as required.	Each	20	226	4520		
		b) Supplying and laying of 1.1 kV grade 1 metre wide anti skid chequered type rubber mat.	Metre	30			1,800	54000
13.14		Providing and fixing of M.S Slotted angle iron with fixing materials and painting for cable racks in trenches/ on wall etc. as required.	KG	50			70	3500
13.15		Providing and fixing of M.S Slotted angle 'C' channel/ Ladder type rack/ tray including fixing material grouted in wall or haning with M.S rod hanger from ceiling including 2 coat synthetic enamel painting over 1 coat of red oxide primer etc. as required.	KG	50			150	7500

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
13.16		Fabrication and Installing following size of prefabricated M.S Cable tray including Horizontal and vertical bends, reducers, tee, crossmember and other accessories as required and duly Suspended from the ceiling with M.S 12 mm rod suspenders and including painting etc. as required.						
	DSR 4.1.2	i) 150 mm width x 50 mm depth x 1.6 mm thickness	Metre	400			531	212400
	DSR 4.1.4	ii) 300 mm width x 50 mm depth x 1.6 mm thickness	Metre	300			621	186300
	DSR 4.1.10	iii) 450 mm width x 62.5 mm depth x 2.0 mm thickness	Metre	50			778	38900
13.17		Fabrication and Installing following size of Ladder type M.S Cable tray including Horizontal and vertical bends, reducers, tee, crossmember and other accessories as required and duly Suspended from the ceiling with M.S 12 mm rod suspenders and including painting etc. as required.						
		i) 450 mm width x 62.5 mm depth x 2.0 mm thickness	Metre	50			845	42250
TOTAL SUBHEAD 13: EARTHING AS MENTIONED ABOVE						210760		644474
14.00		SUBHEAD 14: LIGHTNING PROTECTION						
		LIGHTNING PROTECTION						
14.01	MR	Supply and installation of one number earth pit with advance maintenance free Earthing System consisting of one Number, CPRI tested copper bonded steel electrode of minimum 19 mm dia (as per IEC 62561-2) With a minimum coating thickness of 250 microns and length of 3 meters. 25 kg/Electrode of earth enhancing compound (tested as per IEC-62561-7) fill the 100mm augered hole surrounding to the electrode , SS Universal Clamp of Size 175X50X3 mm for terminal Connection including Poly Propylene Heavy duty Pit cover including all accessories , excavation of earth, filling with back fill compound, and earth pit marking. The Complete installation shall be as per the drawing, technical specifications and as required	Set	4			11,516	46064
14.02	DSR 6.2	Providing and fixing of lightning conductor finial, made of 25mm. dia. 300mm., long GI tube, having single prong at top, with 85 mm. dia. 6 mm. thick GI base plate including holes etc. complete as required.	Each	10	448	4480		
14.03	DSR 6.7	Providing and fixing GI tape 20mm X 3 mm thick on parapet or surface of wall for lightning conductor as required. (For horizontal runs).	Metre	300	104	31200		
14.04	DSR 6.8	Providing and fixing GI tape 20mm X 3 mm thick on parapet or surface of wall for lightning conductor as required. (For vertical runs).	Metre	100	163	16300		
14.05	DSR 6.12	Providing and fixing testing joint, made of 20mmX3mm thick GI strip, 125 mm. long, with 4 no.'s of GI bolts, nuts, check nuts, bar saddles, and spring washers etc. complete as required.	Each	4	102	408		
14.06	DSR 6.13	Providing and laying GI tape, 32 mm X 6 mm thick, from test joint upto earth electrode directly in ground as required.	Metre	100	176	17600		
TOTAL SUBHEAD 14: LIGHTNING PROTECTION AS MENTIONED ABOVE						69988		46064
15.00		SUBHEAD 15: OUT DOOR LIGHTING						
		OUT DOOR LIGHTING						
15.01		Supply, erection, testing and commissioning of external swaged steel tubular pole with following specifications & items :						

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
		i 9.0 Mtrs. high swaged steel tubular pole with arm length around 1.5 Metre, the construction of the pole shall be as per IS:2713 - 1980 410 SP-30 with base plate 450mmX450mmX6mm complete as per requirement with two coats of spray paints of approved shade.						
		ii 90 watts LED street light fixture in die cast aluminum body with 90 watts LED lamp complete with control gear, cover etc. similar to Compton Greeves LSTN -90-CDL -A or approved equivalent including its wiring with 2X2.5 sq.mm. PVC insulated, FRLS copper conductor and 1.5 sqmm PVC insulated, FRLS copper earth wire from control box complete as required.						
		iii Suitable size 32 A DP MS Control box with 2 no. incoming and outgoing terminals and 2 nos. tap-out terminal with 6A DP MCB complete as required - 1 Set						
		iv Suitable number(s) 40mm dia Class-B GI Pipe(s) from above control box to upto 0.5 metre below ground level for power cable entry						
		v Providing foundation including excavation, shuttering, alignment of poles, casting etc. including lean concrete at the bottom as per CPWD/ BIS specifications.						
		vi The above installations shall be completed as CPWD specifications and as required						
	MR	a. Steet Tubular Poles(9M) Single Arm as mention above	Set	8			21,515	172120

S No.		Description of Items	Unit.	Total Quantity	Rate in Figures (in Rs.)	Amount in Figures (Rs.)	Rate in Figures (in Rs.)	Amount in Figures (Rs.)
15.02		Supply, installation, testing and commissioning of external post top lantern with following accessories and complete as required :						
	i	4m high (3.3m above ground) 80mm dia GI pole as approved, adopting socket at top for fixture mentioned below, base plate 300 x 300 x 6mm and provision for mounting junction box etc. - 1 set.						
	ii	1 x 40 LED Post top lantern with 40W LED lamp (Compton Greeves LSTN -90-CDL -A or equivalent) and its wiring with 2 x 2.5 sq.mm PVC insulated copper wire and 1.5 sqmm PVC insulated copper earth wire from control box .						
	iii	Suitable size 20A DP MS Control box with 2 no. incoming and outgoings terminals and 2 nos. tap-out terminal with 1 nos. 5A HRC fuses complete 1 set.						
	iv	Suitable number(s) 40mm dia Class-B GI Pipe(s) from above control box to upto 0.5 metre below ground level for power cable entry						
	v	Providing 400x400x1000mm deep 1:3:6 ratio cement concrete including excavation shuttering alignment of poles casting etc. including 100mm thick lean concrete shall be provided at the bottom						
	MR	Supply, installation, testing and commissioning of external post top lantern as mentioned above	Set	6			17,106	102636
15.03		Supply, installation, testing and commissioning of Post top lantern 1 x 40 LED Post top lantern with 40W LED lamp (CG MAPLE LPTO-40-CDL) and its wiring with 2 x 2.5 sq.mm PVC insulated copper wire and 1.5 sqmm PVC insulated copper earth wire from control box .						
	MR		set	2			6,654	13308
15.04		Supply, installation, testing and commissioning of bollard lamps LBLSN-10-CDL (LIARA) or equivalent) control box - 1 set.						
	MR		Each	6			6,421	38526
15.05		Road Lighting Panel						
		Supply, installation, testing and commissioning of following outdoor type with canopy, IP-54 protected M.V. cubicle type totally enclosed, free standing type, dust, damp and vermin proof, MV Panel, busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads/solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, stove enamelled painted and having following incoming and outgoing switchgears complete as required.						
		INCOMER:						
		100 Amps,415 volts, TP+NL, 35 KA Moulded Case Circuit Breaker with thermal magnetic release having variable current settings .						
		R,Y&B phase indicating lamp (LED type) with 2A control SP MCB ,ON, OFF , TRIP for MCCB						
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
		1 Set of timer switch & 100A TP contactor with neutral link (for street lights control) .						
		BUSBARS:						
		300 Amp TPN Aluminium busbars						
		OUTGOING:						
	i	20 Nos. 16 Amp 415 volts, DP MCB						
	MR	Feeder Pillar as mention above	Set	1			80,569	80569
		TOTAL SUBHEAD 17: OUTDOOR LIGHTING						407159

**COST ESTIMATE OF HVAC WORKS FOR ADDITIONAL BLOCKS AT ATAL INSTITUTE OF
MEDICAL SUPER SPECIALITIES, CHAMYANA, SHIMLA, HIMACHAL PRADESH**

SUMMARY SHEET FOR HVAC WORKS

SECTION	DESCRIPTION OF WORK	AMOUNT(Rs.)
A	EQUIPMENTS	2,61,44,478
B	PIPING	37,70,318
C	AIR DISTRIBUTION	1,44,59,806
D	ELECTRICAL	61,43,444
	GRAND TOTAL	5,05,18,046

COST ESTIMATE OF HVAC WORKS FOR ADDITIONAL BLOCKS AT ATAL INSTITUTE OF MEDICAL SUPER SPECIALITIES, CHAMYANA, SHIMLA,							
Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
The prices are to be quoted in the below mentioned form and shall include the supply, installation, testing & commissioning at site of all the equipments, ancillary materials as specified and all such items what so ever which may be required to fulfill the intent and purpose as laid down in the specifications and or the drawings.							
The tenderer shall quote rates in figures and in words under column 6&7 and extend amount to column 8							
A)	EQUIPMENTS						
1.0	REVERSIBLE HEAT PUMP SYSTEM HOT WATER SYSTEM - HOSPITAL BLOCK AIR TO WATER HEAT PUMPS						
1.1	Supply, Installation, Testing & Commissioning of Micro Processor Controlled Air to Water Screw Heat pump delivering actual capacity (500 KW) as per the following parameters duly installed at site. The Heat Pump should be complete with multiple semi-hermetic screw compressors and multiple independent refrigerant circuits, Electronic Expansion Valve, Shell & Tube Dx/flooded type evaporator, copper tube and anti-corrosive coated fins condenser coil, anti vibration rubber mounts with Electrical panel suitable for Aluminum Cable Termination mounted on the heat pump including the disconnect switch suitable for 50 Hz, 3 Phase, 415 volts, AC supply. The vibration isolators shall be shipped alongwith heat pump from the works. Heat Pump should be capable of operating ambient temp upto -10 °C.						
	Heating capacity = 500 KW Actual at below mentioned conditions						
	Hot Water Inlet Temp = 45 Deg C						
	Hot Water Outlet Temp = 50 Deg C						
	Glycol= 30% (Glycol to be provided and added by HVAC contracor)						
	Air Ambient Temp = -5 Deg C to 35 Deg C						
	Refrigerant : R134a						
	COP shall be more than 3.5 as per ECBC						
	Heat Pump Should be Capable to Operate at Air Ambient Temp from -10 to 40 Deg C						
	(The system shall be complete in all respects viz Drive, lubrication system, evaporator, condenser coil, refrigerant system, controller, communication port for BMS).						
	The heat pump as described above shall be inline with specifications.						
	The heat pump as described above shall be inline with specifications.		2	Nos	80,00,000		16000000
2.0	WATER CIRCULATION PUMPS						

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
2.1	Primary Hot Water Pumps Supply, installation, testing and commissioning of split casing end suction type centrifugal chilled water pump sets factory assembled and tested for rated efficiency mounted on a common base frame etc each capable of delivering specified flow rate complete with following as per specifications & schedule of equipments.						
	a. Pump with IP 55 TEFC induction motor with class F insulation, IE-3 efficiency class and continuous duty S1.						
	b. Channel base with vibration isolators, coupling, coupling guard etc.						
	c. Cladded insulation and anti corrosive coating inside and outside casing etc. of chilled water pump.						
	d. 2 Nos.- 150 mm dia dial type pressure gauge						
	e. Pumps shall be suitable for operation on 415+/- 10% Volts/ 3ph / 50 Hz/ AC power supply.						
	f. Bellows in suction and discharge line for vibration isolation of suitable capacity.						
	The pump characteristic shall be as follows:						
2.1.1	Water flow rate= 350 USGPM Head = 18 Metre WC						
	Primary chilled water pumps as described above. (2W)		2	Nos	288535		577070
3.0	AIR HANDLING UNITS (AHRI / Eurovent certified)						
3.1	Supply, installation, testing and commissioning of sectional construction draw through type Air Handling Units (double skin type) of horizontal /vertical as specified & shown in schedule of equipment complete with the following :-						
	a. Fan section with fire rated flexible canvas connections on supply and return, Mixing Box, Thermal break profile, (double skin type)						
	b. Centrifugal blower (AMCA Certified) direct driven/ belt driven.						
	c. Coil section as per specifications, minimum 2 bend GSS/PVC eliminators.						
	d. Pre filters with filter section in all AHUs.						
	e. Fine and hepa filters with filter section wherever specifically specified as per AHU schedule .Wherever fine/hepa filters are specified, item shall include factory fabricated double skin plenum of same specifications as AHU panels and complete with filter frameworks.						
	f. Drain pan, drain connection. S.S Insulated Drain pan						
	g. Squirrel cage induction IP 55 TEFC , Insulation class 'F', Duty S1 , IE-3 drive motor, drive arrangement, guard etc.						

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	h. Necessary vibration isolators & supporting frame arrangement as required for AHUs.						
	i. Fresh air intake arrangement, necessary water drain & air purge valves wherever required etc. Necessary civil work such as foundation / base for AHU mounting is included in the scope of work						
	j. Canvass connections, necessary foundations, 2 nos pressure gauge, 2 nos thermometer etc						
	k. Controls for AHUs comprising of a set of PN-16 rating 3 Way diverting cum mixing valve of required size fitted with modulating actuators having manual override facility on each AHU alongwith wiring for interconnections with 1.5 sq. mm Cu Conductor multicore armoured complete as required. The actuator shall have required shut off capability of minimum 4 bar rating. The acuator shall be compatible with BMS.The valve actuator shall be capable of accepting 2-10 volt DC, 4-20 mA electric signal and shall provide similar transduced feedback output signal to control system.						
	l. Pre Filter : 90% down to 10 micron (MERV -8), Fine filter : 99% down to 3 micron (MERV-14), HEPA filter 99.97% down to 0.3 micron (MERV-17).						
	All AHU's with mixing box with return air ducted, whether installed Indoor or outdoor shall be of thermal break design Thermostat with Return air teemperature sensor along with necessary control cabling and controllar for temparature setting. Necessary civil work such as foundation / base for AHU mounting is included in the scope of work RH sensor for AHUs wherever rehating is required along with necessary control cabling and controllar						
3.1.1	AH-BF-01 - 7000cfm/ 4RD Heating Coil/55 mm static (with pre filter)		1	Nos.	198294		198294
3.1.2	AH-BF-02 - 11500cfm/ 4RD Heatling Coil/55 mm static (with pre filter)		1	Nos.	291575		291575
3.1.3	AH-BF-03 - 9500cfm/ 4RD Heatling Coil/55 mm static (with pre filter)		1	Nos.	254337		254337
3.1.4	AH-GF-01 -7500cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)/ 100% Exhaust air		1	Nos.	288969		288969
3.1.5	AH-GF-01 -7000cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)		1	Nos.	286083		286083
3.1.6	AH-1F-01 -6500cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)		1	Nos.	266533		266533
3.1.7	AH-1F-01 -6000cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)/ 100% Exhaust air		1	Nos.	237580		237580
3.1.8	AH-1F-01 -3000cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)/ 100% Exhaust air		1	Nos.	142343		142343
3.1.9	AH-1F-01 -3000cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)/ 100% Exhaust air		1	Nos.	142343		142343

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
3.1.10	AH-1F-01 -9000cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)		1	Nos.	345012		345012
3.1.11							
3.1.12	AH-2F-01 -4500cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)/ 100% Exhaust air		1	Nos.	184515		184515
3.1.13	AH-2F-02 -4000cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)		1	Nos.	161335		161335
3.1.14	AH-2F-03 -4000cfm/4RD Heating Coil/80 mm static (with pre & fine filter)/ 100% Exhaust air		1	Nos.	161335		161335
3.1.15	AH-2F-04 -6000cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)/ 100% Exhaust air		1	Nos.	237580		237580
3.1.16	AH-2F-07 -6000cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)/ 100% Exhaust air		1	Nos.	237580		237580
3.1.17	AH-2 F-08 - 4500cfm/ 4RD Heating Coil/80 mm static (with pre & fine filter)		1	Nos.	184515		184515
3.1.18	AH-3rd F-01 - 10000cfm/ 4RD Heating Coil/55 mm static (with pre filter)		1	Nos.	266533		266533
3.1.19	AH-3rd F-02 - 10500cfm/ 4RD Heating Coil/60 mm static (with pre filter)		1	Nos.	285710		285710
3.1.20	AH-3rd F-03 - 15500cfm/ 4RD Heating Coil/65 mm static (with pre filter)		1	Nos.	436339		436339
4.0	DX- AIR HANDLING UNITS (AHRI/ Eurovent certified)						
4.1	Supply, installation, testing and commissioning of factory fabricated Double Skinned Floor Mounted Type Air-handling unit horizontal type fabricated out of extruded aluminium section with thermal break profile consisting with 0.8 mm pre-plasticized/pre-coated Galvanised steel sheet outside & 0.8 mm plain galvanised steel sheet with 25 mm thick injected PUF of density not less than 40 Kg/CuM. The air handling units shall be complete with mixing chamber pre-filter section with synthetic fibre filters, coil section with multirows deep DX cooling / heating coil of copper tube & aluminium fin construction, strip duct heater of required capacity & humidifier fan section complete with floor standing backward curved DIDW centrifugal fan, IE-3 squirrel cage induction motor, duty-S1, belt drive package, stainless steel drain pan and vibration isolation pads all complete as per specifications. AHUs shall be selected for a maximum face velocity of 500 FPM.						

Item No. 1	Description	3 Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	The units shall be compatible with outdoor condensing units . The unit shall be supplied with starter for motor, electronic expansion valve/s (Dx), thermostats, temperature & RH controller, control wiring & all accessories as required for completing installation. Fan outlet velocity shall not exceed 1800 FPM (9.1 MPS). Filters shall be- Pre Filter : 90% down to 10 micron, Fine filter : 99% down to 3 micron. (The heaters shall be controlled by independent thermostats / humidistats / through electro magnetic type contractors and safety thermostats / geysers as specified complete with wiring for interconnections with 1.5 sq. mm. copper conductor multi core armoured cable. The oil tank shall be 2mm thick ss 304L, pipe 19 mm dia of ss304 L)					
	AH-(Blood Bank)- GF- 9000cfm/ 6RD DX Coil /80 mm static (with pre & fine filter) / 15 TR Cooling Load / 45 Kw Heating Load	1	Nos.	323135		323135
5.0	VRV / VRF Outdoor Unit (Condensing unit)					
	Supply Installation, Testing & Commissioning of modular type Variable Refrigerant Flow/Variable Refrigerant Volume air cooled Outdoor units suitable for cooling and heating, having all hermetically sealed inverter type Scroll Compressor(s), minimum two compressors for above 14 HP modules, microprocessor based Controller, top discharge type condensing unit(s), with R 410 A Refrigerant, vibration isolators, with suitable foundation etc. complete as required. The unit shall deliver the rated capacity at AHRI Conditions and work even at 50°C ambient temperature without tripping. The unit shall be suitable to work on 400V +/- 10%, 3 Phase, 50Hz AC power supply. The unit shall be filled with first charge of the refrigerant and ready for use as required. The COP at AHRI conditions shall not be less than 3.1 and IEEER not less than 6.5 .					
	Necessary hard drawn copper refrigerant piping of suitable sizes as per circuit with class "O" nitrile insulation UV protected along with clamps, supports, fittings such as bends tees, reducers, etc complete as per specifications and as per requirements for each set of units.					
5.1	Capacity : 18 HP (Blood bank area)	1	Nos.	295470		295470
6.0	Ventilation Fan Sections					
	Supply of double skin construction fan sections with canopy suitable for outdoor duty. The unit shall be complete with direct driven plug fans, squirrel cage induction motor IP-55, IE-3 duty S1, vibration isolators, canvass connections, VFD starter , The item shall have pre , fine filters and HEPA as mentioned below.The motor shall be suitable for operation on 3 Phase, 415 +/- 10% V, 50 Hz AC supply.					

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	a. Casing (double skin canopy type as AHU specs)						
	b. Centrifugal type Plug fans.						
	c. Charcoal filter and Fine filters as per specifications.						
	d. Pre filters as required						
	e. Necessary foundations etc						
	f. Drive motor, drive arrangement, guard etc.						
	g. Wiring for interconnection with AHU VFD starter with 1.5 sq. mm Cu Conductor multicore armoured complete as required.						
6.1	EX-1 (For BMW) Air Quantity : 4000 CFM. (with pre, fine and HEPA, Charcoal) Static Pressure : 100 mm wg		1	Nos.	204170		204170
6.2	EX-1 (For AUTOCLAVE) Air Quantity : 3000 CFM. (with pre, fine and HEPA, Charcoal) Static Pressure : 100 mm wg		1	Nos.	181920		181920
7.0	Inline Fans/ Propeller Fans/ Ventilation fans						
7.1	Supply, installation, testing and commissioning of Inline Fans as shown in drawings and as per equipment schedule .Each fan shall be complete with centrifugal blowers, totally enclosed fan cooled motor. Fan motor shall be suitable for single phase, 220 +/- 6% V, 50 Hz AC supply. Item shall be complete with starter & cabling.						
7.1.1	Inline Fans Duty: Toilet Exhaust Air Quantity :500 CFM Static Pressure :20 mm wg		14	Nos.	13768		192752
7.1.2	Duty: Toilet Exhaust Air Quantity :600 CFM Static Pressure :20 mm wg		3	Nos.	13768		41304
7.1.3	Duty: Toilet Exhaust Air Quantity :700 CFM Static Pressure :20 mm wg		6	Nos.	24982		149892
7.1.4	Duty: Toilet Exhaust Air Quantity :800 CFM Static Pressure :20 mm wg		2	Nos.	24982		49964
7.1.5	Duty: Toilet/ Dirty corridor Exhaust Air Quantity :1000 CFM Static Pressure :20 mm wg		1	Nos.	24982		24982

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
7.2	Supplying, installing, testing and commissioning of direct driven Propeller fan for exhaust air as shown in drawings. Each fan shall be complete with permanent split capacitor or shaded pole motor, mounting plate, accessories like wire guard, bird screen and fixed louvers for weather protection as required. Fan selection arrangement and Electrical characteristics shall be as follows:						
7.2.1	300 mm dia 1380 RPM fan suitable for 220 +/- 10% volts, 50 Cycles, 1 Phase AC Supply		6	Nos.	2179		13074
7.2.2	450 mm dia 1380 RPM fan suitable for 220 +/- 10% volts, 50 Cycles, 1 Phase AC Supply		6	Nos.	3189		19134
7.3	Ventilation Fans Tube Axial Flow Fans (AMCA Certified)						
	Supply, installation, testing and commissioning of tube axial flow fans as shown in drawings, Each fan shall be direct driven. Fan motor shall be suitable for 3 Phase, 415 +/- 10% V, 50Hz AC supply with IP 55 protection, class 'F' insulation and IE-3 class. Fan shall be complete with gravity louvers, vibration isolators.						
7.3.1	Duty: Lift lobby pressurisation Air Quantity : 14500 CFM Static Pressure : 25 mm wg		1	No.	153646		153646
7.3.2	Duty: staircase pressurisation Air Quantity : 17500 CFM Static Pressure : 25 mm wg		1	No.	165145		165145
7.3.3	Duty: Lift well pressurisation Air Quantity : 10000 CFM Static Pressure : 25 mm wg		2	No.	114334		228668
	Floor / Services ventilation (Fresh Air Supply)						
7.4.1	Air Quantity : 1500 CFM, 25 mm st. pr.		1	Nos.	45132		45132
7.4.2	Air Quantity : 2000 CFM, 25 mm st. pr.		1	Nos.	46363		46363
7.4.3	Air Quantity : 2500 CFM, 25 mm st. pr.		1	Nos.	53380		53380
7.4.4	Air Quantity : 3000 CFM, 25 mm st. pr.		1	Nos.	57906		57906
7.4.5	Air Quantity : 4500 CFM, 25 mm st. pr.		4	Nos.	70322		281288
7.4.6	Air Quantity : 5000 CFM, 25 mm st. pr.		1	Nos.	70322		70322
7.4.7	Air Quantity : 5500 CFM, 25 mm st. pr.		2	Nos.	79038		158076
7.4.8	Air Quantity : 6000 CFM, 25 mm st. pr.		1	Nos.	76416		76416
7.4.9	Air Quantity : 6500 CFM, 25 mm st. pr.		1	Nos.	85893		85893
7.4.10	Air Quantity : 7500 CFM, 25 mm st. pr.		2	Nos.	85893		171786
7.4.11	Air Quantity : 8000 CFM, 25 mm st. pr.		1	Nos.	85893		85893
7.5	Tube Axial Fans (Fire rated & AMCA Certified)						

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	Supply, installation, testing and commissioning of tube axial flow fans as shown in drawings, Each fan shall be direct driven.. Fan motor shall be suitable for 3 Phase, 415+/-10% V, 50Hz AC supply with IP 55 protection, class H insulation and IE-3 class. Fan shall be complete with vibration isolators, gravity louvers. Fan shall be 250 deg C, 2hrs fire rated.						
	Smoke exhaust on floors						
7.5.1	Air Quantity : 1500 CFM, 25 mm st. pr.		1	Nos.	50795		50795
7.5.2	Air Quantity : 2000 CFM, 25 mm st. pr.		1	Nos.	53380		53380
7.5.3	Air Quantity : 2500 CFM, 25 mm st. pr.		1	Nos.	62242		62242
7.5.4	Air Quantity : 3000 CFM, 25 mm st. pr.		1	Nos.	66769		66769
7.5.5	Air Quantity : 3500 CFM, 25 mm st. pr.		1	Nos.	66769		66769
7.5.6	Air Quantity : 4500 CFM, 25 mm st. pr.		4	Nos.	81093		324372
7.5.7	Air Quantity : 5000 CFM, 25 mm st. pr.		2	Nos.	81093		162186
7.5.8	Air Quantity : 5500 CFM, 25 mm st. pr.		1	Nos.	85992		85992
7.5.9	Air Quantity : 6000 CFM, 25 mm st. pr.		2	Nos.	83371		166742
7.5.10	Air Quantity : 6500 CFM, 25 mm st. pr.		1	Nos.	94756		94756
7.5.11	Air Quantity : 7500 CFM, 25 mm st. pr.		2	Nos.	94756		189512
7.5.12	Air Quantity : 8000 CFM, 25 mm st. pr.		1	Nos.	94756		94756
8.0	Pan type Humidifier						
	Supply, installation, testing and commissioning of electric pan type humidifiers in each Air Handling Rooms to provide humidification during winter months heating operation. The humidifier shall evaporate 12 liters water per hour and complete with all required water valves incoming MCB, humidistat and, electrical & control wiring and earthing as required.						
8.1	6 KW		6	Sets	32000		192000
9.0	MONSOON REHEAT ARRANGEMENT						
	Supply, installation, testing & commissioning of monsoon reheating arrangements fixed in ducts/ plenums complete with strip heaters, fixing frame work, insulators, fire protection insulation in duct, controls such as heating thermostats, humidistats etc. The heaters banks shall be controlled by independent thermostats/ humidistats through electro magnetic type contactors and safety thermostats/ geyserstats as specified complete with wiring for interconnections with 1.5 sq.mm copper conductor multi core armoured cable. The heater capacity shall be as per schedule of equipment and specifications, drawing etc.						
9.1	3Kw(1.5 KW x 2 banks)		1	Sets	22915		22915
10.0	EXPANSION TANK						

Item No. 1	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	Supply, installation, testing and commissioning of pressurised closed type Expansion tank with air separator and dosing pumps (1w+1s) etc. The expansion tank shall be complete with all necessary valves, vent connection. Quoted price shall include of 50 mm thick 32 kg/mt cu density TF quality Expanded polystyrene insulation and cladded with 24 gauge aluminum sheet for chilled water tank and glass wool insulation as per specifications with aluminium sheet cladding for Hot water tank. Tank shall be equipped with 15 mm dia vent, 450 mm dia manhole with cover, 40 mm dia make up with overflow connection (ball valve should be provided at the make up line), 50 mm dia drain and over flow with necessary valves and 50 mm dia insulated pipe connection to nearest chilled water return line					
10.1	2000 ltrs.	1	No.	150000		150000
B)	PIPING					
11.0	INSULATED CHILLED/HOT WATER PIPING (expanded polystyrene insulation)					
11.1	Supplying, laying/ fixing, testing and commissioning of following nominal sizes of chilled water piping plumbing inside the building (with necessary clamps, vibration isolators and fittings but excluding valves, strainers, gauges etc.) duly insulated with fire retardant quality expanded polystyrene moulded pipe section of density 20 kg/cu.m after a thick coat of cold setting adhesive (CPRX compound) wrapping with 500g polythene faced hessain and finally applying 0.63 aluminium sheet cladding complete with type 3, grade 1 roofing felt strip (as per IS:1322 as amended up to date) at joints repairing of damage to building etc. as per specifications and as required complete in all respect. Note: The Pipes of sizes 150mm & below shall be M.S. 'C' class as per IS : 1239 and pipes size above 150mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 6.35mm thick M.S. Sheet for pipes upto 350 mm dia. and from minimum 7mm thick MS sheet for pipes of 400 mm dia and above.					
	Antifreezing material and resistance heating wire					
11.1.1	200 mm dia (75 mm insulation)	50	RM	5301		265050
11.1.2	150 mm dia (75 mm insulation)	80	RM	3452		276160
11.1.3	125 mm dia (50 mm insulation)	150	RM	2904		435600
11.1.4	100 mm dia (50 mm insulation)	80	RM	2514		201120
11.1.5	80 mm dia (50 mm insulation)	200	RM	2010		402000
11.1.6	65 mm dia (50 mm insulation)	250	RM	1717		429250
11.1.7	50 mm dia (50 mm insulation)	350	RM	1455		509250
11.1.8	40 mm dia (50 mm insulation)	150	RM	1273		190950

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
11.1.9	32 mm dia (50 mm insulation)		50	RM	1117		55850
11.1.10	25 mm dia (50 mm insulation)		25	RM	1022		25550
11.1.11	20 mm dia (50 mm insulation)		40	RM	850		34000
12.0	INSULATED VALVES & STRAINERS						
	Supplying, fixing, testing and commissioning of following valves, strainers, gauges in the chilled water plumbing duly insulated to the same specifications as the connected piping and adequately supported as per specifications.						
12.1	Butterfly valves (Manual) : with C I body SS Disc, Nitrile Rubber Seal & O- Ring PN 16 pressure rating for chilled water/ hot water circulation as specified						
12.1.1	200 mm dia.		2	Nos	12838		25676
12.1.2	150 mm dia.		2	Nos	6556		13112
12.1.3	125 mm dia.		18	Nos	5861		105498
12.1.4	100 mm dia.		1	Nos	5169		5169
12.1.5	80 mm dia.		6	Nos	3691		22146
12.1.6	65 mm dia.		8	Nos	3436		27488
12.1.7	50 mm dia.		18	Nos	3167		57006
12.1.8	40 mm dia.		4	Nos	2925		11700
12.1.9	32 mm dia.		6	Nos	2550		15300
12.1.10	25 mm dia.		5	Nos	2050		10250
12.1.11	20 mm dia.		5	Nos	1575		7875
12.2	Balancing valves with built in measuring facility with C I body flanged construction with EPDM coated disc with long pitch with protected out pipe insulation & PN 16 pressure rating for chilled / hot water circulation as specified						
12.2.1	200 mm dia.		1	Nos	26600		26600
12.2.2	150 mm dia.		1	Nos	26600		26600
12.2.3	125 mm dia.		3	Nos	19996		59988
12.2.4	100 mm dia.		1	Nos	15223		15223
12.2.5	80 mm dia.		3	Nos	10360		31080
12.2.6	65 mm dia.		4	Nos	9058		36232
12.2.7	50 mm dia.		9	Nos	7379		66411
12.2.8	40 mm dia.		2	Nos	4522		9044
12.2.9	32 mm dia.		3	Nos	2900		8700
12.3	Non return/Check valves : with dual plate of C I body SS plates vulcanized NBR seal flanged end & PN 16 pressure rating for chilled / hot water circulation including insulation as specified.						

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
12.3.1	125 mm dia.		3	Nos	5163		15489
12.4	Suction Guide : with duel plate of C I body SS plates vulcanized NBR seal flanged end & PN 16 pressure rating for chilled / hot water circulation including insulation as specified.						
12.4.1	125 mm dia.		3	Nos	5163		15489
12.5	Y- strainers of Ductile CI Body flanged ends with stainless steel strainer for chilled / hot water circulation including insulation as specified.						
12.5.1	150 mm dia.		1	Nos	9880		9880
12.5.2	125 mm dia.		6	Nos	9880		59280
12.5.3	100 mm dia.		1	Nos	6918		6918
12.5.4	80 mm dia.		3	Nos	5026		15078
12.5.5	65 mm dia		4	Nos	4434		17736
12.5.6	50 mm dia		9	Nos	3516		31644
12.5.7	40 mm dia		2	Nos	2478		4956
12.5.8	32 mm dia		3	Nos	2300		6900
12.6	Providing and fixing in position the following Gate Valves duly insulated as per specifications:						
12.6.1	50 mm dia Valves		2	Nos.	2500		5000
12.6.2	40 mm dia Valves		2	Nos.	2000		4000
12.6.3	32 mm dia Valves		2	Nos.	1800		3600
12.7	Auto Air Vent Valves						
12.7.1	15 mm dia		12	Nos.	850		10200
12.7.2	20 mm dia		10	Nos.	1000		10000
12.7.3	25 mm dia		10	Nos.	1200		12000
12.8	Ball Valve with strainer						
12.8.1	25 mm		4	Nos.	2100		8400
12.8.2	20 mm		4	Nos.	2000		8000
12.9	Ball valve without strainer						
12.9.1	32 mm		4	Nos.	1200		4800
12.9.2	20 mm		4	Nos.	1000		4000
12.10	Supply, installation, testing and commissioning cooling-heating thermostats :-						
12.10.1	For AHUs		10	Nos.	4238		42380
13.00	DRAIN PIPING						

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	Supply, laying/fixing, testing and commissioning of G.I. medium class ERW piping confirming to IS:1239 with necessary clamps, supports, anti vibration mountings, hangers and fittings such as bends, tees, reducers etc. duly insulated with nitrile rubber insulation and finally applying 0.63 mm aluminium cladding as per specifications for condensate drain from air handling units and chillers etc.						
13.1.1	50 mm dia		20	RM	674		13480
13.1.2	40 mm dia		40	RM	524		20960
13.1.3	32 mm dia		50	RM	460		23000
13.1.4	25 mm dia		30	RM	375		11250
C)	AIR DISTRIBUTION						
14.0	GSS DUCTING						
14.1	Supply, installation, balancing and commissioning of factory fabricated GSS sheet metal rectangular/round ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes, hangers, supports etc. as per approved drawings and specifications of following sheet thickness complete as required.						
14.1.1	Thickness 0.63 mm sheet		2500	Sqm.	983		2457500
14.1.2	Thickness 0.80 mm sheet		1500	Sqm.	1154		1731000
14.1.3	Thickness 1.00 mm sheet		700	Sqm.	1274		891800
14.1.4	Thickness 1.25 mm sheet		300	Sqm.	1677		503100
15.0	FIRE DAMPERS						
	Supplying, Fixing,testing and commissioning of fire dampers in supply air duct/main branch and return air path as and where required of required sizes i/c control wiring,the damper shall be motorized and spring return so as to close the damper in the event of power failure automatically and open the same in case of power being restored. The spring return action shall be inbuilt mechanism and not externally mounted. The damper shall also be closed in the event of fire signal complete as required and as per specifications.						
15.1	Fire/smoke Damper		30	Sqm	9883		296490
15.1	Actuator		42	sets	9212		386904
16.0	VOLUME CONTROL DAMPERS						
16.1	Supply, installation, testing and commissioning of GI volume control duct damper complete with neoprene rubber gaskets, nuts, bolts, screws linkages, flanges etc, as per specifications.		40	Sqm.	6500		260000
17.0	CEILING DIFFUSERS						

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
17.1	Supplying, fixing testing commissioning of supply air diffusers of powder coated aluminium with aluminium volume control dampers with anti smudge ring & removable core.		80	Sqm.	11363		909040
17.2.	Supplying, fixing testing commissioning of Return air diffusers of powder coated aluminium without volume control dampers with anti smudge ring & removable core.		80	Sqm.	7559		604720
18.0	GRILLES						
	Supply, installation, testing and balancing of supply/return air grilles with/without volume control dampers of powder coated aluminium construction suitable for installation in walls, false ceiling boxing etc as per specifications and drawings.						
18.1	Supplying & fixing of powder coated extruded aluminium Supply Air Grills in adjustable double louvered with aluminium volume control dampers as per specifications.		35	Sqm.	8480		296800
18.2	Supplying & fixing of powder coated extruded aluminium Return Air Grills in adjustable double louvered but without volume control dampers complete as required.		35	Sqm.	5507		192745
19.0	LINEAR GRILLES						
	Supply, installation, testing and balancing of air linear grilles of powder coated aluminium construction suitable for installation in walls/false ceiling, boxing etc as per specifications and drawings.		40	Sqm.	4706		188240
20.0	GRILLE DAMPERS						
	Supply, installation and balancing of aluminium construction volume control dampers for linear grills.		20	Sqm.	3797		75940
21.0	LAMINAR FLOW DIFFUSERS						
	Providing & fixing of 18swg aluminium powder coated non-respiratory 100% air tight laminar flow diffusers. LFDs shall have 50% perforation. The perforated front face is operable hinge type complete with key operated opposed blade dampers from front.						
21.1	Size: 1200 x 600		2	Nos.	11913		23827
22.0	FRESH AIR GRILLES with bird screen						
	Supply, installation, testing, commissioning and balancing of fresh air opening comprising of powder coated extruded aluminium louvers with bird screen, projection with frame and volume control damper with lever mounting arrangement etc. as per specifications and drawings.		25	Sqm.	8300		207500

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
23.0	DUCT INSULATION						
23.1	Supplying and fixing of following thickness duly laminated aluminum foil of mat finish closed cell Nitrile rubber (class "O") insulation on existing duct after applying suitable adhesive for Nitrile rubber. The joints shall sealed with 50 mm wide and 3 mm thick self adhesive nitrile rubber tape insulation complete as per specifications and as required.						
23.1.1	19 mm		6300	Sqm.	821		5172300
23.1.2	25 mm		200	Sqm.	1034		206800
24.0	ACOUSTIC						
24.1	DUCT ACOUSTIC LINING						
	Supply and fixing of acoustic lining of supply air duct and plenum with 25 mm thick resin bonded glass wool having density of 32 kg/m ³ , with 25 mm X 25 mm GI section of 1.25 mm thick, at 600 mm centre to centre covered with Reinforced Plastic tissue paper and 0.5 mm thick perforated aluminum sheet fixed to inside surface of ducts with cadmium plated nuts, bolts, stick pins, CPRX compound etc. complete as required and as per specifications.		100	Sqm.	551		55100
	Note:- No lining inside supply / return duct or plenum shall be done if the airside system is equipped with fine, hepa filters.						
D)	ELECTRICAL						
25.0	AIR- CONDITIONING PANELS						
	Supply, installation, testing and commissioning of A/C Panel, Type Tested Assembly (TTA), as per IEC 61439-1&2 cubicle type, totally enclosed, free standing type, dust, damp and vermin proof panel, powder coated, made up of CRCA sheet, complete with aluminum busbars, danger notice plate, interconnections with suitable capacity aluminum leads/solid aluminum strips/rods, necessary interlocking, and having incoming and outgoing switchgears as mentioned below. Complete as per technical specifications and as required.						
	Note :						
	i.All ACBs shall have spare contacts						
	ii.All ACBs should have Icw =Ics=Icu=50 KA for 1 sec						
	iii.All MCCBs shall have Ics=Icu=100%						
	iv.Separate fault indication for O/L, S/C, & E/F to be provided on Panel Door for all outgoing having microprocessor based MCCB						
	v.All indication Lamps will be LED Type .						

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	vi.All starters shall be provided with digital ampere meter with suitable CTs, thermal overload relay, inbuilt/separate single phase preventer, contactors, timers, spare NO-NC contacts, push buttons, ON, OFF, TRIP indication (LED Type) and potential free contacts and relay for interlocking to FDA etc. complete as required.						
	vii.100 VA transformer 220v/24v AC for control wiring with 10 no.s 6A SP MCB 10 KA in all AHU panel is also in the scope of supply						
	viii.ACBS shall be BMS compatible with BACnet/ Modbus protocol						
	ix.All outgoing shall be provided with Stop / Manual /Auto selector switch to facilitate operation through BAS with RS 485 communication ports.						
	x.All out going shall be with extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers. Indicating lamps(LED) with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for MCCB.						
	xi) Time delay relay for automatic restart of AHU motor.						
	xii) 24 volts wiring to the 2/3 way valve and thermostats.						
	xiii) wiring for micro switch smoke sensor and solenoid valve, and for stopping the fan when smoke / fire occurred through smoke sensor.						
	xiv) Control wiring with VFD. And in built fans for panel cooling.						
25.1	Main/ Emergency Air-conditioning MCC in plant room						
	INCOMER						
	2 No. ACB Panels each having following:						
	800A , 415 V, Motorised, Fully Drawout type (EDO), 50 KA (Ics=Icu), Four Pole, Air Circuit Breaker with microprocessor based overload, short circuit, Instantaneous & Earth Fault trip and lockable trip push button.						
	R, Y & B Phase indicating lamps (LED type) with 6A control SP MCBs.						
	Indicating lamps (LED Type) with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB.						
	Push button to Close the ACB.						
	1 Digital multifunction meter with suitable CTs.						
	All ACBs should be computer compatible.						
	BUSBARS						
	800 Amps TPN busbars of aluminium with temperture rise of 40 degree celsius over and above ambient temperture of 45 degree celsius.						
	Bus Coupler						

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	1 No. ACB Panels each having following: 1000A, 415 V, Motorised, Fully Drawout type (EDO), 50 KA (Ics=Icu), Four Pole, Air Circuit Breaker with microprocessor based overload, short circuit, Instantaneous & Earth Fault trip and lockable trip push button.						
	Indicating lamps (LED Type) with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB.						
	Push button to CLOSE the ACB.						
	1 Set of Digital Ammeter with ASS and CTs.						
	OUTGOING						
	3 Nos. MCCB feeder as per following details/ specifications: For Heat Pumps						
	500 Amp 415 volts, 50 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection.						
	R, Y & B Phase indicating lamps (LED type) with 6A control SP MCBs.						
	Indicating lamps (LED Type) with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB.						
	Push button to Close the ACB.						
	1 Digital multifunction meter with suitable CTs.						
	3 Nos. MCCB feeder as per following details/ specifications: For PHWP						
	63 Amp 415 volts, 50 KA (Ics=Icu), TPN MCCB thermal magnetic release having variable current setting, with O/L, S/C & E/F protection.						
	3 Phase, fully automatic Star Delta starter for 20 hp primary chilled/Hot water pumps.						
	1 Digital multifunction meter with suitable CTs.						
	3 Nos. MCCB feeder as per following details/ specifications:						
	63 Amp 415 volts, 50 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection.						
	3 Phase, fully automatic Star Delta starter						
	1 Digital multifunction meter with suitable CTs.						
	3 Nos. MCCB feeder as per following details/ specifications:						
	100 Amp 415 volts, 50 KA (Ics=Icu), TPN MCCB microprocessor based, with O/L, S/C & E/F protection.						
	1 Digital multifunction meter with suitable CTs.						
	Complete panel as above		1	Panel	20,00,000		2000000
26.0	Distribution Panels						

Item No. 1	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	Supply, installation, testing and commissioning of following M.V. cubicle type totally enclosed, wall mounted/Free standing type, powder coated, dust, damp and vermin proof, indoor type Distribution Board/Panel complete with busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads/solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, and having following incoming and outgoing switchgears complete as per technical specification and as required.					
	NOTE					
	i. All MCCBs shall have Ics=Icu=100%					
	ii. 100 VA transformer 220v/24v AC for control wiring with 10 no.s 6A SP MCB 10 KA in all AHU panel is also in the scope of supply					
	iii. All starters shall be provided with digital ampere meter with suitable CTs, thermal overload relay, inbuilt/separate single phase preventer, contactors, Timers, spare NO-NC contacts, Push Buttons ON, OFF, TRIP indication (LED Type) and potential free Contact & relays for interlocking to FDA etc. complete as required.					
	iv. All indication Lamps will be LED Type.					
	v. All incomer and outgoing shall have extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.					
26.1	AHP-1&3					
	INCOMER :					
	1 nos. 125 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C,E/F protection.					
	R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication.					
	1 No. 0 to 500 V Digital voltmeter with selector switch.					
	Digital ammeter with selector switch with one set Suitable C.Ts.					
	Bus Bar					
	300 A TPN Aluminium bus bar 415V , 50 Hz.					
	OUTGOINGS :					
	2 Set- 63 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection.					
	6set - 32 A, 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection.					
	13 set - 16 A, 415 volts, 35 KA C- Curve, Four Pole, Miniature Circuit Breaker.					

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	Complete panel as above		2	Panel	112280		224560
26.2	AHP-2F, B1, B2 & G						
	INCOMER : 1 nos. 100 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C,E/F protection.						
	R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication. 1 No. 0 to 500 V Digital voltmeter with selector switch. Digital ammeter with selector switch with one set Suitable C.Ts.						
	Bus Bar 300 A TPN Aluminium bus bar 415V , 50 Hz.						
	OUTGOINGS :						
	7 set - 32 A, 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection. 8 set - 16 A, 415 volts, 35 KA C- Curve, Four Pole, Miniature Circuit Breaker.						
	Complete panel as above		4	Panel	79567		318268
27	FAN STARTER PANEL - DOL / STAR DELTA STARTER Supply, installation, testing & commissioning of Fan Starter Panel with following details :						
	Each Fan Starter Panel shall have :						
	14G CRCA Powder Coated panel enclosure with earthing studs & hinged locable doors, suitable for 415V, 3 Phase, 4 wire, 50Hz system.						
	Type-II co-ordination switchgear. Incomer switch shall be TP MPCB of required rating & fault withstand capacity. MPCB shall be with overload & short circuit protection.						
	R,Y,B LED Type Phase indication lamps with control MCB's. Auto / Manual Selector switch & ON & OFF Push buttons for manual operation & terminals for BMS wiring. ON' Indication LED Type lamp with control MCB. DOL Starter / Contactor for motors upto 7.5HP, with 2 NO + 2 NC Auxiliary contacts.						
	Star-Delta starter / contactors / timers for motors beyond 7.5HP, with 2 NO + 2 NC Auxiliary contacts. All internal control & power wiring.						

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	Voltage operated 'SPP' (Single Phasing Preventor) for 10HP & above rating motors.						
	CT's (3 Nos. for more than 5HP motors) & single CT for motors upto 5HP for metering purposes. CT's shall be of required class & burden.						
	Digital VA Meter.						
	Control terminals / linkage / interlocking with fire detection system & fire dampers, so that Fresh air Fan motor trips on receiving a fire signal & normal & smoke exhaust fans start on receiving a fire signal. Manual control shall also be possible through an override.						
27.1	Fan Starter Panel for up to 3 HP Motor		8	Nos.	9000		72000
27.2	Fan Starter Panel for 5 HP Motor		15	Nos.	11000		165000
27.3	Fan Starter Panel for 7.5 HP Motor		10	Nos.	12000		120000
28.0	CABLING						
28.1	LT CABLES						
	Supply of following sizes of 1.1 kV grade multicore aluminium conductor PVC sheathed armoured XLPE cable as per IS 7098.						
28.1.1	3.5 Core 25 Sqmm.		350	Metre	232		81200
28.1.2	3.5 Core 35 Sqmm.		50	Metre	287		14350
28.1.3	3.5 Core 50 Sqmm.		200	Metre	369		73800
28.1.4	3.5 Core 95 Sqmm.		200	Metre	622		124400
28.1.5	3.5 Core 185 Sqmm.		125	Metre	1146		143250
28.1.6	3.5 Core 240 Sqmm.		100	Metre	1445		144500
28.1.7	3.5 Core 300 Sqmm.		100	Metre	1771		177100
28.1.8	4 Core 16 Sq mm		150	Metre	189		28350
28.1.9	4 Core 10 Sq mm		100	Metre	166		16600
28.1.10	4 Core 6 Sq mm		200	Metre	132		26400
28.1.11	4 Core 4 Sqmm.		500	Metre	114		57000
28.1.12	3 Core 4 Sqmm.		750	Metre	100		75000
28.2	Laying and fixing of PVC insulated and PVC sheathed/ XLPE powe cable of 1.1 KV grade of following size on cable tray as required.						
28.2.1	Up to 35 sq.mm (clamped with 1mm thick saddle)		500	Metre	20		10000
28.2.2	Above 35 Sq mm and upto 95 Sq mm (clamped with 25 X 3mm MS flat clamp).		200	Metre	48		9600
28.2.3	Above 95 Sq mm and up to 185 Sq mm (clamped with 25/40x3mm MS flat clamp).		150	Metre	59		8850
28.2.4	Above 185 Sq mm and up to 400 Sq mm (clamped with 40x3mm MS flat clamp).		300	Metre	91		27300

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
28.3	Supplying and making end termination with brass compression gland and Aluminium lugs for following sizes of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.						
28.3.1	3.5 Core 25 Sqmm.		25	Each	247		6175
28.3.2	3.5 Core 35 Sqmm.		50	Each	270		13500
28.3.3	3.5 Core 50 Sqmm.		50	Each	342		17100
28.3.4	3.5 Core 95 Sqmm.		25	Each	466		11650
28.3.5	3.5 Core 185 Sqmm.		15	Each	784		11760
28.3.6	3.5 Core 240 Sqmm.		10	Each	969		9690
28.3.7	3.5 Core 300 Sqmm.		16	Each	1086		17376
28.3.8	4 Core 16 Sq mm		10	Each	245		2450
28.3.9	4 Core 10Sq mm		20	Each	193		3860
28.3.10	4 Core 6 Sq mm		20	Each	170		3400
28.3.11	4 Core 4 Sqmm.		20	Each	165		3300
28.3.12	3 Core 4 Sqmm.		30	Each	145		4350
29.0	CABLE TRAYS						
29.1	Supply & installation of following sizes of perforated MS cable trays including horizontal & vertical bends, reducers, tees, cross members and other accessories as required and duly supported from the ceiling/wall/floor with MS suspenders/supports and including painting etc. as required						
29.1.1	300 mm widthx50 mm deep x1.6 mmthickness		150	Mtr	1329		199350
29.1.2	200 mm widthx50 mm deep x1.6 mmthickness		200	Mtr	1101		220200
29.1.3	150 mm widthx50 mm deep x1.6 mmthickness		300	Mtr	880		264000
29.1.4	100 mm widthx50 mm deep x1.6 mmthickness		250	Mtr	760		190000
29.2	Fabrication and Installing following size of Ladder type M.S Cable tray including Horizontal and vertical bends, reducers, tee, crossmember and other accessories as required and duly Suspended from the ceiling with M.S 12 mm rod suspenders and including painting etc. as required.						
29.2.1	450 mm width x 62.5 mm depth x 2.0 mm thickness		100	Mtr	2042		204200
30.0	EARTHING						
30.1	Earthing with GI plate 600mmX600mmX6mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/coke and salt as required.		4	Set	4490		17960
30.2	Providing and fixing 25mmX5mm GI strip on surface or in recess for connections etc. as required.		300	Mtr	142		42600

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
30.3	Providing and fixing GI earth strip on walls/ trenches complete as per specifications and as required.						
30.3.1	50mmx 5mm		100	Mtr	140		14000
30.3.2	25mm x 3mm		120	Mtr	125		15000
30.4	Providing and fixing earth wire of complete as per specifications as required.						
30.4.1	6 SWG wire		100	Mtr	23		2300
30.4.2	8 SWG wire		300	Mtr	60		18000
31.0	CONTROL CABLING						
	Supply, laying, effecting proper connections, testing & commissioning of 1.5 sq.mm. PVC insulated copper multicore cables from AHU's and AC equipments to central control console						
31.1	8 core cable		250	Mtr	336		83936
31.2	6 core cable		500	Mtr	282		140758
31.3	3 core cable		1200	Mtr	255		306000
31.4	2 core cable		600	Mtr	255		153000
32.0	CONTROL CONSOLE /DESK						
	Supplying, installation, testing & commissioning of floor mounted desk type control console cum indicating panel in the A.C. plant room containing various indications and controls for the complete air-conditioning system comprising chilling units, chilled/ Hot/ condenser fana, Ex. blower, Fans etc , Hot water generator with test push button facility. The panel shall be fabricated from minimum 1.6mm thick M.S. powder coated sheet of approved design. The air-conditioning module of the central control cum indicating panel shall contain the following accessories.						
	Status indication (ON, OFF & fault) of each compressor for each chilling machine, hot water boiler etc.						
	Push buttons and indicating lamps for remote start & stop and status indication for every nos of the water circulating pumps, Ex blower, Fans etc.						
	Hooter and flashing lamp to indicate operation of any safety/ shut down with necessary contactors, accept, reset and test push buttons.						
	Complete wiring with copper conductor PVC insulated multicore 2.5 sq.mm stranded cable (excluding supply of cable, tray, clamps etc) from various equipments in the A.C. plant room, AHU's and terrace equipments etc to the control console panel as required.						

Item No. 1	Description	3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Rate in Rs. (in words) 7	Amount (Rs.) 8
	Complete Panel As above for Following blocks						
	For Plant room		1	Panel	250000		250000
	TOTAL FOR HVAC WORKS						50518046

Special Services				
Additional Works for AIMSS-Shimla				
Sr. No.	Description	Quantity	Rate in Rs.	Amount in Rs.
1.0	Mortuary	2	15,72,500.00	31,45,000.00
2.0	BMWMS	1	1,18,93,720.00	1,18,93,720.00
	Total			1,50,38,720.00

BOQ -Mortuary					
Package - Supply, Installation, Testing & Commissioning of MORTUARY on Turnkey basis and 5 years warranty					
Item No.	Description	Unit	Qty	Rate In Rs	Amount in Rs.
1.0	Mortuary (6-Body) including UPS Complete with all accessories as per technical specification	Nos	2	12,50,000.00	25,00,000.00
2.0	Loading Trolley Complete with all accessories as per technical specification	Nos	1	2,95,000.00	2,95,000.00
3.0	TURNKEY WORKS	Lot	1	3,50,000.00	3,50,000.00
	Total of Part-I				31,45,000.00

BOQ - BMWMS

**Supply, installation & commissioning of Equipments of BIO-MEDICAL WASTE MANAGEMENT SYSTEM on turnkey basis with Defect Liability
Period of 5 years**

Item No.	Description	Unit	Qty	Rate in Rs.	Amount in Rs.
1.0	Bio-medical Waste Autoclave of capacity 600 Ltrs including in-built Steam Generator.complete as required with all accessories as per specification	Nos	2	24,50,000.00	49,00,000.00
2.0	Medical Waste Shredder (Low speed) of capacity 50 Kg/hr complete as required with all accessories as per specification	Nos	2	12,80,000.00	25,60,000.00
3.0	Needle Destroyer complete as required with all accessories as per specification	Nos	100	6,500.00	6,50,000.00
4.0	Waste Collection Containers of metal construction with synthetic enamel painting as per specifications.				
	App.Size- 8"x10"x21";	Nos	100	2,572.00	2,57,200.00
	App.Size- 12"x14"x33";	Nos	100	2,891.00	2,89,100.00
	App.Size-17"x14"x33"	Nos	20	3,422.00	68,440.00
5.0	Waste Collection bags as per specification				
	App. Size 17"x25"	Nos	10000	21.00	2,10,000.00
	App. Size 25"x37"	Nos	10000	26.00	2,60,000.00
	App.Size 36"x40"	Nos	1500	32.00	48,000.00
6.0	Transportation Trolley 100 Ltrs. Capacity complete as required with all accessories as per specification	Nos	20	35,714.00	7,14,280.00
7.0	INDUSTRIAL WEIGHING MACHINE-Capacity 300 Kg Electronic machine with Digital display. Details of technical data are as per technical specification.	Nos	1	76,700.00	76,700.00
8.0	Turnkey Works complete as required with all accessories as per specification	lot	1	18,60,000.00	18,60,000.00
	Sub Total of Part-I				1,18,93,720.00

**IT Network Infrastructure for Additional Blocks at Atal Institute
of Medical Super Specialties, Chamyana, Shimla, Himachal
Pradesh**

S. no.	Description	Amount
1	Network Infrastructure (LAN & Wi-Fi)	60,69,971.24
2	Computer Hardwrae	14,09,261.55
	Grand Total	74,79,232.79

BOQ for IT Network Infrastructure for Additional Blocks at Atal Institute of Medical Super Specialties, Chamyana, Shimla, Himachal Pradesh					
S.No.	ITEM DESCRIPTION(Supply, Installation, Configuration, Testing, Commissioning With 3 years OEM warranty & maintenance support for all components)	Total Quantity	Unit	Rate(INR)	Total Amount(INR)
Active Components					
1	Supply, installation, testing and commissioning of Layer 3 Distribution Switch as per the technical specification mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	1	Nos.	850000	850000
2	Supply, installation, testing and commissioning of 1000 BASE-TX SFP Copper, RJ-45 Connector as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	1	Nos.	6620	6620
3	Supply, installation, testing and commissioning of 24-port POE+ switch as per the technical specification mentioned as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	14	Nos.	125000	1750000
4	Supply, installation, testing and commissioning of stacking cable as per the technical specification mentioned as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	6	Nos.	9098	54588
5	Supply, installation, testing and commissioning of 10G BASE-SR, SFP+ optic, LC Connector optical monitoring capable for core switch as per the requirement & complete in all respect and as directed to the satisfaction of engineer	12	Nos.	18232	218784
6	Supply, installation, testing and commissioning of 10G BASE-LR, SFP+ optic, LC Connector optical monitoring capable for core switch as per the requirement & complete in all respect and as directed to the satisfaction of engineer	6	Nos.	25842	155052
7	Supply, installation, testing and commissioning of Wireless Access Point (Indoor) with Power over Ethernet Adapter (100/1000 Mbps), Wall mounting device, Universal horizontal ceiling etc. as per the technical specification and as per requirement & complete in all respect and as directed to the satisfaction of engineer	35	Nos.	30960	1083600
Passive Components					
14	Supply, installation, testing and commissioning of Cat 6A, U/FTP Cable as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer	14000	Mtrs.	45	630000
15	Supply, installation, testing and commissioning of Face Plate 1 Port/2 Port - White as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer	200	Nos.	77	15400
16	Supply, installation, testing and commissioning of Cat6A RJ45 Sheilded Jack as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer	165	Nos.	361	59565
17	Supply, installation, testing and commissioning of Cat 6A Patch/Mounting Cord 1 mtrs as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer	200	Nos.	278	55600
18	Supply, installation, testing and commissioning of Cat 6A Patch/Mounting Cord 2 mtrs as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer	200	Nos.	297	59400
19	Supply, installation, testing and commissioning of Cat6A Sheilded RJ45 connectors as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer	35	Nos.	617	21595
20	Supply, installation, testing and commissioning of 24 Port loaded Patch Panel including adapters etc. as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	14	Nos.	14048	196672

21	Supply, installation, testing and commissioning of 24 port SM LC LIU Fibre Panel- Unloaded as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	1	Nos.	10965	10965
22	Supply, installation, testing and commissioning of 12 port SM LC LIU Fibre Panel- Unloaded as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	4	Nos.	7998	31992
23	Supply of LC Pigtail, SM, 50/125, 900 micron as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	36	Nos.	323	11628
24	Supply, installation, testing and commissioning of LC-LC, 50/125, OS2/OS1 Singlemode, 3 Mtrs Patchcord as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	6	Nos.	1548	9288
25	Supply, Laying, testing and commissioningof 6 Core OS2/OS1 FOC cable as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	600	Mtrs.	84	50400
26	Supply, installation, testing and commissioning of 24 port MM LC LIU Fibre Panel- Unloaded as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	1	Nos.	7829	7829
27	Supply, installation, testing and commissioning of 12 port MM LC LIU Fibre Panel- Unloaded as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	7	Nos.	5934	41538
28	Supply of LC Pigtail, MM, 50/125, 900 micron as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	72	Nos.	300	21600
29	Supply, installation, testing and commissioning of LC-LC, 50/125, OM3/OM4 Multimode, 3 Mtrs Patchcord as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	12	Nos.	1200	14400
30	Supply, laying, testing and commissioning of 6 Core OM3/OM4 FOC cable as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	700	Mtrs.	113	79100
31	Testing and commissioning of Pentascanning test for CAT 6A cable as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	200	Nos.	95	19000
32	Testing and commissioning of OLTS (Optical loss test through OTDR) test for OFC as per the technical specificaton mentioned and as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	108	Nos.	129	13932
33	Supply, installation, testing and Commissioning of 19" Rack 15U Wall Mount Rack with all standard accessories that include Cable Manager, Power Bar with sockets etc. as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	6	Nos.	10034	60204
34	Supply, installation, testing and Commissioning of 19" Rack 42U Wall Mount Rack with all standard accessories that include Cable Manager, Power Bar with sockets etc. as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	1	Nos.	33668	33668
35	Supply, installation, testing and Commissioning of 19" Rack 9U Wall Mount Rack with all standard accessories that include Cable Manager, Power Bar with sockets etc. as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	1	Nos.	7359	7359

36	Supply, installation, testing and Commissioning of PVC Batten/Pipes as per actual 1" as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	6000	Mtrs.	22	132000
37	Supply, installation, testing and Commissioning of 40mm HDPE Pipe (Standard ISI mark) as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	700	Meter	86	60200
38	Supply, installation, testing and Commissioning of 1 KVA online UPS that include Cable Manager, Power Bar with sockets etc.and 2 years of battery warranty as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	10	Nos.	21730	217300
39	Supply, installation, testing and Commissioning of 2 KVA online UPS that include Cable Manager, Power Bar with sockets etc.and 2 years of battery warranty as per the requirement & complete in all respect and as directed to the satisfaction of engineer.	2	Nos.	45346	90692
Total (LAN & Wi-Fi)					6069971
Computer Hardware					
S.No.	ITEM DESCRIPTION(Supply, Installation, Configuration, Testing, Commissioning With 3 years OEM warranty & maintenance support for all components)	Total Quantity	Unit	Rate(INR)	Total Amount(INR)
39.00	Supply, Installation, Testing, Commissioning of latest Computer (i7 Based) all-in-one with all the accessories including antivirus and as per technical specifications and as per the requirement & complete in all respect and satisfaction of the engineer (Make - As per approved make)	15	Nos.	68800	1032000
41.00	Supply, Installation, Testing, Commissioning of latest LaserJet Multifunction (Print, Scan, Copy, Wireless) Printer with all the accessories etc. and as per technical specifications and as per the requirement & complete in all respect and satisfaction of the engineer (Make - As per approved make)	10	Nos.	21500	215000
42.00	Supply, installation , testing and commissioning of 10 KVA online UPS with 90 minutes back up as mentioned above with all the accessories etc. with 2 years of battery warranty and as per technical specifications and as per the requirement & complete in all respect and satisfaction of the engineer. (Make -	1	Nos.	162262	162262
Total (Computer Hardware)					1409262
Grand Total					7479233