

Running Contract Details	
Equipment Name	SPECT CT SCANNER
Running Contract Valid Till	27-06-2023
Tender Ref No	KMSCL/EP/T402/1575/2021
Tendered Quantity	6
Supplier Name	M/s Wipro GE Healthcare Pvt Ltd
GST No	29AAACW1685J1ZW
Installation & Delivery Period	
Up-time / PM vist	95% & 4 Visits per year
Warranty period	3 Years

Supplier`s Details		
Address	Contact Details	
No. 4 - Kadugodi Industrial Area Whitefield Bangalore - 560 067	Contact Person	Mr. John Tenny
	Phone	080-28452923
	Mobile No	9895895006
	Email	tenny.john@ge.com

Item-wise Price Details				
#	Item Details	Unit Rate (Incl.all taxes & charges)	Service Charges (Through KMSCL)	Grand Total
1	SPECT CT SCANNER <i>Model & Make : GE NM/CT 860 SPECT CT SCANER/Wipro GE Healthcare</i>	46100000 Incl.GST :12%	3399875	49499875
2	Additional work station	3726000 Incl.GST :12%	274792.5	4000792.5
3	UPS	1151680 Incl.GST :18%	80617.6	1232297.6
4	Desktop PC	80240 Incl.GST :18%	5616.8	85856.8
5	Public Address System	45000 Incl.GST :18%	3150	48150
6	CCTV Cameras	79500 Incl.GST :18%	5565	85065
7	Safety and warning gadgets	472 Incl.GST :18%	33.04	505.04

Item-wise Price Details				
8	Office PC with laser printer scanner copier	137614 Incl.GST :18%	9632.98	147246.98
9	Fume Hood 1500x900x1900mm	236000 Incl.GST :18%	16520	252520
10	Radiation Fume hood 4x4x3 feet	236000 Incl.GST :18%	16520	252520
11	Isotope Calibrator	640920 Incl.GST :12%	47267.85	688187.85
12	L bench	50149.96 Incl.GST :12%	3698.56	53848.52
13	Ventillation Perfusion Stand (Aerosol generator)	1475000 Incl.GST :18%	103250	1578250
14	Flood Phantom	105280 Incl.GST :12%	7764.4	113044.4
15	Survey Meters	99037 Incl.GST :18%	6932.59	105969.59
16	Contamination monitor	119437 Incl.GST :18%	8360.59	127797.59
17	Gun Monitor	204161 Incl.GST :18%	14291.27	218452.27
18	Area Monitor	248231 Incl.GST :18%	17376.17	265607.17
19	Pocket Dosimeter	24780 Incl.GST :18%	1734.6	26514.6
20	Iodine uptake probe	2360000 Incl.GST :18%	165200	2525200
21	TMT	1740000 Incl.GST :12%	128325	1868325
22	Lead bricks	1853 Incl.GST :18%	129.71	1982.71
23	QC Generator	83326 Incl.GST :18%	5832.82	89158.82
24	Syringe Holder	20650 Incl.GST :18%	1445.5	22095.5
25	Syringe Dose carrier	12320 Incl.GST :12%	908.6	13228.6
26	Lead Bin Foot operated	29500 Incl.GST :18%	2065	31565
27	Decay Drums	60180 Incl.GST :18%	4212.6	64392.6
28	Forceps	1120 Incl.GST :12%	82.6	1202.6

Item-wise Price Details				
29	Laptop	100000 Incl.GST :12%	7375	107375
30	Lead Apron	1180 Incl.GST :18%	82.6	1262.6
31	Laser Printer	53100 Incl.GST :18%	3717	56817
32	Dry Film printer	200000.01 Incl.GST :18%	14000	214000.01
33	Television 21"	25000 Incl.GST :18%	1750	26750
34	Television 52"	86499.99 Incl.GST :18%	6055	92554.99
35	Water Purifier with hot water facility	45500 Incl.GST :18%	3185	48685
36	Medical grade glass door refrigerator with external temperature controls 300 litre	1020846 Incl.GST :18%	71459.22	1092305.22
37	Refrigerator 165 Litres	18500 Incl.GST :18%	1295	19795
38	Patient examination couch	11200 Incl.GST :12%	826	12026
39	Foot steps	2360 Incl.GST :18%	165.2	2525.2
40	Washing machine 8 Litres	45000 Incl.GST :18%	3150	48150
41	Iron box	1100 Incl.GST :18%	77	1177
42	Ironing board	4499.76 Incl.GST :18%	314.98	4814.74
43	Source for calibration	391760 Incl.GST :18%	27423.2	419183.2
44	Projector with screen	29500 Incl.GST :18%	2065	31565
45	Collapsible wheel chair	35400 Incl.GST :18%	2478	37878
46	Vial Decapper	5479.92 Incl.GST :18%	383.59	5863.51
47	Kidney tray	2313 Incl.GST :18%	161.91	2474.91
48	Tray rectangular with lid	4673 Incl.GST :18%	327.11	5000.11

Item-wise Price Details				
49	Lead Goggles	12208 Incl.GST :18%	854.56	13062.56
50	Steel tray with cover small	2266 Incl.GST :18%	158.62	2424.62
51	Glucometer	13924 Incl.GST :12%	1026.89	14950.89
52	Digital BP Apparatus	14927 Incl.GST :12%	1100.87	16027.87
53	Digital Thermometer	590 Incl.GST :12%	43.51	633.51
54	Nebuliser	3516 Incl.GST :12%	259.31	3775.31
55	Emergency trolley	33630 Incl.GST :18%	2354.1	35984.1
56	Waste bin foot operated	1500.02 Incl.GST :18%	105	1605.02
57	Induction cooker	8500 Incl.GST :18%	595	9095
58	Tissue Paper dispenser	2700.01 Incl.GST :18%	189	2889.01
59	Height measuring scale	1652 Incl.GST :18%	115.64	1767.64
60	Aluminium ladder 5 steps with support	8500 Incl.GST :18%	595	9095
61	Covered Shoe rack 20 pair capacity	25000 Incl.GST :18%	1750	26750
62	Radiation Emergency kit	177000 Incl.GST :18%	12390	189390
63	IV Infusion stand	7080 Incl.GST :18%	495.6	7575.6
64	Consumables - tissue paper, absorbant sheet, disposable apron, EDTA, Pottasium Permanganate as per spec	58292 Incl.GST :18%	4080.44	62372.44
65	Demolishing R.C.C. work manually / by mechanical means including stacking of steel bars and disposal of unserviceable material with in 50 metres lead as per direction of Engineer -in-Charge.	3500 Incl.GST :0%	289.1	3789.1
66	Demolishing brick work manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-Charge.In cement mortar	1950 Incl.GST :0%	161.07	2111.07

Item-wise Price Details				
67	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead : Of area 3 sq. metres and below	2650 Incl.GST :0%	218.89	2868.89
68	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead : Of area beyond 3 sq. Metres	2650 Incl.GST :0%	218.89	2868.89
69	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.For thickness of tiles 10 mm to 25 mm	310 Incl.GST :0%	25.61	335.61
70	Dismantling aluminium / Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material with in 50 metres lead as directed by Engineer - in-Charge	750 Incl.GST :0%	61.95	811.95
71	Supplying chemical emulsion in sealed containers including delivery as specified.Chlorpyriphos / Lindane emulsifiable concentrate of 20%	2000 Incl.GST :0%	165.2	2165.2
72	Diluting and injecting chemical emulsion for POST -CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion):Along external wall where the apron is not provided using chemical emulsion @ 7.5 litres / sqm of the vertical surface of the substructure to a depth of 300mm including excavation channel along the wall & rodding etc. complete:With Chlorpyriphos /Lindane E.C. 20% with 1% concentration	150 Incl.GST :0%	12.39	162.39

Item-wise Price Details				
73	<p>Providing and fixing double scaffolding system (Cup lock type) on the exterior side of building/structure, upto 25 metre height, above ground level, including additional rows of scaffolding in stepped manner as per requirement of site, made with 40 mm dia M.S. tube, placed 1.5 metre centre to centre, horizontal & vertical tubes joint with cup & lock system with M.S. Tubes, M.S. tube chakkus, M.S. clamps and staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for execution of work of cleaning and / or pointing and / or applying chemical and removing it thereafter. The scaffolding system shall be stiffened with bracings, runners, connecting with the building etc, wherever required, if feasible, for inspection of work at required locations with essential safety features for the workmen etc., complete as per directions and approval of Engineer-in-Charge. Note: - (1) The evaluational area of the scaffolding shall be measured for payment purpose, (2) The payment will be made once only for execution of all items of such works.</p>	<p>1550 Incl.GST :0%</p>	128.03	1678.03
74	<p>Filling with contractor's own 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 as per direction of site Engineer-in-charge</p>	<p>6000 Incl.GST :0%</p>	495.6	6495.6
75	<p>Providing and laying in position cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) up to floor five level excluding the cost of centering, shuttering, finishing for leveling coarse of floor and roof etc.</p>	<p>7400 Incl.GST :0%</p>	611.24	8011.24
76	<p>Reinforced cement concrete work in arches, archribs, domes, vaults, shells, folded plate and roof having slope more than 15 degree up to floor five level excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size).</p>	<p>8800 Incl.GST :0%</p>	726.88	9526.88
77	<p>Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelMild steel and Medium Tensile steel bars</p>	<p>85 Incl.GST :0%</p>	7.02	92.02
78	<p>Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5m in width as well as 10 sqm on plan including disposal of excavated earth up to 50 m and lift up to 1.5 m, disposed soil to be levelled and neatly dressed:All Kinds of soil</p>	<p>330 Incl.GST :0%</p>	27.26	357.26

Item-wise Price Details				
79	Providing and laying in position machine batched and machine mixed design mix M-20 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 or less cement used as per design mix is payable or recoverable separately. All work above plinth level upto floor V level	9500 Incl.GST :0%	784.7	10284.7
80	Brick work with common burnt clay selected F.P.S (non modular) bricks of class designation 7.5 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12 mm deep complete in cement mortar 1:6 (1 cement : 6 coarse sand)Above plinth level and upto floor V level	7200 Incl.GST :0%	594.72	7794.72
81	Solid block masonry using pre cast solid blocks (Factory made) of size 40x20x20cm or nearest available size confirming to IS 2185 part I of 1979 for super structure up to floor two level thickness 20cm and above in: CM 1:6 (1 cement: 6 coarse sand) etc complete.	7550 Incl.GST :0%	623.63	8173.63
82	Solid block masonry using pre cast solid blocks (Factory made) of size 40x20x15cm or nearest available size confirming to IS 2185 part I of 1979 for super structure up to floor two level with thickness 15cm in: CM 1:6 (1 cement : 6 coarse sand etc complete	7450 Incl.GST :0%	615.37	8065.37
83	12 mm cement plaster of mix:1:4 (1 cement : 4 fine sand)	440 Incl.GST :0%	36.34	476.34
84	12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 (1 cement : 3 fine sand)	480 Incl.GST :0%	39.65	519.65
85	Providing and fixing I st 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 @ 3.3 kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	1050 Incl.GST :0%	86.73	1136.73

Item-wise Price Details				
86	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), including pointing the joints with white cement and matching pigment etc., complete.	1050 Incl.GST :0%	86.73	1136.73
87	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 20 mm thick cement mortar 1:4(1 cement : 4 coarse sand), including grouting the joints with white cement and matching pigments etc., complete.Size of Tile 600 x 600 mm.	1200 Incl.GST :0%	99.12	1299.12
88	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 20 mm thick cement mortar 1:4(1 cement : 4 coarse sand), including grouting the joints with white cement and matching pigments etc., complete.Size of Tile 800x 800 mm	1600 Incl.GST :0%	132.16	1732.16
89	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 20 mm thick cement mortar 1:4(1 cement : 4 coarse sand), including grouting the joints with white cement and matching pigments etc., complete.Size of Tile 1000x 1000 mm	1400 Incl.GST :0%	115.64	1515.64
90	Providing and fixing first quality Vitrified 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.	1350 Incl.GST :0%	111.51	1461.51
91	Grouting the joints of flooring tiles having joints of 3 mm width, using epoxy grout mix 0.70 kg of organic coated filler of desired shade (0.10 kg of hardener and 0.20 kg of resin per kg). including filling /grouting and finishing complete as per direction of Engineer-in-charge.Size of Tile 600x600 mm	150 Incl.GST :0%	12.39	162.39

Item-wise Price Details				
92	Grouting the joints of flooring tiles having joints of 3 mm width, using epoxy grout mix 0.70 kg of organic coated filler of desired shade (0.10 kg of hardener and 0.20 kg of resin per kg). including filling /grouting and finishing complete as per direction of Engineer-in-charge.Size of Tile 800x800mm	140 Incl.GST :0%	11.56	151.56
93	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately), using good quality Anjili wood /jack wood	160000 Incl.GST :0%	13216	173216
94	Providing and fixing paneled and glazed shutters for doors, windows and clerestory windows, 35 mm thick shutters including ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of Engineerin - charge.using Anjili/ Jack wood	12500 Incl.GST :0%	1032.5	13532.5
95	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, Aluminnium 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):For fixed portionPowder coated aluminium (minimum thickness of powder coating 50 micron)	380 Incl.GST :0%	31.39	411.39
96	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)Powder coated aluminium (minimum thickness of powder coating 50 micron)	330 Incl.GST :0%	27.26	357.26

Item-wise Price Details				
97	Providing and fixing 12 mm thick prelaminate particle board flat pressed three layer or graded wood particle board conforming to IS : 12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of Engineer - in- Charge.Pre- laminated particle board with decorative lamination on both sides	990 Incl.GST :0%	81.77	1071.77
98	Supplying and fixing flush door shutter, shutter of required size, thickness 30mm;thick, finished with 1 mm laminate of approved shade with 9; clear glass vision panels as per design including necessary hinges ;	12500 Incl.GST :0%	1032.5	13532.5
99	Frosted film - Supply and installation of 3M make frosted film pattern throughout all the internal glass panels wherever required of approx. 1.5 m height as per the approved pattern.
	1550 Incl.GST :0%	128.03	1678.03
100	Providing and fixing extruded section body tubular type universal hydraulic door closer(having brand logo with IS: 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete	2200 Incl.GST :0%	181.72	2381.72
101	Providing and fixing 4.00 mm thick ACP sheet for cupboard including all cost, conveyance, labour charges etc complete	1800 Incl.GST :0%	148.68	1948.68
102	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):With float glass panes of 4.0 mm thickness	810 Incl.GST :0%	66.91	876.91
103	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS: 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer -in- Charge.With brass cover plate minimum 1.25 mm thickness	18000 Incl.GST :0%	1486.8	19486.8

Item-wise Price Details

104	Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0mm thick & 2100 mm long with S.S. screws etc. complete as per direction of Engineer -in-Charge. Powder coated minimum thickness 50 micron aluminium tubular handle bar	5500 Incl.GST :0%	454.3	5954.3
105	Providing and fixing 100 mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete	550 Incl.GST :0%	45.43	595.43
106	Providing and fixing Thomson Multi wood board or equivalent make paneling 12 mm thick, to frame, backing or studding with screws etc. complete (Frames, backing or studding to be paid separately) as per the direction of site Engineer-in-charge.	1500 Incl.GST :0%	123.9	1623.9
107	Providing and fixing Thomson Multi wood board or equivalent make, in shelves with screws and fittings wherever required, edges to be painted with polyurethane primer (fittings to be paid separately) as per the direction of site Engineer-in-charge.	1950 Incl.GST :0%	161.07	2111.07

Item-wise Price Details

108	<p>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 37 mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50 mm long with 6 mm 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 25 mm 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 3.5x25 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:12.5 mm thick tapered edge gypsum fire resistant board conforming to IS; 2095-Part I</p>	<p align="right">850 Incl.GST :0%</p>	<p align="right">70.21</p>	<p align="right">920.21</p>
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Item-wise Price Details

109	<p>Providing and fixing GI Clip in Metal Ceiling System of 600x600 mm module which includes providing and fixing 'C' wall angle of size 20x30x20 mm made of 0.5 mm thick pre painted steel along the perimeter of the room with help of nylon sleeves and wooden screws at 300 mm center to centre, suspending the main C carrier of size 10x38x10 mm made of G.I steel 0.7 mm thick from the soffit with help of soffit cleat 37x27x25x1.6 mm, rawl plugs of size 38x12 mm and C carrier suspension clip and main carrier bracket at 1000 mm c/c. Inverted triangle shaped Spring Tee having height of 24 mm and width of 34 mm made of GI steel 0.45 mm thick is then fixed to the main C carrier and in direction perpendicular to it at 600 mm centers with help of suspension brackets. Wherever the main C carrier and spring T have to join, C carrier and spring T connectors have to be used. All sections to be galvanized @ 120 gms/sqm (both side inclusive), fixing with clip in tiles into spring 'T' with :GI Metal Ceiling Clip in plain Beveled edge global white color tiles of size 600x600 and 0.5mm thick with 25 mm height, ,made of G.I sheet having galvanizing of 100 gms/ sqm (both sides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending .</p>	<p align="center">1300 Incl.GST :0%</p>	<p align="center">107.38</p>	<p align="center">1407.38</p>
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Item-wise Price Details

110	<p>Providing and fixing tiled false ceiling of approved materials of size 595x595 mm in true horizontal level, suspended on interlocking metal grid of hot dipped galvanized steel sections (galvanized @ 120 grams/ sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30 mm thick (minimum) sheet, spaced at 1200 mm center to center and cross "T" of size 24x25 mm made of 0.30 mm thick (minimum) sheet, 1200 mm long space between main "T" at 600 mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600 mm and size 24x25 mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening of services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x 1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm GI adjustable rods with galvanized butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge. 8 mm thick fully perforated calcium silicate board made with Calcareous & Siliceous materials reinforced with cellulose fiber manufactured through autoclaving process to give stable crystalline structure with minimum compressive strength 225 Kg/ sq. cm, bending strength 100 Kg/sq. cm, of size 595x595 mm, having perforation of dia, 10 mm with minimum perforated area 18% with non woven tissue on the back side, having an NRC (Noise Reduction Coefficient) of 0.85, with 50 mm thick rockwool of 48 Kg/cum backing.</p>	<p align="center">2100 Incl.GST :0%</p>	<p align="center">173.46</p>	<p align="center">2273.46</p>
111	<p>Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:Two or more coats on new work</p>	<p align="center">290 Incl.GST :0%</p>	<p align="center">23.95</p>	<p align="center">313.95</p>
112	<p>Polishing on wood work with ready mixed wax polish of approved brand and manufacture:New work</p>	<p align="center">1150 Incl.GST :0%</p>	<p align="center">94.99</p>	<p align="center">1244.99</p>
113	<p>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.</p>	<p align="center">200 Incl.GST :0%</p>	<p align="center">16.52</p>	<p align="center">216.52</p>

Item-wise Price Details				
114	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile including applying additional coats wherever required to achieve even shade and colour.Two coats	300 Incl.GST :0%	24.78	324.78
115	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade Old work (Two or more coats applied @ 1.43 ltr/ 10 sqm) over existing cement paint surface.	350 Incl.GST :0%	28.91	378.91
116	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.Electric resistance or induction butt welded tubes	195 Incl.GST :0%	16.11	211.11
117	Roofing sheet with Sandwich PUF roof panel with 0.40 mm or nearest size pre painted Galvalume sheet at top & Bottom , 30 mm or nearest size PUF sheet at middle portion , necessary overlap at ends including self screws, cyclone washer etc. complete	2900 Incl.GST :0%	239.54	3139.54
118	Wall cladding with Sandwich PUF Wall panel with 0.40 mm or nearest pre painted Galvalume sheet at top &Bottom , 30 mm or nearest PUF sheet at middle portion , necessary overlap at ends including self screws, cyclone washer etc. complete.	2900 Incl.GST :0%	239.54	3139.54
119	Providing at all heights, levels and locations 0.45 mm thick Galvalume sheet of Alloy 31500/31000/40800, conforming to IS 1254, IS 737, IS 2676. The sheet shall be fixed using self drilling/self tapping SS screws of size 5.5x65 mm with EPDM seal complete upto required pitch in horizontal, vertical or curved surfaces i/c cutting to size and shape where required as per the direction of Engineer-in-Charge. The rate shall be inclusive of all screws, seal, ridge, labour, scaffolding, machinery for fixing and approved sealant where required etc. but excluding the cost of purlins, rafters and trusses.	2800 Incl.GST :0%	231.28	3031.28
120	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 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:W.C. pan with ISI marked black solid plastic seat and lid	1200 Incl.GST :0%	99.12	1299.12

Item-wise Price Details				
121	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:White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	8000 Incl.GST :0%	660.8	8660.8
122	Supplying and fixing CP Towel rod 45cm or nearest available length including cost of materials and labour charges etc complete as per the direction of site Engineer-in-charge.	2250 Incl.GST :0%	185.85	2435.85
123	Supplying and fixing CP Health Faucet superior quality (Jagur or equivalent make) including cost of materials and labour charges etc complete as per the direction of site Engineer-in-charge.	2550 Incl.GST :0%	210.63	2760.63
124	Supplying and fixing Stainless steel soap dish including cost of materials and labour charges etc complete as per the direction of site Engineer-in-charge.	1050 Incl.GST :0%	86.73	1136.73
125	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	1200 Incl.GST :0%	99.12	1299.12
126	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 15mm dia 12kgf/cm2 -Internal work- Exposed on wall	245 Incl.GST :0%	20.24	265.24
127	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 32 mm dia 10Kgf/cm2- Internal work - Exposed on wall	280 Incl.GST :0%	23.13	303.13
128	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer- in- Charge. Concealed work, including cutting chases and making good the wall etc. 15 mm pipe 12 Kg/ cm2	325 Incl.GST :0%	26.85	351.85

Item-wise Price Details				
129	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge. Concealed work, including cutting chases and making good the wall etc. 32 mm pipe 10Kgf/cm2	365 Incl.GST :0%	30.15	395.15
130	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge. Concealed work, including cutting chased and making good the wall etc. 110 mm pipe 6kgf/cm2	450 Incl.GST :0%	37.17	487.17
131	Providing and fixing PVC pipes includings of pipes with one step PVC solvent cement, trenching and refilling & testing of joints complete as per direction of Engineer in Charge. 75 mm dia 4 Kgf/cm2	380 Incl.GST :0%	31.39	411.39
132	Providing and fixing 24 mm thick factory made PVC door shutters made of styles and rails of a PVC hollow section of size 59 x 24 mm and wall thickness 2 mm with inbuilt edging on both sides. The styles and rails mitered and joint at the corners by means of M.S. galvanized/plastic brackets of size 75 x 220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by fixing galvanized M.S. tube of size 20 x 20 mm and 1 mm wall thickness. The lock rail made up of &H&apos; section, a PVC hollow section of size 100 x 24 mm and 2 mm wall thickness, fixed to the shutter styles by means of plastic/galvanized M.S. &apos;U&apos; cleats. The shutter frame filled with a PVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm wall thickness. The panels filled vertically and tie bar at two places by fixing horizontally 6 mm galvanized M.S. rod and fastened with nuts and washers, complete as per manufacturer&apos;s specification and direction of Engineer-in-charge(For W.C. and bathroom door shutter).	380 Incl.GST :0%	31.39	411.39
133	Supplying and fixing Name board of various sizes using foam sheet board including lettering as per the direction of departmental officers including cost, conveyance and fixing charges etc complete. 45x14cm size	1200 Incl.GST :0%	99.12	1299.12
134	Supplying and fixing the name board of size 8x4 feet; using ACP board with acrylic lettering including cost, conveyance and labour charges for lettering and fixing etc complete	35000 Incl.GST :0%	2891	37891

Item-wise Price Details				
135	Supplying and fixing Inaugration board using granite slab including lettering as per direction of departmental officers including cost of granite, lettering and fixing charges etc complete. Size: 100x84cm	5000 Incl.GST :0%	413	5413
136	Fabricating, supplying and placing in position oval shaped conference table as per the shape and configuration of the image having an over all size of 330x180x75cm dtachable in 4 pieces to satisfy for providing seating requirement of 14 chairs. This unit is fabricated with 20mm thick M.D.F. with Veneer finish of approved shade on both faces with post formed edge profile or with the cuted gess hall befinished with lipping of the same shade 1-mm thick veneer to match with the shade of the table top. The bottom supporting frame work shall be with moulded C.R.C. A sheet with powder coated finish and joined together with bolting system which can be dismantled as and when required.The item includes supplying and fixing of all required hardware items of approved brand, and all labour and materials etc complete as directed.	75000 Incl.GST :0%	6195	81195
137	Computer Chair;The Medium Back Adjustable Revolving chair made with Mesh back within Built Handle in the Nylon Finish, The Back is designed extra lumber support. The seat have provided Seat cover in PP made with 12mm hot pressed ply and PU Moylded foam. The tilting mechanism should be synchro-tilt mechanism as per international ergonomics standards any position locking. The base and pin wheels are made in the Nylon. 120mm H Gas lift should be provided with Tower Bellow	8500 Incl.GST :0%	702.1	9202.1
138	High Back Chair Made with feather Foam Seat & Mesh Back with lumber;support. , The Gas lift mechanism should be tested as per BIFMA ;05.01.2002 Standards. The pedestal should be five legged injection moulded;in black 30% glass –filled nylon and fitted with 5 nos twin wheel castors. Theastors of the chairs should be glass filled, It should have synchro any angle locking arrangement	12500 Incl.GST :0%	1032.5	13532.5

Item-wise Price Details				
139	Providing and fixing trap doors for access to the areas above false ceiling. The trap door shall have an external frame made of Powder coated aluminium channel on which the shutter is hinged. Shutter shall be made 3 mm thick ACP sheet shutter external frame of shutter made of Powder coated aluminium channel. Concealed heavy duty hinges shall be used to mount the shutters and locking shall be provided. The shutter shall be moulded in level with the false ceiling forming a groove all around. Sufficient number of hinges and locks shall be provided to avoid sagging of the shutter. Key also shall be supplied. No extra rate shall be provided for suspenders or frame works all round for linking the trap door to gyp board /any other false ceiling. The rate including all labour charges ,material charges ect complete.	25000 Incl.GST :0%	2065	27065
140	2mm Lead lined doors: 2mm Lead lined doors: Solid cored(30mm) Lead(2mm) lined flush door side hung two rebated shutters with plywood(6mm) & laminated (1mm) on both sides and all accessories (SS hinges (4 no's), towerbolt , SS handles etc..)	14500 Incl.GST :0%	1197.7	15697.7
141	"Lead(2mm) lined flush door side hung single shutter with plywood(6mm) & laminated (1mm) on both sides and all accessories (Lead sheet should overlap door frame & wall) Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately), using good quality Anjili wood /jack wood "	12500 Incl.GST :0%	1032.5	13532.5
142	Wood frame for fixing Lead Glass (Lead sheet should overlap door frame & wall)	15000 Incl.GST :0%	1239	16239
143	Steel cupboard (Godrej) for storage 6ft tall 3 feet width	27000 Incl.GST :0%	2230.2	29230.2
144	Computer table (long) with keyboard tray , CPU storage at base in a side and storage drawers at other side. Size 1.2m x 0.6m x 0.75m (h) thickness of sheet shall be 12mm, marine plywood with mica/ vineer lipping, edge band with PVC or teakwood reaper. reputed brand godrej/featherlite/wipro	27500 Incl.GST :0%	2271.5	29771.5
145	Vaccum cleaner power atleast : 1300Watts, input 230Vac, eureka forbes or equivalent	12500 Incl.GST :0%	1032.5	13532.5

Item-wise Price Details				
146	Suitable De- Humidifier units : Extraction at least 35 litres/day, compresor : rotary, Air flow : at least 220m3/hr, reputed brand, input 230Vac	70000 Incl.GST :0%	5782	75782
147	Providing cable trench for system cables and wherever necessary with metal cover including finishing works and all allied works	1300 Incl.GST :0%	107.38	1407.38
148	Providing and fixing 2.0mm th. Vinyl floor with rubber based adhesive over clean and smooth surface including finishing by rolling a light roller all complete.	1100 Incl.GST :0%	90.86	1190.86
149	Light weight low density filling material CINDER / equivalent	60000 Incl.GST :0%	4956	64956
150	"Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.Group B"	1750 Incl.GST :0%	144.55	1894.55
151	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	1950 Incl.GST :0%	161.07	2111.07
152	Supplying and fixing call bell/ buzzer suitable for single phase, 230 volts, complete as required.	2200 Incl.GST :0%	181.72	2381.72
153	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed PVC conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required.Group B	1350 Incl.GST :0%	111.51	1461.51
154	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface / recessed medium class PVC conduit as required 2x1.5 sq.mm + 1x1.5 sq.mm earth wire	290 Incl.GST :0%	23.95	313.95

Item-wise Price Details				
155	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface / recessed medium class PVC conduit as required2X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	290 Incl.GST :0%	23.95	313.95
156	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface / recessed medium class PVC conduit as required2 X 4 sq. mm + 1 X 4 sq. mm earth wire	390 Incl.GST :0%	32.21	422.21
157	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface / recessed steel/ PVC conduit as required.4 x 6 sq. mm	420 Incl.GST :0%	34.69	454.69
158	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface / recessed steel/ PVC conduit as required.3 X 1.5 sq.mm	220 Incl.GST :0%	18.17	238.17
159	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface / recessed steel/ PVC conduit as required.3 x 2.5 sq. mm	285 Incl.GST :0%	23.54	308.54
160	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface / recessed steel/ PVC conduit as required.3 x 4 sq. mm	380 Incl.GST :0%	31.39	411.39
161	Supplying and drawing following pair 0.5 mm dia FRLS PVC insulated annealed copper conductor,unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.2 Pair	90 Incl.GST :0%	7.43	97.43
162	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated,shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/recessed steel/ PVC conduit as required.	550 Incl.GST :0%	45.43	595.43
163	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.20 mm	115 Incl.GST :0%	9.5	124.5

Item-wise Price Details				
164	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.25 mm	120 Incl.GST :0%	9.91	129.91
165	Supplying and drawn of UTP 4 pair CAT 6 LAN cable in the existing surface/recessed steel/PVC conduit as required1 run of Cable	130 Incl.GST :0%	10.74	140.74
166	Supplying and drawn of UTP 4 pair CAT 6 LAN cable in the existing surface/recessed steel/PVC conduit as required2 run of Cable	260 Incl.GST :0%	21.48	281.48
167	CAT 6 RJ 45 Computer jack modular SOCKET OUTLET	650 Incl.GST :0%	53.69	703.69
168	Supplying and fixing following modular switch/socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.5/6 amps switch	130 Incl.GST :0%	10.74	140.74
169	Supplying and fixing following modular switch/socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.2 way 5/6 amps switch	140 Incl.GST :0%	11.56	151.56
170	Supplying and fixing following modular switch/socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.15/16 amp switch	240 Incl.GST :0%	19.82	259.82
171	Supplying and fixing following modular switch/socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.3 pin 5/6 amp socket outlet	260 Incl.GST :0%	21.48	281.48
172	Supplying and fixing following modular switch/socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.6 pin 15/16 amp socket outlet	440 Incl.GST :0%	36.34	476.34
173	Supplying and fixing following modular switch/socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.Telephone socket outlet	275 Incl.GST :0%	22.72	297.72

Item-wise Price Details				
174	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.TV antenna socket outlet	280 Incl.GST :0%	23.13	303.13
175	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.Bell push	250 Incl.GST :0%	20.65	270.65
176	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	320 Incl.GST :0%	26.43	346.43
177	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required.1 or 2 Module (75mmX75mm)	350 Incl.GST :0%	28.91	378.91
178	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required.3 Module (100mmX75mm)	370 Incl.GST :0%	30.56	400.56
179	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required.6 Module (200mmX75mm)	440 Incl.GST :0%	36.34	476.34
180	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required.8 Module (125mmX125mm)	480 Incl.GST :0%	39.65	519.65
181	Supplying and fixing call bell/ buzzer suitable for single phase, 230 volts, complete as required.	550 Incl.GST :0%	45.43	595.43
182	Extra for fixing the louvers/ shutters complete with frame for a exhaust fan of all sizes	1250 Incl.GST :0%	103.25	1353.25
183	Charges for cutting holes suitable for accommodating exhaust fans up to 305mm sweep including plastering colour washing etc. as required.	2250 Incl.GST :0%	185.85	2435.85
184	Installation of exhaust fan in the existing opening, including making good the damage connection testing, commissioning etc. as required.Upto 450 mm sweep	250 Incl.GST :0%	20.65	270.65

Item-wise Price Details				
185	Supply of exhaust fan of 380 mm sweep,heavy duty with metallic vanes and housing with louvers and shutters	1600 Incl.GST :0%	132.16	1732.16
186	Supply of 300/305 mm sweep Light Duty Exhaust fan in metal frame working on230 V A/C	1400 Incl.GST :0%	115.64	1515.64
187	Supply and installation of sheet steel, phosphatised and painted, dust and vermin proof enclosure of MCB DB including copper /brass bus bar, neutral link, earth bus and DIN rail suitable for fixing MCB/ isolator etc. fixed on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall , making good the damages, colour washing etc. as required4 way (8+12) - three phase double cover (IP 42/43)	5200 Incl.GST :0%	429.52	5629.52
188	Supplying and fixing following rating, four pole, (three phase and neutral), 415 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required. 63 A rating, 4 pole, 30 mA RCCB	4850 Incl.GST :0%	400.61	5250.61
189	Supplying and fixing following rating, four pole, (three phase and neutral), 415 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required. 40 A rating, 4 pole, 30 mA RCCB	4500 Incl.GST :0%	371.7	4871.7
190	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.40 amps	2850 Incl.GST :0%	235.41	3085.41
191	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.63 amps	2950 Incl.GST :0%	243.67	3193.67
192	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.Single pole	255 Incl.GST :0%	21.06	276.06
193	Supplying and fixing following rating, three pole, MCB 63 A rating, 3 pole, MCB	2800 Incl.GST :0%	231.28	3031.28

Item-wise Price Details				
194	Supplying and fixing following rating, three pole, MCB >40 A rating, 3 pole, MCB	2900 Incl.GST :0%	239.54	3139.54
195	Supply and installation of sheet steel, phosphatised and painted, dust and vermin proof enclosure of MCB DB including copper /brass bus bar, neutral link, earth bus and DIN rail suitable for fixing MCB/ isolator etc. fixed on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall , making good the damages, colour washing etc. as required 6 way (8+18) - double cover TPN vertical DB with provision for fixing 4P MCB / Isolator/ RCCB/ RCBO as incomer and SP/ TP MCB as outgoing (IP 42/43)	5500 Incl.GST :0%	454.3	5954.3
196	Providing and fixing following rating and breaking capacity and pole MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required. 100 Amp, 30 KA 4 Pole	14000 Incl.GST :0%	1156.4	15156.4
197	Providing and fixing following rating and breaking capacity and pole MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required. 125 Amp, 36 KA	16000 Incl.GST :0%	1321.6	17321.6
198	Supply, conveyance and fixing the following types & current rated control gears & switchgears conforming to IS 13947 suitable for 440 V, 50 Hz, AC supply in the existing panel assembly as required. 16A -100A, 35/36 kA (Ics=100%Icu), 4 pole, current limiting type MCCB with microprocessor based release with overload setting of 50 - 100% having adjustable OL & SC	31000 Incl.GST :0%	2560.6	33560.6
199	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required. Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	180 Incl.GST :0%	14.87	194.87
200	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured copper power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required. 3.5 core 25 sq mm with factory made clamp	2250 Incl.GST :0%	185.85	2435.85

Item-wise Price Details				
201	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured copper power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required.3.5 core 35 sq mm with factory made clamp	2650 Incl.GST :0%	218.89	2868.89
202	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured copper power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required.3.5 core 50 sq mm with factory made clamp	3250 Incl.GST :0%	268.45	3518.45
203	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured copper power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required.4 core 10 sq mm with factory made clamp	1200 Incl.GST :0%	99.12	1299.12
204	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured copper power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required.4 core 16 sq mm with factory made clamp	1500 Incl.GST :0%	123.9	1623.9
205	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.225 mm width X 50 mm depth X 1.6 mm thickness	910 Incl.GST :0%	75.17	985.17
206	"Supplying and installing following size of perforated pre-painted M.S. cable trays bends with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.225 mm width X 50 mm depth X 1.6 mm thickness"	350 Incl.GST :0%	28.91	378.91
207	Supplying siemens / tropodur type nickel plated Double compression brass cable gland for PVC insulated and PVC sheathed armoured aluminium/ copper conductor cable 1.1 KV grade, and making end termination suitable for 2/ 3/ 3½/ 4 core cable of the following sizes as required. 50 Sqmm	950 Incl.GST :0%	78.47	1028.47

Item-wise Price Details				
208	Supplying siemens / tropodur type nickel plated Double compression brass cable gland for PVC insulated and PVC sheathed armoured aluminium/ copper conductor cable 1.1 KV grade, and making end termination suitable for 2/ 3/ 3½/ 4 core cable of the following sizes as required. 16 Sqmm	480 Incl.GST :0%	39.65	519.65
209	Supplying siemens / tropodur type nickel plated Double compression brass cable gland for PVC insulated and PVC sheathed armoured aluminium/ copper conductor cable 1.1 KV grade, and making end termination suitable for 2/ 3/ 3½/ 4 core cable of the following sizes as required. 25 Sqmm	750 Incl.GST :0%	61.95	811.95
210	Supplying siemens / tropodur type nickel plated Double compression brass cable gland for PVC insulated and PVC sheathed armoured aluminium/ copper conductor cable 1.1 KV grade, and making end termination suitable for 2/ 3/ 3½/ 4 core cable of the following sizes as required. 10 Sqmm	380 Incl.GST :0%	31.39	411.39
211	Supplying siemens / tropodur type nickel plated Double compression brass cable gland for PVC insulated and PVC sheathed armoured aluminium/ copper conductor cable 1.1 KV grade, and making end termination suitable for 2/ 3/ 3½/ 4 core cable of the following sizes as required. 35 Sqmm	450 Incl.GST :0%	37.17	487.17
212	Supply of superior quality copper tubular cable socket and making core termination of cables of the following sizes including crimping etc. as required. 50 Sqmm	850 Incl.GST :0%	70.21	920.21
213	Supply of superior quality copper tubular cable socket and making core termination of cables of the following sizes including crimping etc. as required. 35 Sqmm	150 Incl.GST :0%	12.39	162.39
214	Supply of superior quality copper tubular cable socket and making core termination of cables of the following sizes including crimping etc. as required. 25 Sqmm	140 Incl.GST :0%	11.56	151.56
215	Supply of superior quality copper tubular cable socket and making core termination of cables of the following sizes including crimping etc. as required. 16 Sqmm	130 Incl.GST :0%	10.74	140.74
216	Supply of superior quality copper tubular cable socket and making core termination of cables of the following sizes including crimping etc. as required. 10 Sqmm	120 Incl.GST :0%	9.91	129.91

Item-wise Price Details				
217	Supplying and providing earth clamps for siemens/tropodur type cable glands of suitable length and other dimensions noted along with each size of glands for the following sizes of cables as required. 25 sq - 95sq mm with 20 mm wide x 1.20 mm thick clip	700 Incl.GST :0%	57.82	757.82
218	Supplying and providing earth clamps for siemens/tropodur type cable glands of suitable length and other dimensions noted along with each size of glands for the following sizes of cables as required. 4sqmm-16 sq mm with 12 mm wide x 1 mm thick clip	600 Incl.GST :0%	49.56	649.56
219	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving connection as required2.65 mm copper conductor (12 SWG)	130 Incl.GST :0%	10.74	140.74
220	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving connection as required3.15 mm copper conductor (10 SWG)	120 Incl.GST :0%	9.91	129.91
221	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving connection as required4.00 mm copper conductor (8 SWG)	150 Incl.GST :0%	12.39	162.39
222	Supply of superior quality copper earth socket for the following size of earth conductor including crimping etc. as required.2.65 mm (12 SWG)	100 Incl.GST :0%	8.26	108.26
223	Supply of superior quality copper earth socket for the following size of earth conductor including crimping etc. as required.3.15 mm (10 SWG)	100 Incl.GST :0%	8.26	108.26
224	Supply of superior quality copper earth socket for the following size of earth conductor including crimping etc. as required.4.00 mm (8 SWG)	100 Incl.GST :0%	8.26	108.26
225	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	18500 Incl.GST :0%	1528.1	20028.1

Item-wise Price Details				
226	Supply and Clamping the following size of strips on surface of wall/parapet/existing cable tray using clamps fabricated from 20*3mm GI flat duly painted or heavy duty GI spacer saddles spacing of clamps not exceeding 1m making good the damages,colour washing etc.as required(for horizontal run)25*3mm copper strip	1225 Incl.GST :0%	101.19	1326.19
227	Supplying , threading , laying and jointing of the following sizes of 'B' class GI pipe with all required accessories in ground in trench as protective covering to earth leads. 40 mm Dia	650 Incl.GST :0%	53.69	703.69
228	Supply and providing test joint for the earthing system using 2 Nos of the following sizes of strips including cutting and bending to shape, drilling necessary holes and fixed to the watering pipe etc as required. 2 x 25 x 3 mm tinned copper strip	1225 Incl.GST :0%	101.19	1326.19
229	90.16.1.1 : Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving connection as required2.00 mm copper conductor (14 SWG)	120 Incl.GST :0%	9.91	129.91
230	Supply conveyance, installation, testing and commissioning the light fittings of following types made from CRCA sheet 0.5mm thickness with all accessories and lamps directly on wall and giving connections with 16/0.20 mm 3 core PVC insulated and sheathed round copper conductor flex wire or extending the original wiring and giving connections as required1200 mm 1X20W LED Lamp with box type fixture	100 Incl.GST :0%	8.26	108.26
231	"Supply & installation of light fittings on TW round block Supply, conveyance installation testing and commissioning the light fittings of following types made of CRCA with 0.5mm thickness complete with all accessories and lamps etc. directly on wall or ceiling with PVC round block neatly painted to suit the fitting and giving connection with required length of 16/0.20mm 3 core copper conductor flex wire conforming to relevant ISS and giving connections as required.1200 mm 1X20W LED Lamp with box type fixture"	1600 Incl.GST :0%	132.16	1732.16
232	Recess mounted LED luminaire with full diffuser type upto 36 W (max), 2x2 LED, Cool White, 5700k, White powder coated CRCA housing, WIPRO CRCO10R038HP57GL1 or Bajaj BZRSQL 36W GZi CW or Equivalent 	3850 Incl.GST :0%	318.01	4168.01

Item-wise Price Details				
233	Frame for Fixing Recess mounted LED 2x2 ft luminaire 608 mm x 608 mm
	1200 Incl.GST :0%	99.12	1299.12
234	Recess mounted circular LED retrofit downlighter, 15W, powder coated white finish, BPSLR 15W WH Bajaj or Equivalent	1550 Incl.GST :0%	128.03	1678.03
235	Supplying and Fixing of 6 / 7 W pin type LED bulb in the existing angle batton etc as required (Philips, Wipro or similar superior make)
	450 Incl.GST :0%	37.17	487.17
236	SITC of 400mm sweep meduim duty wall fans with metallic vanes (Make: M/s Almonard/ Crompton/Bajaj or Equivalent)	3200 Incl.GST :0%	264.32	3464.32
237	4 kg ABC Powder Type Fire Extinguisher With NABL Approval, Fights Class A, B, C and Electrically started fires.	5000 Incl.GST :0%	413	5413
238	4.5 kg Fire Extinguisher Carbon Di-oxide Type With NABL Approval
	7000 Incl.GST :0%	578.2	7578.2
239	Charges for dismantling the existing Electrical Installations complete making good the damages of the wall and conveying the dismantled materials to store etc as required.	500 Incl.GST :0%	41.3	541.3
240	Numbering of ceiling fan / exhaust fan/ fluoresent fittings as required.	100 Incl.GST :0%	8.26	108.26
241	Copper Pipe with Superlon Insulation for Suction and Discharge	1650 Incl.GST :0%	136.29	1786.29
242	PVC Drain Pipe with proper insulation	425 Incl.GST :0%	35.11	460.11
243	Weather Proof 3 Core Copper Wire for Indoor to Outdoor Connecting Cable (Size as per the requirement of AC manufacturer)	245 Incl.GST :0%	20.24	265.24
244	Core Cutting charges including Making the surface finished with plastering and painting, making good and finishing with matching surface after housing pipe etc.	2500 Incl.GST :0%	206.5	2706.5
245	Supporting Stand for Fixing Outdoor Unit(Powder coated)	1500 Incl.GST :0%	123.9	1623.9

Item-wise Price Details

246	4 KVA Voltage Stabilizer Wall mount type with Time delay, High& low voltage& Thermal overload protection, Input voltage: 170-220V, Output Voltage : 200-240V, High Voltage Cut Off : 240V, Efficiency: >95%, Frequency : 50Hz, V guard VG 500 or Equivalent	2350 Incl.GST :0%	194.11	2544.11
247	Supply, Conveyance testing and commissioning of 2 Ton 5 Star Inverter Type, split AC unit with Copper Tube cooling coils, 5 star rating Bluestar/LG(Dual Inverter Type)/Voltas/Mitsubishi or Superior Superior brands, Cooling Capacity 6000 KW/hr with rotary/scroll type compressors. with microprocessor controlled code less remote, CFM above 500/450, LED/LCD Display	50000 Incl.GST :0%	4130	54130
248	Supply, Conveyance testing and commissioning of 1 Ton 5 Star Inverter Type, split AC unit with Copper Tube cooling coils, 5 star rating Bluestar/LG(Dual Inverter Type)/Voltas/Mitsubishi or Superior brands, Cooling Capacity 3000 KW/hr with rotary/scroll type compressors. with microprocessor controlled code less remote, CFM above 500/450, LED/LCD Display	38500 Incl.GST :0%	3180.1	41680.1
249	Supply and providing copper earth bus in the panel board	1100 Incl.GST :0%	90.86	1190.86

Item-wise Price Details

250	<p>Supply of LT Switch board cubicle type, made out of 2 mm thick CRCA sheet, totally enclosed, IP42, free standing, wall/floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system with busbars extendable on both sides, including all the necessary internal wiring , suitable spreader etc. The panel shall be fabricated from a firm having CPRI certification with test certificates for similar panel(required for short circuit rating, temperature rise and IP classification) and with following switchgears, metering instruments and accessories etc. complete as required as per drawing & specification. & ; RYB Indicating lamps LED type & 4A SP MCB & ;(0-500)V Class 1 with 90 deg defl. Scale. (0-200)A Class 1 with 90 deg defl. Scale;& Voltmeter selector switch;200/5 A 5 VA Class .5S CTs & ;ON/OFF INDICATION LAMP & ;Digital multifunction meter to read V,A.Hz,PF,Kwh&;surge protection device (type1+2)&;Incomer&;200A FP Moulded Case Circuit Breaker with Micro processor based release with OL and SC protection neutral link (Ics =100%Icu= 25kA) -1 Nos&;200A Copper TPN busbar chamber with Copper busbar&;Out Goings&;125A FP Moulded Case Circuit Breaker with Micro processor based release with OL and SC protection neutral link (Ics =100%Icu= 25kA) -1 Nos&;100A FP Moulded Case Circuit Breaker with Micro processor basedl release with OL and SC protection neutral link (Ics =100%Icu= 25kA) -2 Nos&;63A FP MCCB ISOLATOR-2Nos The panel shall be Top Entry/Exit and suitable for termination of cable system as per SLD and technical specification.</p>	<p align="center">210000 Incl.GST :0%</p>	<p align="center">17346</p>	<p align="center">227346</p>
251	<p>"Supply, installation, testing and commissioning (SITC) of 11 TR x 2 No's or higher capacity aircooled ductable split air conditioner with ceiling suspended IDU and all standard fittings, IDU SS drain pan, as per specifications complete with suitable capacity drive motor, air cooled condenser with all accessories, hermetically sealed scroll compressor, electronic microprocessor pendant controller with digital display, first charge refrigerent gas, vibration isolator pads, structural supports for fixing IDU/ODU as shown in the drawing, safety devices including thermal protector, pressure relief valve, over load relays single phase preventor etc, power wiring(max 3m from isolator) and control cabling(indoor to outdoor),thermostat wiring, high-low pressure cut out, suitable for three phase 440V supply etc complete as required "</p>	<p align="center">1270788 Incl.GST :0%</p>	<p align="center">104967.09</p>	<p align="center">1375755.09</p>

Item-wise Price Details				
252	Supply, installation, testing and commissioning of suitable sized hard drawn copper refrigerant piping(both suction and liquid piping) including 25mm thick closed cell elastomeric insulation as per specification for 11 TR & 8.5 TR machine between indoor & outdoor units as per site conditions all complete.	250 Incl.GST :0%	20.65	270.65
253	Supply, installation, testing and commissioning of GSS sheet metal ducting for Air distribution network from indoor unit as per ducting specifications complete with angle flanges ,supports, GI rods , anchor bolts ,GI nuts and bolts, PVC/ rubber gaskets complete with all fittings , bends, transformations , vanes , splitter dampers ,inspection doors , plenums, channels, rods, anchor bolts, etc to roof /truss as per IS 655 . The job includes entire air distribution network and sizing of ducts also. 22G	1050 Incl.GST :0%	86.73	1136.73
254	Supply, installation, testing and commissioning of GSS sheet metal ducting for Air distribution network from indoor unit as per ducting specifications complete with angle flanges ,supports, GI rods , anchor bolts ,GI nuts and bolts, PVC/ rubber gaskets complete with all fittings , bends, transformations , vanes , splitter dampers ,inspection doors , plenums, channels, rods, anchor bolts, etc to roof /truss as per IS 655 . The job includes entire air distribution network and sizing of ducts also. 24G	950 Incl.GST :0%	78.47	1028.47
255	Supply, installation, testing and commissioning of volume control duct damper made of extruded aluminium for ducts/collars to be provided with suitable links, lebers and quadrants for manual control of volume of air flow and for proper balancing of the air distribution in the main duct complete with neoprene rubber gaskets, nuts, bolts, screws linkages, flanges etc., as per specifications.	6200 Incl.GST :0%	512.12	6712.12
256	Supplying, fixing testing commissioning of Return air Diffusers of powder coated aluminium without volume control dampers with anti smudge ring & removable core.	8650 Incl.GST :0%	714.49	9364.49
257	Supplying, fixing testing commissioning of supply air diffusers of powder coated aluminium with aluminium volume control dampers with anti smudge ring & removable core.	8650 Incl.GST :0%	714.49	9364.49

Item-wise Price Details				
258	Supply, installation, testing and commissioning of Powder coated extruded aluminium Continuous grilles 150 mm high for supply air with aluminium damper as per spec	8650 Incl.GST :0%	714.49	9364.49
259	Supply, installation, testing and commissioning of Powder coated extruded aluminium Continuous grilles 150mm high for return air as per spec	8650 Incl.GST :0%	714.49	9364.49
260	Providing and fixing of Acoustic Duct lining with 10mm thick nitrile rubber open cell type inside the ducts	650 Incl.GST :0%	53.69	703.69
261	Providing and fixing of Thermal insulation lining with 10mm thick fiberglass rigid board with adhesive, on supply duct using 9mm thick nitrile rubber closed cell type.	750 Incl.GST :0%	61.95	811.95
262	Supply and Fixing of Canvas connection and ribbed rubber pads as vibration isolators	3500 Incl.GST :0%	289.1	3789.1
263	Supply and Fixing of Heater Package with Humidistat and contactor for humidity control	71500 Incl.GST :0%	5905.9	77405.9
264	Motorized volume control damper for individual operation of ductable split air conditioners	9500 Incl.GST :0%	784.7	10284.7
265	Supply, installation, testing and commissioning UPVC drain pipe 6kg/sq.cm of suitable dia connecting the drain pan of the indoor units to nearest drain point, with 12mm thick closed cell elastomeric insulation as per specification	450 Incl.GST :0%	37.17	487.17
266	Electrical Cabling between indoor and outdoor units, with required size cables/wires(Havells/RR Kabel/V-guard FRLS wires)	245 Incl.GST :0%	20.24	265.24
267	Outdoor unit stand with ribbed rubber pads	2000 Incl.GST :0%	165.2	2165.2
268	Charges for cutting holes suitable for accommodating the supply ducts including plastering, colour washing etc. as required.	700 Incl.GST :0%	57.82	757.82
269	19mm thick class O insulation for under deck insulation for under deck insulation with raw plugs, GI screws and plate washers made of 24G GSS etc.	977 Incl.GST :0%	80.7	1057.7

Item-wise Price Details				
270	Charges for obtaining electrical inspectorate's approval	100000 Incl.GST :0%	8260	108260
271	Supply and fixing in position twin RJ11 jack plate i/c wall recessed GI box for telephone. (Reputed brand)	550 Incl.GST :0%	45.43	595.43
272	Supply and drawing CAT 6 wiring in recessed/surface conduite including termination for Data	160 Incl.GST :0%	13.22	173.22
273	Supply and fixing in position twin RJ45 jack plate i/c wall recessed GI box for LAN. (Reputed brand)	485 Incl.GST :0%	40.06	525.06
274	24-Port Gigabit manageable smart Network Switch with 2 SFPs. Rack mountable	20000 Incl.GST :0%	1652	21652
275	Patch panel - 24-Port patch panel with cable tray. Rack mountable	9000 Incl.GST :0%	743.4	9743.4
276	4U Rack- Wall Mountable including 4x 6Amp power distribution box	12000 Incl.GST :0%	991.2	12991.2
277	Supply of branded 1mtr patch cords with cat 6 cable.	260 Incl.GST :0%	21.48	281.48
278	Supply of branded 2mtr patch cords with cat 6 cable.	340 Incl.GST :0%	28.08	368.08
279	Supply of branded 3mtr patch cords with cat 6 cable.	425 Incl.GST :0%	35.11	460.11
280	Supply and installation of portable fire extingwisher (2 kg) with wall mounted for fire type ABC classification	5000 Incl.GST :0%	413	5413
281	Providing and fixing in position CO2 type fire extinguisher of 5kg Capacity	7000 Incl.GST :0%	578.2	7578.2
282	Height Adjustable lab stool	4950 Incl.GST :0%	408.87	5358.87
283	Executive office table	27500 Incl.GST :0%	2271.5	29771.5
284	Executive chair	12500 Incl.GST :0%	1032.5	13532.5
285	Non Revolving Office chair	4500 Incl.GST :0%	371.7	4871.7

Item-wise Price Details							
286	Diwan Cot			18000 Incl.GST :0%	1486.8	19486.8	
287	Almirah with glass 6x3" Godrej			28000 Incl.GST :0%	2312.8	30312.8	
288	Office table			2200 Incl.GST :0%	181.72	2381.72	
289	PVC Chair with arm			1350 Incl.GST :0%	111.51	1461.51	
290	Patient Stool			4000 Incl.GST :0%	330.4	4330.4	
291	Teapoy			4200 Incl.GST :0%	346.92	4546.92	
292	3 in 1 combination chair			14500 Incl.GST :0%	1197.7	15697.7	
293	Screen Portable			8500 Incl.GST :0%	702.1	9202.1	
294	Foot Step			2360 Incl.GST :0%	194.94	2554.94	
295	Lecture stand			22500 Incl.GST :0%	1858.5	24358.5	
296	Mini PACS as per spec (Not taken for evaluation)			5596000 Incl.GST :0%	462229.6	6058229.6	
				70059642.67	5208678.32	75268320.99	
Annual / Comprehensive Maintenance Charges (Exl.Tax)							
Rate	4 th Year	5 th Year	6 th Year	7 th Year	8 th Year	9 th Year	10 th Year
SPECT CT SCANNER							
Labour	6,50,000.00	7,00,000.00	7,50,000.00	8,00,000.00	8,50,000.00	9,00,000.00	9,50,000.00
Comprehensive	28,47,330.00	29,87,947.00	31,69,219.00	33,25,930.00	34,90,476.00	36,63,250.00	38,44,663.00

Other terms & conditions

1. The supplier shall execute an agreement with the purchaser as per tender conditions (agreement format is given in the tender document).
2. The supplier shall submit performance security amounting to 5% of the value of the supply order.
3. The labour & comprehensive charges of equipment after the completion of warranty period is finalized by KMSCL as mentioned above.
4. Since discount rate is not applicable for equipment under Running Contract of KMSCL, purchase/supply order can be issued directly to supplier at the given rate with tax & other charges (exclusive of KMSCL service charges).
5. If purchase/supply order is issued directly to the supplier, KMSCL service charge need not be paid. But the copy of the said order

may be forwarded to KMSCL for information.

Technical Specification

Equipment :SPECT CT SCANNER

SPECT CT Scanner

The latest technology dual-headed variable angle SPECT/CT 16 slice system for commissioning by the company. The system must be introduced within the last 3 years.

Scope of the work:

1. The primary vendor should be responsible for the supply, installation and commissioning of the gamma camera on a turn-key basis.
2. The price of the system and Civil work cost should be quoted separately.
3. The radiation equipment offered against this tender shall duly conform to the prescribed international/national standards and norms of radiation safety. AERB type approval certificate / NOC should be attached.
4. Quoting firm should have Minimum 10 SPECT-CT installations in India with a satisfactory track record of install, service and maintenance. Please provide list of such installations and also attach a satisfactory performance certificate from at least 3 centers in India.
5. All the QA / acceptance tests as per NEMA and AERB need to be carried out by company engineer in the presence of a Nuclear Medicine Physicist of the department, for onwards transmission to AERB to get the license for operation of the equipment.
6. The tenders along with all the commitments, claims, specifications, guarantee, warrantee etc. pertaining to the equipment shall be submitted directly by the Manufacturer/Principals (also referred to as Vendors or Suppliers) who shall be wholly and solely responsible for all the statements/commitments in this connection.
7. Any options or added facilities not indicated in the specifications may also be given. Any improved modifications or updated versions of the system can be included in the quotation.

I. General

1. The system should be capable of performing all Planar, Dynamic, SPECT, Gated Cardiac SPECT, WB SPECT and Whole Body imaging applications.
2. The system should be capable to perform fast rotation high-resolution CT image-based attenuation correction on the same patient table for nuclear medicine images and functional anatomical image fusion.
3. Integrated CT hardware option for transmission attenuation correction and functional- anatomical image fusion.
4. All the Application, Operating and Service manuals in duplicates should be provided by the vendor at the time of handing over the machine. At least one of these manual sets to be provided in computer-readable format.

I. Gantry

1. Should have integrated SPECT/CT gantry with 70 cm bore size and 50 cm CT Scan FOV for large patient size.
2. Gantry design should be wide open with image acquisition capability in clockwise and anticlockwise movement.
3. Should be capable of variable angle including 90° and 180° detector configuration for SPECT, Horizontal and Vertical upright for static views.
4. Gantry should have emergency stop buttons.

5. Gantry motion should be controlled by remote control handset and via user-defined programs
6. Should have persistence scope (LCD Color Display) mounted on the gantry or wall for continuous display of patient position and gantry parameters

I. Detectors

1. Should have a large field of view and rectangular detectors having UFOV of at least 540 x 400 mm ($\pm 5\%$) to enable adequate patient breadth coverage
2. Crystal thickness should be 9.5 mm (3/8").
3. The number of PMTs should be 59 or more per detector with 1 ADC per PMT (True digital detector).
4. The detectors should be equipped with automatic body centering (ABC).
5. The system should have a facility for automatic correction for energy, linearity and uniformity.
6. Performance parameters should conform to NEMA NU 1 or the latest standards complying the latest specifications prevailing at the time of supply of equipment and clearly mention with literature support
7. NaI (TI) crystal of size should not less than 540X400 mm. Maximum intrinsic count rate > 300 kcps for each detector.
8. The intrinsic energy resolution (Tc-99m@20 kcps, FWHM) less than 9.5 %.
9. Intrinsic Flood uniformity:
 - i. Differential: UFOV \leq 3% and CFOV \leq 2.5%
 - ii. Integral: UFOV \leq 4% and CFOV \leq 3%
10. Intrinsic Spatial resolution
 - i. FWHM of UFOV < or = 3.8 to 4.1 mm
 - ii. FWHM of CFOV < or = 3.7 to 7.8 mm
11. System Spatial sensitivity using LEHR/LEHRS Collimator at 10 cm for CFOV better than 200 cpm/microcuri.
12. SPECT reconstructed spatial resolution with scatter (LEHR collimators).
 - i. Central < 9.9 mm to 10.7mm
 - ii. Radial < 9.9 mm to 10.9mm
 - iii. Tangential < 7.9 mm

I. CT Specifications

1. The system should be enabled with Fast rotation CT scanner with full rotation capable of 16 slices or more per rotation.
2. It should be able to generate attenuation correction map to apply on Nuclear Medicine images for body attenuation correction and to get accurate localization by fusing the SPECT and CT images.
3. The latest ultra-low dose technology for attenuation correction of follow-up patients and cardiac patients.
4. Patient port aperture: 70 cm
5. Transaxial field of view should be ? 50 cm
6. Continuous generator to support sustained and continuous X-ray generation. Mention generator capacity.
7. Tube current: 30-200 mA or more
8. KV range should be from 80-130 kV
9. Anode heat storage capacity: 2.0 MHU or more
10. Pitch factor (volume pitch) should be variable between 0.625 to 1.5 or more and should be user selectable
11. Scan time for a complete 360-degree scan should be 1 sec or less.
12. High contrast resolution should be ? 15 lp / cm @ 0% MTF.
13. The slice thickness of the CT reconstructed image should be ?1 mm
14. Inbuilt Laser light should control the iso-centric position of the patient in all planes.
15. Filter and collimators and other specific features to reduce radiation dose to the patient
16. Specify the focal spot size and number according to IEC recommendations. Automatic selection of focal spots should be possible

I. Collimators

1. Should have following high precision Collimators with collision sensors to do all clinically possible examinations along with proper storage carts and easy changing.
 - i. Low Energy High Resolution (LEHR/LEHRS) – One Pair
 - ii. High Energy General Purpose – One Pair
 - iii. Medium energy general purpose – One Pair

I. Patient Table:

1. Should have a single universal table for all studies i.e., Planar, SPECT, Whole-body imaging and CT images.
2. Tabletop should be composed of low attenuation material, preferably, carbon fiber with attenuation not more than 10% at 140 keV. It should be covered with a mattress pad and straps
3. The table should be able to withstand at least 220 Kg of body weight
4. Whole-body imaging covering should not be less than 190 cm.
5. Should have automated interactive scale at the bedside for faster patient positioning.
6. Table should move to home position automatically
7. Table should have facility for lowering the height to facilitate easy patient transfer and should be movable to permit imaging for sitting, standing, and stretcher/wheelchair patients. The lower range of vertical motion should be 24 inches or less
8. Should have Pediatric pallet, adjustable head positioning pallets, injection arm rest, Cardiac armrest, leg support, Velcro straps for patient restraint & support

I. Acquisition Workstation

1. One Acquisition station with dual monitor (each one dedicated for SPECT and CT) independent of main processing unit capable of data acquisition in static, dynamic, multi-gated, whole-body scanning, SPECT and Gated SPECT.
2. High-performance PC of latest specifications with multi-tasking operating system, compatible motherboard and integrated graphic card. It should have a minimum of 4 GB RAM, 2.5 GHz or more processor speed, 500 GB HARD DISK OR MORE. High resolution (1024 x 1024 or more) antiglare flat panel square LED monitor of minimum 17" size. It should also have CD and DVD combo drive preferably with the writer facility
3. Fully integrated CT system capable of acquiring X-ray transmission data along with nuclear emission data. SPECT & CT data acquisition should be on the same console.
4. Image acquisition and data display should be from 64 x 64 matrix up to 256 x 1024 matrix.
5. Acquisition termination by preset time, preset count with ability to manually pause, resume and stop all types of acquisitions
6. Pre-defined acquisition protocols as well as a facility for users to configure customized protocols.
7. Should have the zoom and rotate features
8. Should have online live display of acquired data and imaging parameters during acquisition
9. Should have the cinematic display of dynamic, MUGA & all multi-frame studies
10. Should provide system compatible ECG Gating Device with all leads and cables for MUGA / Gated Data acquisition. There should be ECG and R-to-R Histogram display during acquisition. Indicate frames per R-R interval and maximum frame rate capability
11. Acquisition software should include camera quality control activities including Center of rotation (COR) correction, Uniformity correction maps, Energy, Sensitivity and Linearity maps, Daily /Weekly QC including Gantry calibration, Energy spectrum histogram (PHA) display, QC for Whole Body Acquisition, QC for Balancing sensitivity of both Detector heads.
12. The acquisition console should allow universal networking via DICOM ready to both local and wide area networks. It should also be connected to a network laser color printer
13. Real-time reconstruction and immediate display of images in 1024 x 1024 matrix parallel to acquisition in spiral mode to be provided.

I. Processing Workstation

1. High-performance PC of latest specifications with dual monitor with multi-tasking operating system with full DICOM readiness for image transfer print etc., compatible motherboard and integrated graphic card. It should have a minimum of 4 GB RAM, 2.6 GHz or more processor speed, 700GB or more Hard disk. It should also have CD and DVD combo drive preferably with writer facility
2. Antiglare high resolution (1024 x 1024 or more) flat panel square LCD dual monitor of minimum 19" size. Both monitors should be capable to process, display and compare two studies individually.
3. The graphical user interface (GUI) should be identical to that of the acquisition unit
4. Predefined and user-configurable protocols for standard studies for rapid recall
5. The workstation should support functions like SPECT, CT and SPECT-CT Image reconstruction, attenuation correction, film documentation, and other Nuclear Medicine protocols for organ-specific quantitation
6. There should be provision for data transfer to an external storage device (CD/DVD/External Hard Disk) for mass data storage and archiving. Both processed data (reports etc) as well as raw (acquired images) should be amenable to such data transfer and storage. CD/DVD archiving facility should be available on main console.
7. The system should be connected with the available server in the department.
8. Broadband / Wi-fi enabled remote diagnostic facility should be provided and maintained

I. Clinical Applications Software:

1. All standard SPECT, Whole-body imaging and Planar such as general static, dynamic clinical applications packages including Display Analysis software, 3-D volume rendering display with Maximum intensity projection (MIP), Cine review capability, curve generation, and image manipulation tools.
2. Filtered back-projection & Iterative reconstruction, Wide beam and 3D-OSEM reconstruction algorithm software for SPECT studies
3. The image profile curve should be possible in all the acquired images with a possibility to draw FWHM of the profile curve.
4. Profile cuts, horizontal, vertical, oblique.
5. Image subtraction & addition software should be available for all types of images
6. Image output format should include JPEG, TIFF, AVI and multimedia reporting tool with self-executable CD creation software.
7. Annotation, labeling, online measurements, ROI analysis etc.
8. 2-D image zoom, pan, manipulate, averaging reversal of greyscale values, mirroring, image filter functions, advanced imaging algorithms.
9. Attenuation and scatter correction program, both for planar and SPECT studies
10. Whole-body SPECT processing software
11. Complete Renal processing software including Transplant Evaluation, Diuretic Renography, Package for GFR, ERPF, Renal Extraction Fraction, Deconvolution analysis and Renal Output Efficiency etc.
12. Thyroid Uptake study.
13. Technetium – Thallium / MIBI subtraction for Parathyroid Scintigraphy
14. Condensed dynamic image program for esophageal transit studies and gastric emptying software
15. Lung Perfusion & Ventilation, Left to Right Lung Ratio
16. Bone Static, Three Phase and SPECT including 3-D bone reconstruction and Display
17. Complete Cardiac package including First Pass EF and Cardiac Shunt quantification studies, Gated equilibrium, MUGA SPECT, Myocardial Perfusion (Planar and SPECT including Bullseye), and gated SPECT tomography.
18. Dedicated licensed cardiac software – 4 DM complete package OR QGS/QPS/QBS for Gated cardiac SPECT quantification. A companion tool for phase analysis should also be included.
19. Advanced diagnostic CT applications including brain, peripheral angiography and calcium scoring software
20. Brain, both planar and SPECT with attenuation correction & segmentation and choice of different filters.
21. Advanced licensed Neuro software for SPECT Brain studies with Stereotactic projection map, Z-Scores and normal database.
22. Advanced neuro program for evaluation/quantification of brain tumors
23. Latest collimator-detector response – Resolution recovery algorithm (software and hardware) option that allows half dose and

- half acquisition time in SPECT including cardiac SPECT, BONE SPECT and planar images should be offered as a standard feature.
24. Transmission attenuation correction software to generate attenuation map. Flexibility to manually adjust the transmission attenuation map as per requirements
 25. Multimodality Fusion Software required. Anatomical and functional data co-registration software (SPECT/CT/MRI fusion software). It should also work for the imported anatomic imaging data.
 26. On-line patient registration facility, transfer of information from HIS/RIS via DICOM and emergency registration.

I. Advanced Clinical Applications:

1. Quantitative volumetric analysis for SUV calculation: Automated organ definition & segmentation on SPECT & CT combined images i.e., CT ROI should be transferable to SPECT and vice versa and ROI analysis should be possible. The Quantification (SPECT SUV) should be based on patient demographics tracer information.
2. Application enabling dosimetry & quantification of changes in radiopharmaceutical absorption at multiple body organs over time through analysis of SPECT or planar WB studies and a hybrid SPECT/CT scan, resulting in calculated residence time for organ, tumor and whole body. The results should help in isotope /radiotherapy treatment planning. The package should be FDA approved

Accessories and QC Utility

1. System compatible indigenous online UPS with maintenance-free batteries for whole system with 30 min back up time.
 2. Four latest specifications desktop PC with licensed windows, DICOM software, MS Office software, antivirus software for patient reports. Windows-based desktop computer with 500GB hard disk, 21-inch monitor, keyboard and mouse
 3. One office PC with laser Printer-Scanner-Copier
 - a. Intel core i7 (9th generation) or higher
 - b. Intel chipset Gigabyte motherboard
 - c. 8GB DDR3 RAM or higher, 1 TB SSD, DVD RW
 - d. 20" LED Monitor or higher, ATX cabinet
 - e. Multimedia Keyboard, Optical scroll mouse, Speakers
 - f. 600 VA UPS
 - g. Windows 10
 - h. Multipurpose Laser Printer-Scanner-Copier
-
1. Mini PACS 2 TB for data storage from the SPECT-CT
 2. Fume hood of size not less than 1500mm width*900 mm depth*1900 mm height to be incorporated in the radioactive dose administration room with cfm as per AERB regulations, which is additional to the one listed in the SPECT- CT Accessories list.
 - a. Specifications
 - i. 3 mm lined of working area with charcoal filter and blower, suitable for handling I-131. The Fume Hood should have stainless steel-lined working area, with clear acrylic door with counterweights for effortless and smooth opening and closing with adequate lighting in the working area.
 - ii. Size should not be less than 1500mm width*900 mm depth*1900 mm height
 - iii. Should have SS steel working area
 - iv. Should have Fluorescent light
 - v. Should have Front viewing transparent acrylic glass
 - vi. Should have an Exhaust fan

I. Others

1. Equipment should be installed as per AERB requirements. Qualified personnel from the company should install and commission the camera.
2. Cordoning off of the acquisition terminal with lead and appropriate sized lead glass is to be done.
3. Warranty of the equipment including crystal & CT tube and all accessories as well as batteries of the UPS and Air-conditioning units should be for THREE years after the satisfactory commissioning and handing over of the system. Warranty will include all the accessories as well as electronic / electrical consumables /cables / leads etc and third party items.
4. Rates for SEVEN years comprehensive maintenance contract (CMC) after the expiry of warranty with uptime as per the tender terms. CMC will include the crystal, CT tube, batteries of the UPS, Air-conditioning units. All the accessories supplied with the main equipment as well as electronic / electrical consumables /cables / leads etc. will also be part of the CMC
5. A list of installations existing in the country with satisfactory service certificate if available from the user may be submitted to support the claim of a good performance of the similar models of the equipment. The supplier shall mention the number of installations in India and worldwide for the quoted model only. Such installations should have been supplied directly by the quoting firm itself.
6. The acceptance of the installation shall be subject to satisfactory handing over of the system to the department and a certificate to this effect will be issued by the institute. Warranty of equipment will start from the date of receiving the License from AERB.
7. The whole equipment should be connected with the in-house available mini PACS through DICOM
8. Onsite training by trained engineers and application specialists, for both SPECT and CT, should be provided for at least 4 weeks period each in two shifts.

I. SPECT-CT Accessories

1. Radiation fume hood – 1 No

- a. Shielded Fume hood: 3 mm lined of working area with charcoal filter and blower, suitable for handling I-131. The Fume Hood should have stainless steel lined working area, with a clear acrylic door with counterweights for effortless and smooth opening and closing with adequate lighting in the working area.
- b. Working space: 4x4x3ft
- c. SS steel working
- d. Fluorescent light
- e. Front viewing transparent acrylic glass
- f. Exhaust fan

1. ISOTOPE CALIBRATOR- 2 nos

i. Dose Calibrator (Capintech CRC 55)

- a. Detector : Incorporated into control unit
- b. Energy Range : 50 keV to 1.2 MeV
- c. Operation Range : Auto-ranging up to 1 Ci. Display blanks when

activity exceeds 1.0 ci

- a. Resolution : 1 Ci
- b. Accuracy : $\pm 10\%$ overall. Less than 2% error vial

Volume of 0 to 3ml.

- a. Display : Four-digit LED plus decimal point.
- b. Controls : Selector switches for five isotopes. Others can

be assayed by using the digital potentiometer.

- a. Accessories Supplied : sample holder for standard elution vials any
Syringesserves as contamination shield, and a 99 mo break through shield.
- a. Power : 115V, 60Hz, double insulated, using UL-
Listed converter.Optional 230 V, 50Hz converter available
- a. dimensions : 11' wide x 7 " high x 4/3" thick
- b. Well size : 6" DEEP X 2" Diam.. Has1/4" Lead shield
- c. Weight: : 40 I bs

1. L Bench – 2 Nos.

- i. 25 mm Lead thickness
- ii. Lead lined table top L-bench
 - a. Size 12" L x 12" d x 18"h
 - b. Outer part SS
 - c. View area [lead glass] size 10' x 10'

1. Ventilation Perfusion Stand-Aerosol Generator- 1 No.

- a. Resistance-free breathing with at least 25-liter capacity (air in and air out), Large breathing passages, and motor-assisted airflow.
- b. Cabinet: stainless steel
- c. Complete .125" lead shielding in an upper cabinet for patient and operator safety
- d. Easy access to replace Drierite and Soda-Lime cartridges
- e. Effortless mobility for easy patient positioning
- f. Convenient built-in stainless steel tray for holding disposables, xenon gun, syringe, etc.
- g. Dimensions: 20.5" w x 22" depth x 48.5" h (52.1 x 55.9 x 123.2 cm)
- h. Motor: UL approved. 12 volt DC
- i. Electrical Requirements: 115 VAC, 1 amp, 50/60 Hz
- j. Warranty for at least one year for parts and labor
- k. Disposable bacteriostatic filter in conjunction with a disposable mask or mouthpiece.

1. Collimator – 3 Nos.

- i. LEHR
- ii. MEGP
- iii. HEGP
- iv. Part of the SPECT-CT scanning equipment

1. Flood Phantom-1 No.

- i. Fillable Flood Phantom for QC- standard make
- ii. Flood Phantoms provide a means of lighting scintillation camera's crystal to determine response uniformity over the entire field.Our Flood Phantoms feature extra-strength side walls and clear lucite for easy positioning. Easy to fill and easy to drain, the phantoms are leakproof and are excellent for transmission imaging.
- iii. SPECIFICATIONS:
- iv. Dimensions: 20.5" x 28" x 1.25" thick (52 x 71.1 x 3.2 cm)

v. Cavity: 16.5" x 24" x .5" (41.9 x 60.9 x 1.3 cm)

1. Survey Meter- 2 Nos.

Radiation survey meter

- i. Ranges: Three full-scale ranges of 0.2, .2 and 20 mR/hour Meter indicated - Calibrated in MR/hr.
- ii. Accuracy: 20% of f.s.d
- iii. Energy Dependence: Though the instrument will respond to energy as

low as 0.1 MeV. the calibration holds good for energy range of 600 Kev to 2 Mev.

- i. Calibration :Each range is individually calibrated with a standard as 137 sources.
- i. Detector : Beta gamma BM Counter -type 1-1020, 35-40mg/cm² wall thickness, argon, halogen quenched. Responds to Beta above 0.25 MeV.
- ii. Power requirements: Three 1.5V cells. Eveready type 1035 or equivalent. Life of cells - 25 hours continuous operation. Neon Lamp indicated the 'ON' condition of the instrument
- iii. Dimensions: 103 W x 260D x 105(mm)
- iv. Weight : 1.5 KG. (approximately)

a. CONTAMINATION MONITOR- 1 No.

- a. Range : 0-5000 CPS in four linear ranges
 - a. 0-5 CPS
 - b. 0-50 CPS
 - c. 0-500 CPS
 - d. 0-5000 CPS
- b. Time Constant: Less than 50 seconds in 5 CPS mode for 90% of FS reading. Time constant will be far less for successive higher ranges (50,500 and 5000 CPS)
- c. Accuracy: $\pm 10\%$ for all the ranges when fed from a pulse generator.
- d. Analogue/Scaler Mode: Stores counts up to 50 counts in conjunction with timer of 1 min or 5 min.
- e. Timer Accuracy : $\pm 10\%$
- f. Accuracy of hold mode: $\pm 10\%$
- g. Drift : 2 Counts per 5 min
- h. EHT: EHT is a separate and continuously variable from 500 to 1500at two separate inputs for the detector.
- i. Regulation: Better than 20% for a load of 50.
- j. **Gun Monitor** – 1 No.

Beta gamma exposure rate meter

- a. Range of operation: Three linear ranges 0 to 50, 500 and 5000 mR/hr.
- b. Accuracy: $\pm 15\%$ of reading.
- c. Display: Moving coil meter directly calibrated in mR/hr.
- d. Energy Response: $\pm 15\%$ from 200 KeV to approximately 3 MeV with end cap on. Is responsive to quantum energies up to 100 KeV with the cap (1/8th Bakelite) removed. A 1mg.cm² beta radiation.
- e. Ionization chamber volume : ≈ 600 (Air filled)
- f. Response time: Less than two seconds in all range
- g. Power supply: Two 1.5V cells, Eveready type 1050 or equivalent. A facility

for self-check of battery voltage is provided.

- a. Battery Life: 40 hours with 4 hours operation every day.
- b. Pilot lamp: Neon lamp indicated the ON condition of the instrument.
- c. Environmental conditions of Operation: Temperature range 0oC to 50oC. Relative humidity up to 95 %
- d. Zero drift : I division in most sensitive range over a period of 8 hours.
- e. Weight (with cells) : Approximately 1.9 kg

a. Area Monitor

- a. Gamma zone monitor– reputed make
- b. Specifications: : same or higher version is preferred
- c. Radiation to be detected: X-ray & Gamma Radiation
- d. Range : 1 Mr/hr to 1000 R/hr
- e. The unit should be configurable and Range selection automatic.
- f. Detector probe :
 - i. Option (A): Pressurized Ion Chamber with external energy compensating filter and sensitivity of 1.5×10^{-10} A / R/hr.
 - i. Sensitive volume: 17cc
 - ii. Probe Dimensions: 46mm dia x 246mm long.
 - ii. Option (B): Pressurized Ion chamber with external energy compensating filter and sensitivity of 1.2×10^{-9} A / R/hr.
 - i. Sensitive volume = 204 cc
 - ii. Probe dimensions: 70mm dia x 275 mm long or lower.
- g. Energy Dependence: Within +/- 18% of true dose rate from 100 keV to 1.3 MeV gammas.
- h. Accuracy :+/- 10% Full Scale
- i. EHT : 400V to 700V DC adjustable (Typical 500V)
- j. Display: Auto-ranging direct reading, 6 digit 7 segments LED display and 16x2 LCD display. 6 x 7 segment display should be there for display of dose-rate information and hardware status information & 16x2 LCD display should be there for visualization of preset alarm and other parameters.
- k. Overload : overload above 200% of fullscale and upto 10000R/h should be sensed and displayed
- l. Recorder output:4-20 mA, with 600-ohm load.
- m. Recorder output stability : a) Non-linearity : Max = 0.025% of Span
- n. Offset current (Io=4mA):Max = 0.0005% of Span / oC
- o. Span Error (Io=20mA) : Max = 0.005% of Span / oC
- p. Time Constant: First reading on Power ON within 5 secs.
- q. Normal (Slow): 30 sec to 0.5 sec automatically varying inversely with the radiation level.
- r. Abrupt detection: Update the current reading within 2 sec and return to normal mode.2.13
- s. Calibration Accuracy:+/- 10% throughout the range.
- t. Instrument “ON” Indication: Large Area Green LED Lamp. This will indicate the Normal condition also.
- u. Alarm range : 1 mR/hr to 1000R/hr (10µSv/hr to 10000 mSv/hr)
- v. The alarm level setting should be carried out through the front panel keypad / handheld configurator / PC.
- w. Alarm Indication :
 - i. RED (LED) flashing large area window display
 - ii. Loud audio tone (dual-frequency tone)

11. Pocket Dosimeter- 2 Nos

Direct reading pocket dosimeters

- a. Radiation Detected : Gamma and x-radiation from 20 keV to 2 MeV
- b. Ranges : 0-200 mR to 600 R
- c. Energy Response
 - i. 160 keV to 2 MeV : $\pm 10\%$
 - ii. 40 keV to 160 keV : + 20 % - 10 %
 - iii. 20 keV to 40keV : 20% - 30%
- d. Accuracy : Within +or = 10% of true exposure
- e. Rate Response : Dose rate independent for gamma and x-radiation.
- f. Electrical Leakage : Less than 0.5% of full scale for 24 hours at 50% C
- g. Relative Humidity : Up to 90%
- h. Detector : fiber electrometer mounted in an electrically conducting plastic chamber
- i. Material : Detectro Housing: Very low permeability plastics; hermetically sealed. Clip: Glass fiber-filled, high strength plastic
- j. Dimensions : Length: 4.5 (12. 4 cm); diameter: 0.6 (1.5 cm)
- k. Weight :1.0oz (25 grams)

1. Iodine Uptake Probe-1 No.

- a. Mobile Thyroid uptake system with well counter.
- b. It should be compatible for diverse nuclear medicine applications such as thyroid uptake, wipe testing, bio assay, schilling test, blood volume and RBC survival functionality test.
- c. QA should be completely automated.

- d. Reference standard sources (Cs-137, Eu- 152) for QA should be included.
- e. System should be capable of identifying isotopes causing contamination.
- f. Automatic decay correction, on screen spectrum acquisition and analysis are mandatory.
- g. The system should have 1024 channel Multi channel analyzer module with individual MCAs for uptake probe and well counter.
- h. Energy range should be up to 2MeV.
- i. Expandable Isotope selection library with minimum 50 number of preloaded isotopes.
- j. Adjustable automatic or manual ROIs.
- k. Maximum count rate of 1,00,000cps.
- l. Automatic peak finding.
- m. Software should be capable of establishing multiple thyroid uptake protocols utilizing different isotopes.
- n. Compact mobile platform with caster wheels with locking facility.
- o. An uprising shaft/column from of enough height from the platform for the up and down running of a 360° articulating multi-axis, height adjustable, counterbalanced spring arm for the uptake probe.
- p. Wall mount/ Table top stand.
- q. Desktop computer system with MCA interface enabled board.
- r. Desktop printer should be a standard inclusion.
- s. Two inches thick sodium iodide thallium crystal detectors with drilled well.
- t. Drilled well with 1-2 inches well shielding.
- u. Power requirements. 220volt (180-250), 50-60Hz, with circuit protection, line filter and isolation transformer.
- v. Dicom software and interface is desired.
- w. Protocol with quick start and customization option should be available.
- x. Reports should have options for standard and user-defined normal ranges and comments.
- y. Enough data storage and archiving capacity is compulsory.
- z. For easy and accurate patient positioning a combination of distance measurement rode and LED/laser beam localizing option should be a standard part.

1. TMT -1 No.

- a. PC-based 12 lead ECG/stress system with medical-grade TMT.
- b. It should have Bruce protocol, FDA approved system.
- c. Stress test system and defibrillator
- d. Biphasic defibrillator with external pacing
- e. Should have a safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL

1	Treadmill	Power input	:	230V 15A
		PC communication	:	Through serial port [Rs-232]
		Protocols supported	:	Standard [Bruce, Mod, Bruce, Mod, Balke Eliested and Naughton] or User definable
		Total length	:	1970mm
		Total width	:	700mm
		Walking area	:	1500 x 500mm
		Belt speed	:	0.8 – 16kmph
		Incline range	:	0-22%
		Patient weight	:	up to 180kg
				:
2	ECG Acquisition Device	Power input	:	Through USB
		Power consumption	:	< 1W
		PC communication	:	Through USB

	Operating Temp.	:	10 to 40 deg C
	Relative humidity	:	25 to 95% non- condensing
	Storage temperature	:	-10 to 50 deg C
	Relative humidity	:	10 to 95% non-condensing
	Dimension	:	170.5mm x 106.5mm x 22.5mm [length x width x height]
		:	< 400gms
3	Data Acquisition		
	Weight	:	
	Standing Rate	:	400 Samples/ sec
	Acquisition	:	simultaneous 12 lead acquisition 12 bits
	Leads	:	Standard 12 leads. Acquired 6 leads. Reconstructed 4 leads [111 aVR, aVL,aVF] $\pm 300\text{mV}$ @ $\text{OHZ} \pm 10\text{mv}$ in pass band
	Input Dynamics	:	> 100M Ohms
	Input impedance	:	3.2 seconds 90dB @ 50Hz
	Time Constant	:	Internal
	CMRR	:	<10mA
	DF protection	:	0.5Hz to 100Hz
	Patient leakage	:	Mains interference : 50Hz Notch Filter [always present]
	Frequency response	:	Anti-Drift Filter: 0.5Hz[13db] always present]
4	Signal processing		
	Digital filters [linear Phase]	:	
	ECG Analysis	:	200 Samples / sec
	QRS detection	:	single lead [Selectable]
	Calculated parameters	:	ST- level, ST-Slope, HR, METS
	Fiducial points	:	Auto or Manual Selection
	Enlarged Median Lead	:	Auto Lead selection [Lead having minimum ST level] or Manual Lead selection
	Median update interval	:	Every 8 secs
5	Display		
	Display Revolution	:	1024 x 768
	ECG display format	:	3 lead +12 median or 6 lead + 12 median or 12 lead + 12 median
	ECG display speed	:	25mm/sec or 50mm/ sec
	ECG display sensitivity	:	5 or 10 or 20mm/mV
	Event Marker	:	Yes
	Displayed Data	:	HR, Target HR, BP, Stage Time Test Time, Speed, Grade, METS Protocol name

			:	Protocol Stage, ST- level, ST-slope. Leadoff information and patient name
		Filter	:	20Hz or 40 Hz or No filter [selectable]
6	Printing	Print format	:	User defined reports; printout with / without grid
		Paper size	:	Plain paper A4 size
		Printing speed	:	25mm / sec
		Printing sensitivity	:	10mm/ mV
		Filter	:	20Hz or 40Hz No filter [selectable]
7	Review	Printouts	:	Automatic stage printouts and real time printouts
		Full disclosure ECG	:	Beat to beat raw ECG record of complete exercise
		Marked events	:	Review of marked events
8	Data storage	Trend graphs	:	Trend graph of HR, ST- level, ST-slope, BP and J-amplitude
		Local storage	:	On hard disk, separate fold for each test
		External storage	:	Selected records can be exported to CD-ROMs

1. Lead Bricks -120 Nos.

- a. Interlocking lead bricks with size 4" x 4" x 2"

2. QC Generator- 1 No.

- a. 200mCi 99mTc generator

3. Syringe Holder – 1 No.

- a. Perspex stand for renal assay
- b. Dimensions: Inner 0.84" dia* 5.6" h (2.1*14.3 cms)
- c. Should accommodate upto 5 cc syringe sheils.

1. Syringe Dose Carrier-4 Nos.

- a. Shielded Syringe Carrier, Large Dimensions:
 - i. I.D.: 8.25" 1 x 3" w x 2.9 h (21 x 7.6 x 7.4 cm)
 - ii. O.D.: 9.5" 1 x 4.4" w x 3.5" h (24 x 11.2 x 8.9 cm)
 - iii. Lead Shielding: Sides, top and bottom: .125" thick (.32 cm)Ends: .25" thick (.64 cm)
 - iv. Weight: 11.3 lb (5.1 kg) - 1No.
- b. Shielded Syringe Carrier, SmallDimensions:
 - i. I.D.: 8" 1 x 1.9" w x 1.97" h (20.3 x 4.8 x 5 cm)
 - ii. O.D.: 9.25" 1 x 3.4" w x 2.6" h (23.5 x 8.6 x 6.6 cm)
 - iii. Lead Shielding:Sides, top and bottom: .125" thick (.32 cm)Ends: .25" thick (.64 cm)
 - iv. Weight: 7.5 lb (3.4 kg) - 1No.
- c. Shielded Syringe Carrier, SmallDimensions:
 - i. I.D.: 7.5" 1 x 1.7" w x 1.7" h (19 x 4.3 x 4.3 cm)
 - ii. O.D.: 9.25" 1 x 3.4" w x 2.6" h (23.5 x 8.6 x 6.6 cm)
 - iii. Lead Shielding:Sides, top and bottom: .25" thick (.64 cm)Ends: .5" thick (1.3 cm)
 - iv. Weight: 11 lb (4.9 kg) – 2 Nos .

1. Lead Bin foot operated with 6 mm lead lined- 4 Nos.

1. Decay Drums -2 Nos.

- a. Dimensions: 30" h x 19.5" dia (76 x 50 cm)
- b. Lead Shielding: minimum 6 mm
- c. Drop Port: 6.5" x 8" (16.5 x 20.3 cm)
- d. Top loading with handled lid and optional dolly for transportation

1. Additional Work Station with all software same as provided with main equipment- 1No.

1. Forceps- 5 Nos

- a. Forceps are made of surgical grade steel.
- b. Forceps, Curved, locking, 9.5" l (24.1 cm) – 2 Nos
- c. Forceps, Straight, locking, 9.5" l (24.1 cm) – 2 Nos
- d. Forceps, Curved, non-locking – 1 No

2. Laptop – 1 No.

- a. Intel i7 or later processor
- b. 500 GB storage,
- c. windows 10 or later
- d. MS office.

3. Lead Apron –4 Nos.

- a. Dimensions: 36" L*24"W (91.4*61 cms)
- b. Lead Equivalence: 0.5 mm
- c. Weight; Less than 5 kgs

4. Printer HP color – HP 452 or later- 2 No.

5. 2 tray Film Printer CT- 1 No.(Fuji, Carestream/ Equivalent)

1. TURNKEY

General:

The area marked for installation of the Gamma Camera, Hotlabetc complete with all the civil/electrical/air-conditioning modification along with the accessories as required for safe (*including radiation dosimetry, calibration, beam quality assurance and radiation safety aspects*), proper and smooth functioning of the equipment shall be the responsibility of the vendor, on turnkey basis from the existing state at the site at the time of finalizing the tender. Gamma Camera (SPECT-CT) equipment shall be installed in the same area by the approved vendor. The vendors shall inspect the site in detail before quoting for the turnkey job. All the materials and workmanship for the turnkey shall conform to the ISI/PWD standards and shall be carried out under the overall supervision and after prior approval of the clients before execution. The vendor shall coordinate the shipment of the equipments with the pace of work at site, which should be planned in such a manner that the equipments are installed for use within six months from the date of the placement of the orders.

1. The vendor shall submit complete drawings for fabrication and erection, including plans, elevations, and large-scale details of typical sections and connections and get the same approved by AERB before commencing the work. All expenses incurred on this preparatory work shall be borne by the vendor including the **fee for architect/civil/structural consultants**. The drawings shall include complete layout with dimensions, required utility connections with specific identification of each unit corresponding to sequence of installation and erection procedures, location and details of anchorage devices to be embedded in or fastened to other construction besides submitting templates, if required, for accurate placement and providing samples for finishing materials for approval. In addition to the above drawings, additional schematics and functional drawings shall show an overview of all electronics and major electrical systems. The drawings shall include major cable interconnections. Additional drawings shall provide complete details of all electrical connections and signals. The drawings shall accurately reflect the "as-built" configuration.

Scope of the turnkey shall consist of the following salient components:

- i. The site for the proposed Equipment shall be provided in raw, unfinished state. The vendor shall complete the job, as per the AERB requirements, from 'as is where is' basis at the time of finalizing the tender. It shall be the responsibility of the vendor to advice for the necessary requirements for this purpose and obtain the AERB/BARC clearance for these rooms for installing/operating the proposed equipments in these rooms.

- i. The vendor shall finish the rooms according to the international standards of aesthetics and functional requirements and matching with the existing décor at the Institute, as detailed below:
 - a. Flooring of the rooms shall have first quality vitrified tiles of reputed forms in matching colour, in size of at least 600 mm x 600 mm or any other similarly suitable substitute **eg; Linolium**, after obtaining approval from the AERB/Institute. The walls should have glazed tile finish up to the false ceiling level or paneling and cupboards of suitable material as per the requirements of the equipments with granite workbenches, to keep the accessories as required for patient treatment and equipment maintenance. Handrails shall be provided, as required.

 - a. False ceiling (*preferably with acoustic lining –with/without perforations*) in the equipment rooms consisting of removable 2'x2' panels of powder coated GI/ aluminum sheet panels/ comparable material. Electrical work including copper wiring, lighting, switches and fixtures, keeping in view the needs and ambience in the mentioned areas. Decorative wall panels (paintings) with light effect matching with the decor of the equipment shall be provided as part of the work.

 - a. Additional air conditioning for trouble-free and smooth functioning of the equipment and for the comfort of the patients shall be provided by the Vendor. As we use closed windows in the facility, all areas except the present corridor and forthcoming corridor should be air-conditioned.

 - a. Following facilities/accessories/furniture shall have to be created/provided in the given space:

i. Existing Space

- a. **The corridor** which would be converting to

- 1. Office,
- 2. Common room for staff,
- 3. Technologist room,
- 4. Counter
- 5. Wash rooms
- 6 Patient changing Room
- 6. Janitor facility

7.Room for trolley/wheel chair

a. Five Existing Rooms will be converted into following;

- 1.Reception/seminar Hall
- 2.Reporting Room /Console room
- 3.HODs Room/Library
- 4.SPECT-CT Room
5. UPS/ Machine room
- 5.RA source storage room
6. RA waste storage room
7. Hot Lab
8. Dose Admin Room
- 9.Post dose admin waiting room
- 10.Post Iodine therapy waiting room
- 11.Decontamination Room

New walls should be constructed to accommodate all these rooms. The walls should be 9 inch brick wall/ 6 inch concrete wall reach up to roof. All walls should be supported using solid steel T sections as the existing space is located in the first floor of the hospital building.

a. Following furniture of reputed brand shall have to be provided in the area after getting the same approved by the Institute:
(separate rate in BOQ)

- Two Sony LCD TV (52") for patient waiting area.

i. PA (*patient call*) system from the console area to the patient waiting area and between the console area & the equipment room.

i. CCTV with cameras in the equipment room, the console and another area with additional monitors installed in the room of the HOD.

- i. On-line UPS for the entire system with at least thirty minutes back up supply. In addition to this main UPS, additional UPS systems shall be supplied along with all other computer terminals/workstations/ accessories, wherever applicable. The batteries for the UPS systems shall be maintenance-free and shall be looked after/replaced (*whenever required*) by the vendor throughout the warranty period of the main equipment.

- i. All safety and warning gadgets like Gamma Zone Monitors, Contamination Monitors, voltage stabilizers, fire fighting systems, smoke detectors, fire alarms, electrical safety devices, glow signs, signages, air/fumes exhaust, waterproofing, water-logging protection, *etc.*, as may be necessary for the safety of the equipment, patients and personnel handling the equipment.

- i. The vendor shall ensure the radiation safety aspect of the room, as per the AERB guidelines, and shall get the necessary 'NOC' from BARC for operating the unit after installation.

TURNKEY-2

I. New Construction

- 1. General Waiting Area-400 Sq. ft.
- 2. Corridor to enter the facility- 200 Sq. ft
- 3. Consultation Room for 4 doctors with washroom- 250 Sq. ft.
- 4. TMT room-120-150 Sq.ft.
- 5. Corridor to open area and roofed mesh-covered area-50 Sq. ft.

This area should be elevated approximately one meter from the existing roof of the corridor of radiotherapy OPD to align and match with the floor of the existing Nuclear medicine space so that smooth movement of patients using trolley/wheelchair can be facilitated.

Appropriate steel/ concrete structure should be provided for this elevation of space.

The walls can be constructed with either bricks or prefabricated panels.

Slanting roofs can be provided with puffed metal or asbestos or any other durable material. The false roof should be provided.

The consultation room and TMT room should be air-conditioned.

IV. Consumables

- | | |
|-------------------------------|-----|
| 1. Tissue Paper A4 size rolls | 20 |
| 2. Absorbent Sheets | 200 |
| 3. Disposable Apron | 100 |
| 4. EDTA | 10 |
| 5. Potassium Permanganate | 10 |

Any other accessory deemed to be necessary for operating/using the unit should be offered. All details of the (make, model, specification) accessories should be submitted.

Turnkey Equipments

1. 21 ‘‘ TV – 2 Nos

Make – Sony

i. Water Purifier with Hot Water Facility- 2 Nos

- i. Should be RO water with hot water facility output of 20 liter per hours.
- ii. Should have cold and hot water output facility by using refrigeration and heating method respectively.
- iii. Storage capacity-1.5 liter for hot water and 6 liters for cold water. Purified water storage-16 liter/adequate to supply hot and cold
- ii. water continuously.
- iii. TDS of the output water should be between 0-50%.
- iv. Should have five stage filtrations.
 - i. One external filter.
 - ii. Sediment filter.
- v. Pre and post carbon filter.
- vi. 2 thin film composite 1812-75 membrane/ equivalent
- vii. Should be provided with external prefilter
- viii. Should be Wall mounted and ABS plastic body type.

i. Medical Grade Glass door Refrigerator with external temperature controls(300 Litre) – 2 Nos

- i. Should have upright type unit.
- ii. Should have a storage Capacity of (300-350) liters.
- iii. Should have adjustable temperature control range from +2 to +8 degree Celsius.
- iv. Should have a hermetically sealed type Compressor.
 - v. Refrigerant System: CFC Free Eco-friendly refrigerant R134a/R404a or equivalent.
- vi. The system should have positive, forced, air circulation to maintain temperature uniformity at all shelf levels, with quick recovery+/-1 degree Celsius.
- vii. The system should have sensors for activating automatic defrost cycle to minimize the frost build up.
- viii. Should have a temperature accuracy of +/-0.3degree.
- ix. The Inner Cabinet should be made of durable white epoxy painted steel.
 - x. The Outer Cabinet made up powder coated corrosion resistant sheet.
 - xi. The Door system should have lockable double glass doors for better safety, (self closing hinge doors)
 - xii. External ambient temperature:- should perform in ambient temperature up to +45 degree Celsius.
 - xiii. System should have large and clear digital displays for the set/run parameters.
 - xiv. Alarms
- ii. System should have audible/visual warnings for over-temperature, under temperature, power failure and low battery.
 - i. Should have Clear product visibility with dual glasses.
 - ii. Should have adjustable plastic coated wire mesh shelves.
 - iii. Number of shelves- 5-6 Numbers
 - iv. Power input :- 220-240V AC, 50Hz with power cord & plug
 - v. Automatic Voltage stabilizer with time delay restarts of appropriate ratings meeting ISI Specifications (Input 160-260V and output 220-240V and 50Hz).
 - vi. Should have FDA/ CE/ UL or BIS approved product.
 - vii. The unit should have fitted with castor wheels, front two with brakes.
 - viii. Should have No frost, fan-assisted cooling circulation system.

- ix. Ultra fast pull down, Auto defrost with self-evaporating drip tray.
- x. Should have Rear-to-front hot air anti-condensation.
- xi. Should have Digital temperature controller display.
- xii. Should have Full length illumination.
- xiii. Should have Low noise, Green technology & Energy saving (4/5 star rating).
- xiv.

4. Refrigerator Model B (with stabilizer): 1 No

- 1. Should have a Capacity of 160 Litres or above.
- 2. Shelves shall be of Toughened glass type.
- 3. Should have EEC 4 star rating or above

- 1. Should have inbuilt protection for voltage fluctuation or to be supplied with external stabilizer of adequate KVA capacity.

1. Public Address System

As mentioned in turnkey 1- detailed below

PA (patient call) system from the console area to the patient waiting area and between the console area & the equipment room.

1. CCTV cameras

As mentioned in turnkey 1- detailed below

CCTV with cameras in the equipment room, the console and other area with additional monitors installed in the room of the HOD

1. Online UPS

As mentioned in turnkey 1- detailed below

On-line UPS for the entire system with at least thirty minutes back up supply. In addition to this main UPS, additional UPS systems shall be supplied along with all other computer terminals/workstations/ accessories, wherever applicable. The batteries for the UPS systems shall be maintenance free and shall be looked after/replaced (whenever required) by the vendor throughout the warranty period of the main equipments.

1. All safety and warning gadgets.

As mentioned in turnkey 1- detailed below

All safety and warning gadgets like Gamma Zone Monitors, Contamination Monitors, voltage stabilizers, fire fighting systems, smoke detectors, fire alarms, electrical safety devices, glow signs, signages, air/fumes exhaust, waterproofing, water-logging protection etc, as may be necessary for the safety of the equipment, patients and personnel handling the equipment.

1. Patient Examination Couch with foot Steps: 2 Nos.

- a. Frame work made of rectangular / square M.S. Tube
- b. Overall Size: 180L x 60W x 46H cms.
- c. Legs fitted with PU stumps.
- d. Attendant Bed With Mattress
- e. Finish : Epoxy Powder Coated./ Baked Paint

1. Foot Steps: 2Nos

- Size 450mm(L)*450mm(W)*450mm(H)
- M.S. tubular frame with PVC stumps
- CRC sheet duly double press bent
- Rubber matting with aluminum beading

1. Washing machine: 1 No

- Fully automatic top loading/front loading
- Capacity 8 Litres or more
- Warranty: atleast 2 years on product and 10 years on motor
- Energy Rating 3 Star or above.

1. Iron Box: 1 No.

- Non-stick coated sole plate
- Super clean surface finish
- Extra lift at the back for easy gliding on clothes, Extra Light Weight
- Cool touch handle with comfortable grip
- 360 degree swivel cord
- Warranty: 2 years on product
- Power: 750 watts; Operating voltage: 230 volts

1. Ironing Board: 1 No.

- Product Dimension:- 131 * 35 * 6 CM, Product Weight:- 4.2 Kilograms
- Made of High-Quality Steel, Metal Grilled Iron Rest with Silicon Bush to Protect your Iron Base.
- Metal Top with Expanded Mesh for Optimal Steam Flow.
- 100% Cotton Cover prevents clothes from sticking to board.
- Felt made of high-quality fibers that hold and reflect heat, reducing ironing time and electricity.

1. Sources for Calibration to last for 10 years: 1No.

Co-57 flood source for SPECT-CT as recommended for system to be provided and replaced at end of useful life including return or used flood source for warranty and CMC period.

1. Projector with Screen DICOM enabled: 1No.

Projector with the display screen

1. Collapsible Wheel Chair: 2 Nos.

- Folding MS Powder coated Frame wheelchair with fixed arm & footrest
- Superior quality spoke wheels with united brakes.
- Seat width: 46 cms(approx); Max load bearing: 100 kgs(approx)
- Net Weight of wheelchair: 18 kgs(approx)

1. Vial Decapper: 1 No.

- a. Capacity 11mm,13mm,20mm,32mm
- a. Usage/Application Crimping
- a. Nozzle Size 11mm,13mm,20mm,32mm
- a. Material MS,SS
- a. Brand PCI Analytics
- a. Country of Origin Made in India
- a. Handle Material Plastic
- a. Diameter 5-10 mm

20 ml Vials Clear glass Crimp top for Headspace

10 ml Vials Clear glass Crimp top for Headspace

1. Kidney Tray: 4 Nos.

- a. Type of Product : Kidney Tray
- b. Material : Stainless Steel
- c. Size (inches) : 8 Inch
- d. Unit : 4

1. Tray (Rectangular) with lid: 4 Nos

- a. **Dimensions: 8* 6 inches**
- b. **Material:** Stainless Steel

1. Lead Goggles: 2 Nos.

Lead glass goggles frame with soft pliable vinyl held on head securely bind by an adjustable strap. Vents top and bottom to help prevent fogging. Eye shielding provided by 2" *4.25" single sheath of fluoroscopic quality lead glass which provides 2 mm lead equivalency

1. Steel tray with cover (Small): 4 Nos

- a. Type of Product : Kidney Tray
- b. Material : Stainless Steel
- c. Size (inches) : 6 Inch
- d. Unit : 4

1. Glucometer: 2 Nos

- a. Visual reassurance with target range indicator:
- b. Accurate blood glucose measurement: should fulfill ISO 15197:2013, EN ISO 15197:2015 standards of accuracy.
- c. At least 720 blood glucose results storage capacity
- d. Instant display of results
- e. With 200 test strips

26: Digital BP apparatus: 1 No

- a. Digital upper arm blood pressure monitor
- b. Storage at least 200 readings
- c. Smart alerts
- d. Dual display with a backlight
- e. Should work with batteries
- f. AC adapter to be included
- g. Accurate and Reliable Readings
- h. One-button measurement
- i. Auto power-off
- j. Compact and lightweight

27. Digital Thermometer: 2 Nos

- a. For Oral and Underarm Temperature Measurement
- b. Fast Measurement with selectable °C / °F
- c. Replaceable battery

28. Nebuliser: 1 No

- a. Medication capacity of 5 milliliters with 2-micrometer particles, Operating Air Flow Rate :50 KPa to 100 KPa, Particle Size (micro m): 0.5 to 10 micro m
- b. Average nebulizer rate of 0.2 milliliters/minute
- c. Open/close vent for user-selectable control of medication rate
- d. Power rating of 230 volts, 50 hertz

30. Emergency Trolley: 1 No

Stainless-Steel Emergency Medicine Trolley (Crash Cart)

31. Waste bin foot operated: 6 nos

- a. Make: Plastic
- b. Capacity: 20L
- c. Bin Type: Foot operated

32. Induction Cooker: 2Nos.

- a. LED display for power and temperature with high-grade electrical that protects against short circuits. Top plate should withstand very high temperatures.
- b. Smart timer for hands-free cooking, Cord length: 1.3 meters. Worktop Material: Carbon Steel
- c. Preset timer - auto switch off
- d. Soft push button, Temperature Control: Manual
- e. Warranty: 1 year on product
- f. Power Input: 220 V and Power Consumption: 1800 Watts

33. Tissue paper dispenser: 2 Nos

- a. Material Stainless Steel
- b. Mounting Type Wall Mount
- c. Paper Type : M-Folded, Z-Folded
- d. Item Dimensions L x W x H 26 x 10 x 28 Centimeters
- e. Should have transparent window and hold up to 400 pieces of interfolded paper towels.

34. Height measuring scale: 2 Nos

- a. Mobile height measuring scale
- b. With stable floor plate (moulded-ABS) provides the necessary stability and the easy-to-read scale along both sides of the measuring rod.
- c. Measuring Range 20 - 205 cm
- d. Graduation 1 mm

35. Aluminium Ladder 5 steps with support: 1 No.

- a. Product Weight:- 9.5 KG, Weight Holding Capacity (kg) : 120 - 150 kg
- b. Closed Size:- (L) 9 cm x (B) 45 cm x (H) 160 cm.
- c. Opening Size:- (L) 86 cm x (B) 48 cm x (H) 163 cm.
- d. Top Platform From Ground - 112 cm, Wide Steps:- 20*37 cm, Wide Platform:- 25*37 cm
- e. Material: Powder Coated Steel Pipes, Polypropylene Copolymer Steps, Rubber Boots, Foam Clad Handles

36. Covered Shoe Rack 20 pair capacity: 2 Nos.

38. Radiation Emergency Kit: 1 No

- 1. 30-gallon fiber drum
 - a. 2 pair Coverall, Disposable
 - b. 2 pair Shoe Covers, Disposable
- 2. Respirators - 2
- 3. Filters -4
 - a. 2 pair Gloves, Reusable
 - b. 1-gallon Radiacwash
 - c. 1 CSTR Radiacwash Wipes
 - d. 1 bottle Radiacwash Spray Mist, 1 liter
- 1. Poly Bags – 10nos
 - a. 12" Niptong
 - b. 1 each Sponge, mop, scrub brush, pail, rope, assorted signs

40. IV Infusion Stand: 2 Nos

SPECIFICATIONS OF FURNITURE

1. Office Table

- 1. Table - size : 1199 W x 590 D x 735 H
- 2. The top panels shall be made from 18 +/- 0.5 mm thick Pre - laminated boards as per with 2 mm thick PVC edge banding on all sides.
- 3. Understructure shall be made from 0.9 mm +/- 0.09 mm thick powder coated 50 microns (+/-10) CRCA MS.
- 4. Tubular Frame shall be dia. 25.4 +/- 0.3 mm x 1.2 +/- 0.096 mm thick MS ERW tube.
- 5. The modesty panel shall be made from 1.0 +/- 0.09 mm thick powder coated 50 microns (+/- 10).
- 6. The Storage shall be having shell 0.5 +/- 0.07 mm thick CRCA MS plus drawer tray 0.5 +/- 0.07 mm thick CRCA MS plus drawer front 0.8 +/- 0.1 mm thick CRCA MS.
- 7. There should be 10 lever cam lock plus handles built in plastic.
- 8. Should be GREENGUARD / SGS & BIFMA/ANSI certified.
- 9. The manufacturer should compliant with ISO 9001, 14001, 13485 & OHSAS 18001

1. Executive table

1. Main Table : 1800 W x 900 D x 750 H mm.
2. Side Unit size 1200 W x 445 D x 660 H mm.
3. Back Unit size : 2215 W x 410 D x 2000 H mm.
4. Top surface of the table shall be made up of MDF (Medium-density fibre) board duly finished with Veneer and final coating of PU.
5. The Main desk should contain an built keyboard pull-out tray for keeping keyboard of the computer.
6. The front modesty panel of the table shall be made up of an MDF board of size 1640 mm x 600 mm x 16mm which shall also be duly finished with Veener and PU coating.
7. For personal storage, one mobile pedestal (3 drawer unit) shall be provided of size 510 mm Width x 635 mm Height and 445 mm Depth.
8. The storage pedestal shall also be made up of MDF duly finished with veneer & final coating of PU.
9. The side unit shall be made up of MDF board duly finished with Veneer and final finish by PU Coating.
10. The design of the side unit shall be such that it can be placed on either side of the main table.
11. The side unit shall contain open space for keeping CPU in the extreme right side, one closed storage shutter at the extreme left end & open space in the middle with one shelf for keeping files.
12. The thickness of the top of the side unit shall be 25mm.
13. The back unit shall be made up of MDF board duly finished with veneer & final finish by PU coating.
14. Below storage shall be provided with wooden shutters & the upper left & right side of the back unit shall also be provided with wooden shutters.
15. The middle 3 door shutters should be of glass of minimum 5mm thick for display purpose.
16. The hardness of the PU coating shall be 1.5H.

1. Executive Chair

1. Back: (W) 49.0 cm x (H)71.0Cm,
2. Seat : (W) 49.0 cm x (D) 44.0 cm
3. Overall Dimensions of Chair : Seat Height - min 41.0to max 53.0cm, Height - min 100.0 to max 112.0cm.
4. Width & Depth of Chair as measured from pedestal - Width-76.3 cm and Depth-76.3 cm.
5. The seat and back shall be made up of 1.2+/-0.1cm thick hot pressed plywood measured as per QA method described in OCP-QLTA-P14-18 and upholstered with fabric and molded polyurethane foam with PVC lipping all around.
6. The molded polyurethane foam shall be of density $45 \pm 2 \text{kg/m}^3$, and hardness load $16 \pm 2 \text{kgf}$ as per
7. The dimensions of seat shall be- 49.0cm(W) x 44.0cm(D) and of back shall be 49.0cm(W) x 71.0cm(H).
8. The one-Piece armrests should make of black integral skin polyurethane with 50-70 shore 'A' Hardness and reinforced with M.S insert.
9. The armrests shall be scratch and weather resistant.
10. The armrests shall be fitted to the seat with seat/armrest connecting strip assembly made of $0.5 \pm 0.05 \text{cm}$ thick HR steel.
11. The mechanism of the chair shall have the following facilities :
 - a. 360° revolving type, Center tilt synchro mechanism,
 - b. Tilt tension adjustment, Upright position locking,
 - c. 17 degree ± 2 maximum tilt on pivot at the center.
1. The chair shall be provided with pneumatic height adjustment which shall have a stroke of $12.0 \pm 0.3 \text{ cm}$.
2. The bellow should be 3 pieces telescopic type and injection molded in black polypropylene.
3. The pedestial shall be injection molded in black 33% glass-filled Nylon-66.
4. It shall be fitted with 5 nos twin wheel castor.
5. The size of the pedestal shall be $66.3 \pm 0.5 \text{ cm}$ pitch-center-dia $76.3 \pm 1.0 \text{ cm}$ with castors.
6. The twin wheel castors shall be made black nylon.
7. Dimensions tolerance/variatiions shall be within $\pm 1 \text{ cm}$.

1. Teapoy

1. Overall Dimension 1000 mm x 650 mm x 450 mm
2. Certified coffee table made up of MDF understructure and toughened glass top.

1. Almirah Steel

1. Overall Dimension=916mm(W)x486mm(D)x1980mm(H)
2. Shelf thickness- 0.7mm
3. Back thickness - 0.8mm
4. Door thickness- 0.8mm
1. All other components shall have a minimum thickness of 0.9mm.
2. It should have welded construction.
3. The components shall be made of CRCA sheet.
4. The Almirah should have a Mazak (base metal of zinc and alloying) handle and Three way locking mechanism with Shooting Bolts.
5. The Almirah Should have a height wise adjustable shelf mounting with Uniformly Distributed Load Capacity of max 40 Kg and also a M10 Screw type Leveller with Hex plastic base.
6. The finished product should be Epoxy powder coated to the thickness of 50 microns (+/- 10).
7. Should be GREENGUARD / SGS & BIFMA/ANSI certified.
8. The manufacturer should compliant with ISO 9001, 14001, 13485 & OHSAS 18001

1. Computer Chair (Revolving)

1. Back: (W) 49.0 cm x (H)47.0Cm,
2. Seat : (W)49.0 cm x (D) 44.0 cm
3. Overall Dimensions of Chair; Seat Height - min 41.0to max 53.0cm, Height - min 77.5 to max 89.5cm.
4. Width & Depth of Chair as measured from pedestal - Width-76.3 cm and Depth-76.3 cm. Dimensions tolerance/variatio ns shall be within ± 1 cm.
5. The seat and back shall be made up of 1.2+/-0.1cm thick hot pressed plywood measured as per the Quality Assurance method and upholstered with fabric and molded.
6. The molded polyurethane foam shall be of density 45+/-2kg/m³, and hardness load 16+/-2kgf
7. The one-Piece armrests should made of black integral skin polyurethane with 50-70 shore 'A' Hardness and reinforced with M.S insert.
8. The armrests shall be scratch and weather resistant.
9. The armrests shall be fitted to the seat with seat/armrest connecting strip assembly made of 0.5+/-0.05cm thick HR steel. The mechanism of the chair shall have following facilities :
 - a. 360° revolving type, Center tilt synchro mechanism,
 - b. Tilt tension adjustment, Upright position locking
 - c. 17 degree ± 2 maximum tilt on pivot at the center.
1. The chair shall be provided with a pneumatic height adjustment which shall have stroke of 12.0 \pm 0.3 cm.
2. The bellow should be 3 pieces telescopic type and injection molded in black polypropylene.
3. The pedestal shall be injection molded in black 33% glass-filled Nylon-66. It shall be fitted with 5 nos twin wheel castor.
4. The size of the pedestal shall be 66.3 \pm 0.5 cm pitch-center-dia (76.3 \pm 1.0 cm with castors).
5. The twin wheel castors shall be made black nylon.
6. Should be GREENGUARD / SGS & BIFMA/ANSI certified.
7. The manufacturer should compliant with ISO 9001, 14001, 13485 & OHSAS 18001

1. Computer Table

1. Size : 1200 W x 600 D x 750 H
2. Tabletop shall be 18 mm PPB with 35 Kgs , shelf shall be 12.5 Kgs
3. The drawer shall be 506 KGS.

4. 3 mm prelim MDF board.
5. Metal parts shall be BM Slide For Keyboard plus castor mounting table plus locking bracket plus angle clip.
6. Hardware shall be Screw, KD fitting, Wooden Dowel, PVC inserts.
7. Construction shall be KD fitting , Wooden dowel & Angle Clip.
8. Should be GREENGUARD / SGS & BIFMA/ANSI certified.
9. The manufacturer should be compliant with ISO 9001, 14001, 13485 & OHSAS 18001

1. Revolving cushion stool

1. Overall Sizes Diagonal Leg Dia 538 mm H470 min-655 mm max
2. SS 304 made a sheet with a spin section of thickness 1mm & should be noncorrosive.
3. It should have a diameter of 305mm, seat base is made of MS ring and rectangular tube.
4. EN8 Screw having dia of 22 mm should be used for height adjustment of the seat base.
5. The hub should be made of MS ERW tube having dia of 38mm and thickness 2mm.
6. The Hub should be welded with the legs and it should accommodate and cover the lead screw mechanism.
7. The understructure should consist of 4 legs made up of MS ERW tube of diameter 25.4 mm and 1.6mm thick.
8. The press-formed pipe leg should give a round & clean look. All the legs should be provided with 4 nos of Nylon-6 bush.
9. All metal components should be pre-treated with zinc phosphating in 9 tank process and then powder coated with anti microbial epoxy polyester powder coating .
10. Test certificates should be provided for proof loading test , cycle tests, impact test, salt spray test.
11. Should be GREENGUARD / SGS & BIFMA/ANSI certified.
12. The manufacturer should be compliant with ISO 9001, 14001, 13485 & OHSAS 18001

9. Combination Chair (3 x 3)

1. The seat shell should be a welded assembly of seat, back and side frame.
2. The seat and back should be made of 0.12 ± 0.013 cm thick CR steel sheet with oblong perforations.
3. Should be welded to the side frame of size 3.2 ± 0.05 cm x 0.5 ± 0.05 cm thick HR steel.
4. The welded assembly should be powder-coated (DFT 40-60 microns).
5. The seat should have a front waterfall edge to provide popliteal clearance for comfortable seating. It also should have a buttock support curve to provide rear support and should also prevent small children from falling through the gap between seat and back.
6. The seat and back should be clean and have flat surfaces.
7. The dimensions of the seat should be 47 cm (W) x 44cm (D) and of back shall be 41 cm (W) x 23 cm (H).
8. Understructure assembly should have connecting beam and leg assembly made of M.S.E.R.W. oblong tube of size 7.5 ± 0.03 cm x 5.0 ± 0.03 cm x 0.2 ± 0.016 cm thick.
9. The welded structure assembly should be powder-coated (DFT 40-60 microns).
10. The leg assembly should be fitted with shoes and levelers in Nylon.
11. The leg structure should be designed with a minimal area of contact close to the ground providing easy access for cleaning purposes.
12. The shoes fitted to leg assembly should help in aligning the structure for back-to-back arrangements.
13. Levelers should take care of uneven flooring. Connecting beam shall be fitted with a snap locking end cap. Side-by-side understructure alignment should be possible.
14. The armrest assembly should have an armrest frame and armrest pad. The armrest frame shall be made up of size 3.175 ± 0.05 cm x 0.47 ± 0.027 cm thick HR steel and it should be powder-coated (DFT 40-60 microns).
15. The armrest pad should be injection moulded in Nylon and should be fitted onto the armrest frame.
16. Overall Dimensions should be Seat Height - 44.1 cm, Height - 78.5 cm, Width & Depth of Chair as measured from pedestal - Width-169.5cm and Depth-63.8 cm.
17. Should be GREENGUARD / SGS & BIFMA/ANSI certified.
18. The manufacturer should be ISO certified.

10. Non Revolving Chair

1. The seat and back should be made up of 1.2 ±0.1cm thick hot-pressed plywood measured as per QA method described in OCP-QLTA-P14-18 and upholstered with fabric upholstery covers and molded Polyurethane foam.
2. The back foam should be designed with contoured lumbar support for extra comfort.
3. The seat should be extra thick foam on the front edge to give comfort to the popliteal area.
4. The dimensions of back should be 47 cm(W) x 47.0 cm(H) and of the seat should be 47.0 cm (W) x 43.0 cm (D- lumbar point to seat edge).
5. The High resilience polyurethane foam should be molded with a density not less than 45kg/m³.
6. The one-piece armrests should be injection molded from black Polypropylene.
7. Overall Dimensions (approx) of Chair should be Seat Height - 46cm, Height - 89cm, Width & Depth of Chair as measured from pedestal - Width-61 cm and Depth-64 cm.
8. Should be GREENGUARD / SGS & BIFMA/ANSI certified.
9. The manufacturer should be ISO certified.

11. Steel Almira with Mirror

1. Overall Dimension=916mm(W)x486mm(D)x1980mm(H)
 2. Shelf thickness- 0.7mm
 3. Back thickness - 0.8mm
 4. Door thickness- 0.8mm
-
1. All other components shall have a minimum thickness of 0.9mm.
 2. It should have welded construction.
 3. The components shall be made of a CRCA sheet.
 4. The Almira should have a Mazak (base metal of zinc and alloying) handle and a Three-way locking mechanism with Shooting Bolts.
 5. The Almira Should have a height-wise adjustable shelf mounting with Uniformly Distributed Load Capacity of max 40 Kg and also an M10 Screw type Leveller with Hex plastic base.
 6. The finished product should be Epoxy powder coated to the thickness of 50 microns (+/- 10).
 7. The manufacturer should compliant with ISO 9001, 14001, 13485 & OHSAS 18001
 8. Should be with a mirror
 9. Should be GREENGUARD / SGS & BIFMA/ANSI certified

CRCA - Cold Rolled Closed Annealed

MSERW - Mild Steel Electric Resistance Welded

UDL - Uniform Distribution Load

DFT - Dry Film Thickness

KD - Knock Door

PPB - Prelaminated Particle Board

MDF - Medium Density Fibre

LIST OF MATERIALS OF APPROVED BRAND AND/OR MANUFACTURED AS PER IS SPECIFICATION

Civil

Sl. no	Item	Makes
1	Vitrified Tiles	RAK, Johnson, Khajaria, Somani
2	Ceramic Floor Tiles	RAK, Johnson, Khajaria, Somani
3	Ceramic Wall Tiles	RAK, Johnson, Somani, Khajaria
4	HD Digital wall tiles	Somani/ Grestek Nxt
5	PVC Pipes (10 kg/cm ²)	Supreme/ Finolex
6	PVC pipes (6kg/cm ²)	Supreme, Phenolex
7	Valves	Zoloto/Wiking
8	Exterior Emulsion	Jotun, Asian
9	Plastic emulsion	ICI, Asian, Nerolac
10	Wall putty	Altech, Asian, JK, Birla
11	Cement paint	Surfacem, Snowcem, Nerocem
12	Plywood	Green Ply, Century
13	Patch fittings/ Door locks & Door closers	Godrej, 'Dorma', Merit
14	Laminate	Decolam, Formica, Greenlam, Green Ply, Anchor
15	False ceiling	Armstrong, AMF, Comceil, India gypsum/Saint Gobain, Vansgypsum
16	Glass (all types)	Saint Gobain, Modiguard, Hindustan, Asahi, Triveni
17	Hardware (locks)	Godrej, Merit, Dorma
18	Cement	Malabar/ Sankar/Ultratech/Ambuja, ACC, RAMCO
19	Exterior paint	Jotun / Asian/ Nerolac
20	Gypsum or Calcium Silicate	Gypboard, Hilux Ceiling
21	Sanitary fittings	Jaguar, Marc, Roca
22	Sanitary ware	RAK, Toto, American Standard, Parryware, CERA, Hindware
23	Aluminium Powder coating	Bhoruka, Hindalco, Metacoats
24	Aluminium Extrusion	Bhoruka, Hindalco, Jindal/Indal

Electrical

sl.No	ITEM	Make of Materials/Equipment
1	1.1 kV grade XLPE insulated PVC sheathed Al./ Cu. Cable	CCI, NICCO, Torrent, Universal, Havells, Gloster, Finolex, KEI
2	MCCB	Siemens, Schneider, GE, L&T, C & S, Legrand,
3	Capacitor	L&T, Saha Sprague, GE, Shreem, Epcos, Schneider
4	Starters, Timer & Contactors	Siemens, L&T, Schneider, C&S, BCH, GE.
5	SDFU, Isolator, SFCOS	L&T, Siemens, Schnieder, GE.
6	Push Buttons	Teknic, Schneider, Siemens, BCH, C&S, L & T
7	Indicating lamps (LED type)	Teknic, Schneider, Siemens, BCH, C&S, L & T
8	Fuses/Fuse carriers	Siemens, L & T, Schneider, GE
10	Integrating meters	SIMCO, L&T, Siemens, AE, Schneider, Secure, Socomec
11	Instrument Transformer	AE, Intrans, Kappa, Intech, PGR, Powertech, Resitech
12	Selector switches	Reco, Essen, Kaycee, L&T, C & S, Siemens, Schnieder, BCH, Teknic
13	660/1100 volt grade stranded unsheathed wire with copper conductor	Finolex, RR Kabel, L&T, Lapp Kabel, V-Guard, Polycab
14	PVC Conduit	Konseal,Balco,Precision,Clipsal
15	TOD meter	L&T, Schneider, Secure
16	Exhaust Fans	Almonard, Crompton, Polar, Khaitan, Bajaj.
17	Light Fittings	Philips, Wipro, Crompton Greaves,
18	LED light fixtures	Philips, Crompton greaves, Wipro.
19	LED Chip	CREE, Philips, Nichia
20	Modular type switches, sockets, bell push, fan regulator etc.	Crab Tree(Athena), Legrand(Mosaic), Wipro (Northwest), Kolors (krest).
21	Ceiling fan	Crompton Greaves, Polar, Usha, Khaithan
22	Metalclad plug/socket/Decontactor	Legrand, C & S, Schnieder, Hagger,
23	Thermoplastic industrial type plug/ socket / decontactor	Hensel, MK
24	MCB, RCBO,RCCB	Legrand, Siemens, L&T, Hagger, Schneider, V- guard.
25	MCB Distribution Boards	Legrand, Siemens, L&T, Hagger, Schneider.
26	Nitrile rubber insulation	Armaflex/K-flex/Totaline

APPROVED MAKES OF ITEMS

1. AC – DX Split units - Carrier/Hitachi/Mitsubishi/Bluestar/Voltas

2. Three-phase motors - Siemens/Kirloskar/Crompton/Bharath

Bijlee /ABB /Alstom

3. GI Sheets - SAIL/TATA/JINDAL

4. Resin-bonded Glass wool - UPTWIGA /Owens Corning/KIMMCO

5. Grilles/Diffusers - Airmaster/Carryaire/Air Flow/Sachins

Ravistar

6. Stabilizer - V-Guard/Voltas

7. UPVC Pipe - Any ISI marked

8. Volume Control Dampers - Carryaire/Airmaster/Air Flow

9. Paints - ICI/Asian/Berger

10. Exhaust Blowers - Kruger/ System Air/ Nadi/Almonard

11. Pipe Insulation - Totaline/K-flex/Armacell

12. Acoustic Insulation - Armacell/K-flex/KIMMCO

13. Underdeck Insulation - Armacell/K-flex/KIMMCO

14. Refrigerant Piping - Totaline/Mandev/Piyush

15. Motorised Volume Control Damper Actuator

- BELIMO/HONEYWELL/SIEMENS.