



**WEST BENGAL MEDICAL SERVICES CORPORATION LTD.**  
(Wholly owned by the Government of West Bengal)  
Swasthya Sathi, GN-29, Sector-V, Salt Lake, Kolkata-700 091.

**CORRIGENDUM – I**  
**TO**  
**BIDDING DOCUMENTS**  
**FOR**

**Planning, Design and Construction of 2 Government Medical Colleges and Hospitals in the State of West Bengal on Turnkey Basis**

**Bid Reference No.: WBMSCL/NIT- 220/2020**

**Dated – 12.11.2020**

Sl. No.	Page No.	Section No.	Clause No.	Current Clause/ Provision	Changed Clause/Provision
1	3	1	1	West Bengal Medical Services Corporation Ltd. (WBMSCL), Swasthya Sathi, GN- 29, Sector – V, Salt Lake, Kolkata - 700091, West Bengal has been entrusted by the Health & Family Welfare Department, Government of West Bengal, in terms of the Department's Order Nos. HF/O/MERT/1034/HFW-24013(15)/14/2018 dated 2 November 2020 and HF/O/MERT/1032/W-66(15)/2019 dated 2 November 2020 to establish and develop on their behalf to develop 2 nos. of Government medical colleges and hospitals in the State of West Bengal having capacity of 100 students for admission in 5 years' MBBS course in terms of National Medical Commission Guidelines, under the National Medical Commission Act, 2019 ("NMC Guidelines") in <b>one packages</b> , as shown in the table below.	West Bengal Medical Services Corporation Ltd. (WBMSCL), Swasthya Sathi, GN- 29, Sector – V, Salt Lake, Kolkata - 700091, West Bengal has been entrusted by the Health & Family Welfare Department, Government of West Bengal, in terms of the Department's Order Nos. HF/O/MERT/1034/HFW-24013(15)/14/2018 dated 2 November 2020 and HF/O/MERT/1032/W-66(15)/2019 dated 2 November 2020 to establish and develop on their behalf to develop 2 nos. of Government medical colleges and hospitals in the State of West Bengal having capacity of 100 students for admission in 5 years' MBBS course in terms of National Medical Commission Guidelines, under the National Medical Commission Act, 2019 ("NMC Guidelines") in <b>one package</b> , as shown in the table below.
2	7	1	8.(iii).N.B.-(3)	Eligible projects/similar works/ works of similar nature shall mean works executed in India and carried out for any Central/State Government Authority/Public Sector Undertaking/Government Companies comprising of Design and Construction of RCC framed non-residential complex with all supporting facilities with works including Public Health, internal and external electrical works, Firefighting works, air-conditioning and mechanical ventilation system, Lift, Sewerage Treatment Plant, Internal Roads, Drains, Landscaping and installation of sub-station. Eligible projects/similar works/ works of similar nature shall exclude road/ highway/ bridge/airport/railway/sea port/dry port residential housing/ industrial projects/irrigation works	Eligible projects/similar works/ works of similar nature shall mean works executed in India and carried out for any Central/State Government Authority/Public Sector Undertaking/Government Companies comprising of Design and Construction of RCC framed non-residential complex with all supporting facilities with works including Public Health, internal and external electrical works, Firefighting works, air-conditioning and mechanical ventilation system, Lift, Sewerage Treatment Plant, Internal Roads, Drains, Landscaping and installation of sub-station. Eligible projects/similar works/ works of similar nature shall exclude road/ highway/ bridge/airport/railway/sea port/ <b>dry port/residential housing project (excluding any non-residential component of such residential housing project)</b> / industrial projects/irrigation works
3	8	1	8.(iii).(f)	The bidder is presently <b>not barred/ blacklisted</b> by any department, authority or body corporate under the Government of India or any State Government.	The bidder is <b>not (a) presently barred/blacklisted by any department, authority or body corporate under the Government of India or any State Government and/or (b) previously or presently under any breach of any erstwhile or existing contracts (including any breach of the provisions pertaining to furnishing of bid security or performance guarantee) with any department, authority, or body corporate under the Government of India or any State Government.</b>
4	21	2	4.1.N.B.-(3)	Eligible projects/similar works/ works of similar nature shall mean works executed in India and carried out for any Central/State Government Authority/Public Sector Undertaking/Government Companies comprising of Design and Construction of RCC framed non-residential complex with all supporting facilities with works including Public Health, internal and external electrical works, Firefighting works, air-conditioning and mechanical ventilation system, Lift, Sewerage Treatment Plant, Internal Roads, Drains, Landscaping and installation of sub-station. Eligible projects/similar works/ works of similar nature shall exclude road/ highway/ bridge/airport/railway/sea port/dry port residential housing/ industrial projects/irrigation works	Eligible projects/similar works/ works of similar nature shall mean works executed in India and carried out for any Central/State Government Authority/Public Sector Undertaking/Government Companies comprising of Design and Construction of RCC framed non-residential complex with all supporting facilities with works including Public Health, internal and external electrical works, Firefighting works, air-conditioning and mechanical ventilation system, Lift, Sewerage Treatment Plant, Internal Roads, Drains, Landscaping and installation of sub-station. Eligible projects/similar works/ works of similar nature shall exclude road/ highway/ bridge/airport/railway/sea port/ <b>dry port/residential housing project (excluding any non-residential component of such residential housing project)</b> / industrial projects/irrigation works

5	23	2	4.1.(f)	The bidder is presently <b>not barred/ blacklisted</b> by any department, authority or body corporate under the Government of India or any State Government.	The bidder is <b>not (a) presently barred/blacklisted by any department, authority or body corporate under the Government of India or any State Government and/or (b) previously or presently under any breach of any erstwhile or existing contracts (including any breach of the provisions pertaining to furnishing of bid security or performance guarantee) with any department, authority, or body corporate under the Government of India or any State Government.</b>
6	33	2	11.3	The Financial Bid for each package shall comprise of : (i) Bill of Quantity (“BOQ”) in the specified format in respect of the <b>package(s)</b> , the bidder is submitting bid for, being the cost for planning, designing and construction including supply, installation, testing, commissioning and training of personnel pertaining to specified electrical, mechanical and electromechanical items inclusive of <b>all taxes and charges</b> in respect of all the sites in the package taken together, which are sub-categorised in the BOQ as follows.....	The Financial Bid for each package shall comprise of : (i) Bill of Quantity (“BOQ”) in the specified format in respect of the <b>package</b> , the bidder is submitting bid for, being the cost for planning, designing and construction including supply, installation, testing, commissioning and training of personnel pertaining to specified electrical, mechanical and electromechanical items inclusive of <b>all taxes, cess (including labour cess) and charges</b> in respect of all the sites in the package taken together, which are sub-categorised in the BOQ as follows.....
7	34	2	11.3.N.B.-(3)	<b>If a bidder is bidding for both the packages</b> , the documents referred to in the Statutory Cover folder of the Technical Bid documents and the Financial Bid documents <b>are required to be submitted separately for both the packages.</b>	<b>The bidder is required to upload</b> , the documents referred in the Statutory Cover folder of the Technical Bid documents and the Financial Bid documents .
8	35	2	13.4	All <b>duties, taxes, and other levies</b> payable by the Selected Bidder under the Contract, or for any other cause, shall be considered to be included in the prices and the total Bid Price submitted by the bidder. The Bid Price quoted by the bidder shall be final and shall not be adjusted and/or increased for change in any <b>duty / tax / other levies</b> or outgoings and/or any levy of any additional duty or <b>tax or other levies</b> which are not earlier payable In other words, the Selected Bidder will not be paid anything more than the Bid Price, which is all inclusive.	All <b>duties, taxes, cess (including labour cess), and other levies</b> payable by the Selected Bidder under the Contract, or for any other cause, shall be considered to be included in the prices and the total Bid Price submitted by the bidder. The Bid Price quoted by the bidder shall be final and shall not be adjusted and/or increased for change in any <b>duty / tax / cess (including labour cess)/ other levies</b> or outgoings and/or any levy of any additional duty or tax or other levies which are not earlier payable In other words, the Selected Bidder will not be paid anything more than the Bid Price, which is all inclusive.
9	37	2	18.1	The bidder shall as part of its bid, make payment of an amount of Rs. 80,00,000/- (Rupees Eighty Lakhs only) out of the Earnest Money Deposit (EMD) /Bid Security of Rs. 8,00,00,000/- (Rupees Eight Crores only) for <b>each package</b> , by way of net banking, in the website <a href="http://www.wbtenders.gov.in">www.wbtenders.gov.in</a> . The balance amount of Rs. 7,20,00,000/- (Rupees Seven Crores Twenty Lakhs only) shall be provided by way of Bank Guarantee, issued by a scheduled bank, scanned copy of which shall be uploaded in the relevant folder.	The bidder shall as part of its bid, make payment of an amount of Rs. 80,00,000/- (Rupees Eighty Lakhs only) out of the Earnest Money Deposit (EMD) /Bid Security of Rs. 8,00,00,000/- (Rupees Eight Crores only) for <b>the package</b> , by way of net banking, in the website <a href="http://www.wbtenders.gov.in">www.wbtenders.gov.in</a> . The balance amount of Rs. 7,20,00,000/- (Rupees Seven Crores Twenty Lakhs only) shall be provided by way of Bank Guarantee, issued by a scheduled bank, scanned copy of which shall be uploaded in the relevant folder.

10	50	2	39.1	Mobilisation Advance not exceeding 10% of the Contract Price may be given, if requested by the Selected Bidder/Contractor in writing within 30 (thirty) days of the issue of Notification of Award. The Employer shall pay the Mobilisation Advance to the Contractor, in the following 2 tranches, upon completion of the following events :- (a) First tranche of 5% of the Mobilisation Advance shall be paid by the Employer, upon completion of the following events/ activities: (i) Construction of labour camp, Contractor's site office and making arrangements for water supply (ii) Construction of the Employers' temporary site office at the site. (iii) Obtaining a Mobilisation Advance Bank Guarantee from a scheduled bank as per form given in Section - 7 (Contract Forms) aggregating to the full amount of Mobilization Advance (including both tranches) in favour of the Employer and submission of such Bank Guarantee to the Employer.	Mobilisation Advance not exceeding 10% of the Contract Price may be given, if requested by the Selected Bidder/Contractor in writing within 30 (thirty) days of the issue of Notification of Award. The Employer shall pay the Mobilisation Advance to the Contractor, in the following 2 tranches, upon completion of the following events:- (a) First tranche of the Mobilisation Advance equivalent to 5% of the Contract Price shall be paid by the Employer, upon completion of the following events/ activities: (i) Construction of labour camp, Contractor's site office and making arrangements for water supply (ii) Construction of the Employers' temporary site office at the site. (iii) Obtaining a Mobilisation Advance Bank Guarantee from a scheduled bank as per form given in Section - 7 (Contract Forms) aggregating to 5% of the Contract Price, being equivalent to the first tranche of the Mobilization Advance, in favour of the Employer and submission of such Bank Guarantee to the Employer.
11	51	2	39.1.(b)	Second tranche of 5% of Mobilisation Advance will be released by the Employer to the Contractor, upon completion of payment by the Employer, of 15% of the total Tendered Amount.	Second tranche of 5% of Mobilisation Advance will be released by the Employer to the Contractor, upon completion of payment by the Employer, of 15% of the total Tendered Amount and upon the Contractor obtaining a Mobilisation Advance Bank Guarantee from a scheduled bank as per form given in Section - 7 (Contract Forms) aggregating to 5% of the Contract Price, being equivalent to the second tranche of the Mobilization Advance, in favour of the Employer and submission of such Bank Guarantee to the Employer.
12	78	4	Form - 14	<b>MANUFACTURER'S AUTHORISATION FORM</b>	<b>DELETED</b>
13	108	5.2B	9	Teaching Hospital (300 Beds) as per norms of National Medical Commission(NMC)	Teaching Hospital as per norms of National Medical Commission(NMC)
14	112	5.3	Hospital Building	<b>300 Beds (Minimum Corridor width 4.00 M to 5.00M)</b>	<b>250 Bed (Minimum Corridor width 3.60 M to 4.20M)</b>
15	128	5.4.A	10, Stair Case, Academic Building & Other Buildings (Door Frame)	Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm	Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm <b>(2 hrs fire rated)</b>
16	130	5.4.A	11, Stair Case, Boys & Girls Hostel Building (Door Frame)	Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm	Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm <b>(2 hrs fire rated)</b>

17	131	5.4.A	11, Stair Case, Interns & Resident Doctor's Hostel Building (Door Frame)	Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm	Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm <b>(2 hrs fire rated)</b>
18	132	5.4.A	12, Stair Case, Teaching staff quarter, Non-Teaching Staff Quarter and Nurses Quarter Building (Door Frame)	Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm	Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm <b>(2 hrs fire rated)</b>
19	133	5.4.A	14, Stair Case, OPD/Hospital Building (Door Frame)	Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm	Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm Powder coated MS door frame confirming to IS 4351 latest publication with minimum sheet metal thickness 1.60mm <b>(2 hrs fire rated)</b>
20	157	5.5	2.I.	Construction of Medical college buildings comprising Administrative Building and various Departments.	Construction of Medical college buildings comprising Administrative <b>Block</b> and various Departments.
21	157	5.5	2.IV	300 Bed Capacity Teaching Hospital at Uluberia.	<b>250</b> Bed Capacity Teaching Hospital at Uluberia.
22	159	5.5	4.B.5.a.	Internal Compound Concrete Road along <b>with covered</b> paved pathway to provide connectivity between <b>Administrative block &amp; Department block</b> . Internal Compound Concrete Road have to be developed connecting all the infrastructures for respective campus upto the entry and exit of both the campuses of each Medical College & Hospital.	Internal Compound Concrete Road along with paved pathway to provide connectivity <b>in between different buildings</b> . Internal Compound Concrete Road have to be developed connecting all the infrastructures for respective campus upto the entry and exit of both the campuses of each Medical College & Hospital.
23	159	5.5	4.B.5.b.	Development of both the campuses of each Medical College & Hospital for Academic Building, OPD/Hospital, Residential Quarter, Hostels and other units comprising suitable landscaping, boundary wall, and internal concrete road connectivity with storm water drainage network connected with municipality drain, if any, and to the nearest natural outfall where municipality drain is not available.	Development of both the campuses of each Medical College & Hospital for Academic Building, OPD/Hospital, Residential Quarter, Hostels and other units comprising suitable <b>land cutting or filling as and where required</b> , landscaping, boundary wall, and internal concrete road connectivity with storm water drainage network connected with municipality drain, if any, and to the nearest natural outfall where municipality drain is not available.

24	159	5.5	4.B.5.c.	All approach concrete roads (upto nearest National Highway/State Highway/Major District Road) along with storm water drainage system, & Pathways <b>inside premises</b> for all the campuses have to be developed. In case of construction of Culvert, IRC Class 70R/Class A/Class AA loading has to be followed as per approval of the Employer. Ministry of Road Transport Highways (MoRTH) Specification has to be followed for connection of Road with National Highway . In other instances respective authorities has to be contacted.	All approach concrete roads (upto nearest National Highway/State Highway/Major District Road) along with storm water drainage system, Pathways <b>and landscaping</b> for all the campuses have to be developed. In case of construction of Culvert, IRC Class 70R/Class A/Class AA loading <b>&amp; other IRC Codes</b> has to be followed as per approval of the Employer. Ministry of Road Transport Highways (MoRTH) Specification has to be followed for connection of Road with National Highway . In other instances respective authorities has to be contacted. <b>Separate entry and exit gate with proper signage as well as one security room (3M x 3M) for each entry and exit for both the campuses of each Medical College &amp; Hospital has to be provided.</b>
25	162	5.5	5.xiv.	Standard store room for collection of Bio-Medical waste comprising of Bio-Medical waste Plant.	Deleted
26	163	5.5	9.c.iii.	<b>Exterior paint over plastered surface</b>	Deleted
27	164	5.5	9.d.ii.	Exterior paint over plastered surface.	Exterior <b>textured</b> paint over plastered surface.
28	164	5.5	9.e.i.	Exterior paint over plastered surface.	Exterior <b>textured</b> paint over plastered surface.
29	164	5.5	9.f.iii.	<b>Exterior paint over plastered surface</b>	Deleted
30	165	5.5	11	The Contractor must ensure that the works conform to the quality standards up to the satisfaction of the Employer. The contractor shall submit his quality enforcement plan for monitoring. The works, plant and materials shall be subject to tests from time to time as per best practices in the industry. Wherever mentioned in the Contract, the tests must be carried out at the Contractor's expense. The materials, fitting & fixtures shall be procured from reputed make & vendors approved by the EMPLOYER. The Contractor must also supply samples of such material to the Engineer of EMPLOYER for approval and they must carry out the laboratory & field tests as and when required by the Engineer of EMPLOYER and / or in conformity with relevant IS-Code	The Contractor must ensure that the works conform to the quality standards up to the satisfaction of the Employer. The contractor shall submit his quality enforcement plan for monitoring. The works, plant and materials shall be subject to tests from time to time as per best practices in the industry. Wherever mentioned in the Contract, the tests must be carried out at the Contractor's expense. The materials, fitting & fixtures shall be procured from reputed make & vendors approved by the EMPLOYER. The Contractor must also supply samples of such material to the Engineer of EMPLOYER for approval and they must carry out the laboratory & field tests as and when required by the Engineer of EMPLOYER and / or in conformity with relevant IS-Code.  <b>N.B. Course Aggregate of Pakur/Panchami variety have to be used in construction.</b>
31	169	5.5	13.3.viii	Solid waste generated in the medical college as well as OPD/Hospital shall be collected separately, according to the category of wastes and sent to disposal facility. The garbage room shall be in place to store different categories of waste.	Deleted
32	171	5.5	14.9	KAJARIA/JOHNSON : ACADEMY BUILDING KAJARIA/JOHNSON : OPD/Hospital Building NITCO/RAK : BOYS AND GIRLS HOSTEL CERA/ORIENT BELL : TEACHING STAFF QUARTER CERA/ORIENT BELL : NON TEACHING STAFF QUARTER SOMANY/KAJARIA: INTERNS HOSTEL SOMANY/AGL: NURSES HOSTEL NITCO/RAK : RESIDENTIAL DOCTORS HOSTEL	<b>KAJARIA/JOHNSON/NITCO/RAK : ACADEMY BUILDING KAJARIA/JOHNSON/NITCO/RAK : OPD/Hospital Building NITCO/RAK/SOMANY/AGL : BOYS AND GIRLS HOSTEL CERA/ORIENT BELL/SOMANY/AGL : TEACHING STAFF QUARTER CERA/ORIENT BELL/SOMANY/AGL : NON TEACHING STAFF QUARTER NITCO/RAK/SOMANY/AGL: INTERNS HOSTEL CERA/ORIENT BELL/SOMANY/AGL: NURSES HOSTEL NITCO/RAK/SOMANY/AGL : RESIDENTIAL DOCTORS HOSTEL</b>  <b>NB: Atleast three and miximum Four manufacturer has to be used</b>
33	171	5.5	14.12	<b>Delite</b> , Polycraft	<b>Dpi Daylighting</b> , Tuflite, Polycraft

34	205-206	Section 5.6	PART B: II. B. ELECTRICAL LOAD: TABLE 1: Calculation of Transformer loads:	Deleted	Revised Table 1: Calculation of Transformer loads is enclosed in corrigendum.
35	207	Section 5.6	PART B: II. B. ELECTRICAL LOAD: TABLE 2: Calculation of DG loads	Deleted	Revised Table 2: Calculation of DG loads is enclosed in corrigendum.

**TABLE 1: Calculation of Transformer loads:**

<b>LOAD CALCULATION SHEET-MEDICAL COLLEGE &amp; HOSPITAL</b>					
Description	AREA (SQ. MTR.)	LIGHTING and POWER LOAD (KWSqm.)	CONNECTED LOAD (KW)	DEMAND FACTOR	MD (KW)
Academic Building	25000	0.03	750.00	0.60	450.0
Hostel for Boys (Students, Interns and Resident Doctors)	0.00	0.00	0.00	0.00	0.0
Student Hostel	5206	0.03	156.18	0.60	93.7
Interns Hostel	1925	0.03	57.75	0.60	34.7
Residents Hostel	1369	0.03	41.07	0.60	24.6
Hostel for Girls (Students, Interns and Resident Doctors)	0.00	0.00	0.00	0.00	0.0
Student Hostel	5206	0.03	156.18	0.60	93.7
Interns Hostel	1925	0.03	57.75	0.60	34.7
Residents Hostel	1369	0.03	41.07	0.60	24.6
Staff Quarter	0	0	0.00	0.00	0.0
Nurses Accommodation	3090	0.03	92.70	0.60	55.6
Teaching staff Quarter	4600	0.03	138.00	0.60	82.8
Non- Teaching staff Quarter	5560	0.03	166.80	0.60	100.1
Other Buildings (Central Workshop, Maintenance Office, Garbage Store etc.)	0.00	0.00	0.00	0.00	0.0
Central Workshop & Maintenance office	430	0.03	12.90	0.90	11.6
Autopsy Block	500	0.04	20.00	0.90	18.0
Garbage Store	90	0.03	2.70	0.80	2.2
Service Buildings	0	0	0.00	0.00	0.0
Electrical Substation	800	0.03	24.00	0.80	19.2
Out Patient Department Block (OPD) / Hospital Building	12400	0.09	1116.00	0.80	892.8
MGPS			90.00	1.00	90.0
PLUMBING LOAD - Pumps, STP etc			200.0	0.5	100.0
HOT WATER SYSTEM			50.0	0.7	35.0
ELEVATORS LOAD			230.00	0.80	184.0
HVAC LOAD AND VENTILLATION (APPROX)			1350.00	0.50	675.0
PANTRY LOAD (APPROX)			100.0	0.50	50.0
EXTERNAL LIGHTING, LANDSCAPE LIGHTING & SIGNAGES (APPROX)			150.0	0.50	75.0
OTHER UTILITY LOAD/ MISCELLANEOUS LOAD (APPROX)			50.0	0.7	35.0
FIRE FIGHTING LOAD ( FIRE DRILL MODE)			50.0	0.5	25.0
<b>TOTAL DEMAND LOAD (KW)</b>					<b>3207.3</b>
<b>OVERALL DIVERSITY FACTOR</b>					<b>0.80</b>
<b>TOTAL DEMAND LOAD REQUIREMENT (KW)</b>					<b>2565.82</b>
<b>POWER FACTOR</b>					<b>0.85</b>
<b>TOTAL DEMAND LOAD (KVA)</b>					<b>3018.61</b>
<b>TRANSFORMER CAPACITY REQUIRED CONSIDERING 85% LOADING (KVA)</b>					<b>3551.30</b>



**TABLE 2: Calculation of DG loads:**

<b>LOAD CALCULATION SHEET-MEDICAL COLLEGE &amp; HOSPITAL (Emergency or DG Power)</b>		
	<b>DESCRIPTION</b>	<b>EMERGENCY LOAD (KW)</b>
	Academic Building	270.00
	<b>Hostel for Boys (Students, Interns and Resident Doctors)</b>	0.00
	Student Hostel	46.85
	Interns Hostel	17.33
	Residents Hostel	12.32
	<b>Hostel for Girls (Students, Interns and Resident Doctors)</b>	0.00
	Student Hostel	46.85
	Interns Hostel	17.33
	Residents Hostel	12.32
	<b>Staff Quarter</b>	0.00
	Nurses Accommodation	27.81
	Teaching staff Quarter	41.40
	Non- Teaching staff Quarter	50.04
	<b>Other Buildings (Central Workshop, Maintenance Office, Garbage Store etc.)</b>	0.00
	Central Workshop & Maintenance office	6.97
	Autopsy Block	18.00
	Garbage Store	1.08
	MGPS	90.00
	<b>Service Buildings</b>	0.00
	Electrical Substation	19.20
	Out Patient Department Block (OPD)/ Hospital Building	892.80
	PLUMBING LOAD - Pumps, STP etc	100.00
	HOT WATER SYSTEM	35.00
	ELEVATORS LOAD	184.00
	HVAC LOAD AND VENTILLATION (APPROX)	405.00
	PANTRY LOAD (APPROX)	25.00
	EXTERNAL LIGHTING, LANDSCAPE LIGHTING & SIGNAGES (APPROX)	7.50
	OTHER UTILITY LOAD/ MISCELLANEOUS LOAD (APROX)	10.50
	FIRE FIGHTING LOAD ( FIRE DRILL MODE)	25.00
	<b>TOTAL LOAD (KW)</b>	<b>2362.30</b>
	<b>Applying 0.8 power factor Load in KVA</b>	<b>2952.87</b>
	<b>Overall Diversity Factor @0.9</b>	<b>2657.58</b>
	<b>Loading on DG set at 90% or Keeping 10% as spare capacity in KVA</b>	<b>2952.87</b>

36	351	Section 5.6	PART B: 14. Specification of HVAC System: Reference Standards:	Following standard & guidelines shall be adopted while designing the ACMV System.	Following standard & guidelines shall be adopted while designing the HVAC System.
37	351	Section 5.6	PART B: 16. 14. Specification of HVAC System: Reference Standards:	2. Energy Conservation Building Code (ECBC 2007)	2. Energy Conservation Building Code (ECBC 2007) or latest.
38	351	Section 5.6	PART B: 14. Specification of HVAC System: Reference Standards:	9. ANSI/ASHRAE/IESNA standard 90.1-2009: Energy standard for building except low rise residential buildings.	9. ANSI/ASHRAE/IESNA standard 90.1-2009 or latest: Energy standard for building except low rise residential buildings.
39	361	Section 5.6	PART B: 14.7 AIR CONDITIONING SYSTEM TO BE CONSIDERED FOR VARIOUS BUILDINGS Hospital/OPD Building Building:	Air Conditioning to be provided by Chilled water plant consisting of Multi Circuit Air Cooled	Air Conditioning to be provided by Chilled water plant consisting of Air Cooled Multi Circuit Multi Compressor with individual VFD on each compressor.
40	361	Section 5.6	PART B: 14.7 AIR CONDITIONING SYSTEM TO BE CONSIDERED FOR VARIOUS BUILDINGS Hospital/OPD Building Building:	Compressor: Scroll/Screw Type.	Compressor: Twin Screw Type.

41	361	Section 5.6	PART B: 14.7 AIR CONDITIONI NG SYSTEM TO BE CONSIDERED FOR VARIOUS BUILDINGS Hospital/OPD Building Building:	Air Cooled Condenser: Copper tube with aluminium fins duly coated for protection against atmospheric corrosion.	Air Cooled Condenser: Copper tube with aluminium fins duly coated (blue fins / nano coating) for protection against atmospheric corrosion.
42	361	Section 5.6	PART B: 14.7 AIR CONDITIONI NG SYSTEM TO BE CONSIDERED FOR VARIOUS BUILDINGS Hospital/OPD Building Building:	Energy Efficiency:As per ASHRAE std	Energy Efficiency:As per ASHRAE standard (latest), ECBC guidelines (latest)
43	361	Section 5.6	PART B: 14.7 AIR CONDITIONI NG SYSTEM TO BE CONSIDERED FOR VARIOUS BUILDINGS Hospital/OPD Building Building:		Compressor fan: with speed control mechanism.
44	361	Section 5.6	PART B: 14.7 AIR CONDITIONI NG SYSTEM TO BE CONSIDERED FOR VARIOUS BUILDINGS Main Academic Block:	Chilling Machine: Air Cooled Screw Chilling machines with minimum 2 independent refrigerant circuits per machine.	Chilling Machine: Air Cooled Screw Chilling machines with minimum 2 independent refrigerant circuits per machine. Chilled water plant consisting of Air Cooled Multi Circuit Multi Compressor with individual VFD on each compressor (twin screw type)

45	362	Section 5.6	PART B: 14.7 AIR CONDITIONI NG SYSTEM TO BE CONSIDERED FOR VARIOUS BUILDINGS Main Academic Block:	Air Cooled Condenser: Copper tube with aluminium fins duly coated for protection against atmospheric corrosion.	Air Cooled Condenser: Copper tube with aluminium fins duly coated (blue fins / nano coating) for protection against atmospheric corrosion.
46	362	Section 5.6	PART B: 14.7 AIR CONDITIONI NG SYSTEM TO BE CONSIDERED FOR VARIOUS BUILDINGS Main Academic Block:	Energy Efficiency: As per ASHRAE std 90.1.	Energy Efficiency:As per ASHRAE standard (latest), ECBC guidelines (latest)
47	362	Section 5.6	PART B: 14.10 POWER REQUIREME NT	a. The ACMV system will require 3 Ph, 50 Hz, 415 V / 1 Ph, 50Hz 230V A.C. as per specific requirement of the various equipment.	a. The HVAC system will require 3 Ph, 50 Hz, 415 V / 1 Ph, 50Hz 230V A.C. as per specific requirement of the various equipment.
48	366	Section 5.6	PART B: 16. Specification of Lift 16.1 Building wise quantity/num ber of Lift:		Nurses Quarter - Minimum quantity of Lifts- 2 (two) nos. 1 (one) no. bed cum passenger (15 passenger capacity) and 1 (one) no. passenger (10 passenger) lifts.
49	408	Section 5.6	PART B: 25.1 ILLUMINATI ON:	Note: Illumination Level may be changed as per Employer requirement.	Note: As per NBC 2016
50	418	Section 5.6	PART B: 26. Specification of Digital Classroom	Deleted	Revised Specification of Digital Classroom is enclosed in corrigendum.

## 26. Specification of Digital Classroom

<b>Class Room Interactive Digitization:</b>	
<b><u>Specialized Elements</u></b>	
<b>1.</b>	<b>Interactive Flat Panel 98”</b> <ul style="list-style-type: none"> <li>▪ Allows teacher to directly write on the Interactive surface and the contents are recorded back on computer.</li> <li>▪ Teacher can engage with the board naturally.</li> <li>▪ 4K display resolution.</li> </ul>
<b>2.</b>	<b>Audio System</b> <ul style="list-style-type: none"> <li>▪ Amplifier.</li> <li>▪ Speaker (30X4) based on classroom size.</li> <li>▪ Lapel Mic, Handheld Mic.</li> <li>▪ Mixer.</li> <li>▪ Acoustic Echo cancellation.</li> <li>▪ Student Handheld Mic for Local Classroom.</li> </ul>
<b>3.</b>	<b>Document Camera DC-2300</b> <ul style="list-style-type: none"> <li>▪ Magnify and project actual 3D Objects in real time.</li> <li>▪ Simply need to place the object below the camera – Hand Note, Book, Fruit, Flower, Leaf, Machine Component or any other object required to be shown to the class.</li> </ul>
<b>4.</b>	<b>Projector – Short Throw. Branded 3400 lumens</b> <ul style="list-style-type: none"> <li>▪ To project the Screen.</li> <li>▪ Short Throw recommended for lesser shadow, important in interactive scenario.</li> </ul>
<b>5.</b>	<b>Digital Classroom Software</b> <ul style="list-style-type: none"> <li>▪ Fully loaded Software acting as a teaching aid. Helps teacher select multiple pen, easily create various geometrical objects, highlight and scores of such functionalities.</li> <li>▪ Almost Infinite long board for those long questions in math, science, accounts etc.</li> <li>▪ Screen Recording and Replay for review.</li> </ul> <p>Many more such functions to reduce teacher’s efforts and improve quality.</p>
<b>6.</b>	<b>Pointers [ Combination of Laser Pointer, Pen &amp;Telescopic Pen Pointer ]</b> <ul style="list-style-type: none"> <li>▪ To the teacher point to the right components in the right manner and easily use the interactive board.</li> <li>▪ Use Laser for remote, Short Pen Pointer for Black Board Feel, Telescopic one to point out the contents in traditional style.</li> </ul>
<b><u>Computing Backbone</u></b>	
<b>7.</b>	Desktop Computer. Branded. (core i5 /4GB/500GB/Kb & mouse)
<b>Organizer, Connectors &amp; Support System</b>	
<b>8.</b>	<b>Digital Podium</b> <ul style="list-style-type: none"> <li>▪ Professional Housing for Desktop, UPS, Pen, Remote and other Accessories.</li> <li>▪ Professional Termination of Network &amp; Power lines.</li> <li>▪ Professional Housing of Audio Components.</li> <li>▪ HDMI Extender, Splitter, HDMI Cable, Cat 6 Patch cord for Connecting TV,</li> </ul>

	Camera, Mic and Other Accessories.
<b>9.</b>	<b>Projector Mounting Kit with Extended Power &amp; VGA Cables.</b> <ul style="list-style-type: none"> <li>▪ Specially designed for heavy duty use.</li> <li>▪ Professional Grade cables for consistent performance.</li> </ul>
<b>10.</b>	<b>PTZ 20X Camera</b> <ul style="list-style-type: none"> <li>▪ 20X PTZ Camera for Online Teaching for remote student can see a teacher or local student.</li> </ul>
<b>11.</b>	<b>65" TV</b> <ul style="list-style-type: none"> <li>▪ As per the room size may be required a TV in the side wall for last bench of the student can see properly.</li> </ul>
<b>12.</b>	<b>Online Interactive Software</b> <ul style="list-style-type: none"> <li>▪ All the online virtual classroom software can support.</li> <li>▪ Minimum 100 Student can join at a time.</li> <li>▪ Easy to use</li> </ul>
<b>13.</b>	Power Backup <ul style="list-style-type: none"> <li>▪ 2KVA UPS or higher to offer 10 minute backup inside class.</li> </ul>
<b>Enabling Institute</b>	
<b>11.</b>	Internet Connectivity ( Part of Infrastructure provided by the Institute)

S L O	Technical Specification	
<b>Interactive Flat Pannel 98 inches (Cisco/promotion/Smart/Ekin)</b>		
1	Active Screen Size ("inch)	98"
	Display Backlight	Back light LED
	Display Area	3840 x 2160p or Better
	Display Ratio	16 : 9
	Resolution	3840*2160 or better
	Display Colors	10 bit or better
	LCD Brightness	>450cd/m2 or better
	Contrast Ratio (Typical)	15000:1 or better
	Response Time (Typical)	4ms or better
	Viewing Angle	178°
	Life time (working hours)	>50,000 hours or better
	Display Orientation	Landscape
	Reference Frequency	120Hz
	Speakers	Shout be SEAMLESSLY build-in the display
	Max.Power Output	2x15 Watts or above
	Speaker Position	Seamlessly mounted in lower side of the display. Front facing, Forward through
	Rated Impedance	8

Freq.Response	180Hz-20kHz	
Output S.P.L.	84 ± 3dB	
Touch Technology Deployment	Touch feature should be seamlessly build-in the display and NO overlay is allowed	
Touch Sensor	Advanced IR	
Surface material of touch surface	Anti-Glare & Anti-Finger Print Glass	
Protection	3M antiglare	
Haze	2%~5%	
Touch Screen Writing Tools	Nano Pen (>3mm width) included or Finger	
TOUCH Response time	4ms or better	
Positioning Accuracy	±1mm or better	
Transmission Range	5M	
Transparency	>88% or better	
Surface Hardness	H7 or More than H7	
Glass thickness	4 mm	
HID Support	Must have a provision to connect with any external sources	
Touch Points in Windows	Must have a touch capability of MINIMUM 20 points	
Touch Points in Embedded OS	Must have a touch capability of MINIMUM 10 points	
Writing Tool	Shall use with Nano Pen (>3mm width) included or Finger	
Scan Speed	133Hz or better	
Communication Interface	inbuilt - USB-A type	
Requirement of Front access ports with flip	For the purpose of ease access the display must have the following ports in the front side and must have flip cover to close when not in use	
Minimum required Input ports at Front side of the display	1 x HDMI(1.4 , 4K@30Hz):- To connect with any resources 1 x Exclusive USB1 for Touch :- To connect with any resources and operate 2 x Exclusive USB for Media Play function:- To directly view the contents from USB 1 x Microphone(3.5mm):-To connect any external microphone	

Minimum Requirement of AV Inputs at rear side	HDMIx1(2.0,4K@60Hz) + USB for Touch Port 1 while using HDMI port HDMIx2 (2.0,4K@60Hz)+ USB for Touch Port 2 while using HDMI port DPx1 (4K@60Hz)+ USB for Touch Port 3 while using Display port VGAx1 (1920x1080@60Hz) + USB for Touch Port 4 while using VGA port	
Minimum requirement of AV Outputs at rear side	HDMIx1(4K@60Hz)- Transmit the signal to other display with equipment with High definition 3.5mm Line out x 1 DC Out (5V 2A) x1 SPDIF out x 1	
Minimum Requirements for other ports at rear side	USB 2.0 x2 : - To directly view the contents from USB RS232 x1 :- Device Controlled by any third party controller RJ45 x1 :- Input port of Local area network RJ45 x1 :- Output port of Local area network USB 3.0 x1 :- To connect external USB camera OPS Slot (4K@60Hz):- To connect OPS PC for windows function	
Multimedia File Formats Supported	Support all major types of multi-media files	
GUI - Graphic User Interface	The display must have GUI for ease access of resources, functions and shortcuts. This GUI shall be any proprietary OS but must be computable with Android coding.	
Discussion / White Board	Build-in white board ( seamless writing) with inbuilt browser	
newline cast	A wireless presentation software comes with inbuilt for inroom presentation Maximum connectivity of BYOD devices - 4 / 6 users ( Android 4 user / Win 6 user) <b>Control</b> - The setup should be in such a way that the presenter should have control of the GUI of this Remote Interactive Presentation Kit from the Touch Interactive Flat Panel Display <b>Display capability</b> - Equipment should have capability to display 4 /6 sources at a time system Supported - Win/Mac/ios/Android	



newline Display Management	CENTRALLY MANAGE ALL YOUR INTERACTIVE DISPLAYS : Easily manage and deploy apps, configure display settings, add licences, use digital signage features or broadcast emergency messages to all Newline interactive displays, without ever having to leave your desk.	
newline Broadcast	SHARE CONTENT TO AUDIENCES OF ANY SIZE HASSLE-FREE BROADCASTING Joining the broadcast is simple: Access the Broadcast webpage and Share your screen in real-time from your Newline display to any participant connected. Easily invite up to 200 participants to connect their own device from the meeting room, classroom, lecture theater or any other place in the world with a network connection.	
Other features	The onboard system supports...Annotation, saving and send email of annotation files and selecting the inputs and changing the volume , Scheduling function for meeting room schedules , Buildin wifi(2.4G/5G) and so on	
File Commander	Helps to easily open your USB drive and access your documents / files . <b>Additional features in File commander :</b> <b>Add Cloud :</b> Cloud Based file storage services are availbale . User can directly download their documnets or files and access during presentation. <b>FTP :</b> File Transfer Protocol (FTP) is the commonly used protocol for exchanging files over the Internet <b>Local Area Network :</b> A local area network (LAN) is a group of computers and associated devices that share a common communications line or wireless link to a server.	
Email support	Pre loaded Aqua mail - you can easily email your whiteboard content to anyone	
Business calendar	A pre loaded business calenser is available you can set schedules and synchronize with Google calendar for meeting room schedules	
Customized GUI	User can easily customized their own background and logo's	

Multimedia File Formats Supported	Support all major types of multi-media files
Object Regonisation	This product supports object recognition and produces different effects according to the diameter and size of the input objects. Fist/palm: identified as an eraser (100 pt). Fine Pen (3mm): suggested to use while writing. Thick Pen ( 8 mm)/ finger: suggested to use when you want to highlight
OTA (Over-the-Air) Update	Upgrade the latest firmware for your displays through our OTA Update support and keep them running smoothly at all times
Smart Eye production	Smart Eye Protact keep your eye vision safe from IFPD's light
Blue light filter	Blue light contributes to digital eye strain; IFPD's glasses that block blue light may increase comfort for users
Chipset	MTK8386 or higher
CPU	ARMv8 A73*2+A53*2 ( A53 : 1.05-1.3GHz; A73 : 1.15-1.5GHz) or higher
GPU	Mali-G51MP2 650 MHz or higher
RAM	3GB or higher
ROM	16GB build in or higher
External Memory	32GB TF card (build in) or higher
Total In-built Memeory	48GB ( Inbuilt TF Card slot support max 64GB) or higher
Android Version	8.0.0 or higher
Android resolution	4K
Storage Temperature/Humidity	-15 ~55 /20~90%RH(Non coagulation)
Working Temperature/Humidity	0 -40 /20~80%RH(Non coagulation)
Mounting Capabilities	Display must have facility to mount on floor stand or wall brackets
Local Office for Bidder	The Bidder mush have their office Kolkata
Brand	Brand should be Indian
Manufacturer's authorization	The bidder must submit the authorization certification
<b>Wall Mount Kit for Pannel( Ekin/Ebco/MX)</b>	
2	Suitable for TV size:65"-98"
	Including a precision bubble lever to assure proper mounting angle.

	Fits most flat panel plasma and LCD TV, safe and easy to install.	
	Surface: powder coated.	
	Compliant to VESA standard: 200*200mm.	
	Max load capacity: 85 kg.	
<b>PTZ Camera 10X with USB Extender 3G Cable (Ekin/Cisco/Polycom)</b>		
3	Optical Zoom	20X,f= 5.2~98mm
	Video format	ST/HD Video format: 1080P60/50/30/25/59.94/29.97
	View Angle	6.43degree (tele)—60.9degree wide.
	Iris	F1.5 – F3.0
	Sensor	½.8 inch high quality HD CMONS Sensor
	Effective Pixels	10:9 2.07MP
	Digital Zoom	10X
	Minimum Illumination	0.5Lux (f1.8, AGC ON)
	DNR	2D & 3D DNR
	White Balance	Auto/Manual/One Push/3000K /4000K/ 5000K/ 6500K
	Focus/Iris/Electronic Shutter	Auto/Manual
	BLC	On/Off
	WDR	OFF/Dynamic level adjustment
	Video Adjustment	Brightness, color, Saturation, Contrast, Sharpness. B/W mode, Gamma curve
	SNR	>55dB
	Video Interfaces	USB, LAN, RS232, Audio-In
	Video Compression format	H.264, H.265, Dual stream output
	Control Protocol	VISCA/Pelco-D/Pelco-p;Baud Rate:115200/9600/4800/2400bps
	Audio Input Interface	Double track 3.5mm linear input
	Audio Compression format	AAC/MP3 Audio compression
	LAN Port	100M IP Port(100Base-TX); Support VISCA protocol control through IP Port.
	Network Protocol	RTSP,TRMP, ONVIF, GB/T28181
	Power Interface	HEC3800 outlet (DC12V)
	Pan/Tilt Rotation	+170 degree, -30 degree--+90 degree
	Pan Control Speed	0.1—60 degree/sec
	Tilt Control Speed	0.1—30 degree/sec
	Preset Speed	Pan:60 degree/sec, Tilt 30 degree/sec
	Preset number	255 presets (10 presets by remote controller)

	Power Adapter	AC110V-AC220V to DC12V/1.5A	
	Dimension	150mmX150mmX167.5mm	
	Weight	1.4Kg	
	Remote Operation (IP)	Remote Upgrade, Reboot and Reset	
<b>PA SYSTEM 1. 4 pcs Speaker @ 20 Watts. 2. Amplifiers 140 watt for communication for multiple sound device ie.Laple or collar mike. (Ekin/Bose/Studio Master)</b>			
4	<b>Amplifier with Mixture</b>		
	Power Output	10% THD – 325W RMS	
		5% THD – 300W RMS	
		1% THD – 120W RMS	
		Max – 200W	
	Outputs Speakers	min 4 , 8 , 16 , 70V, 100V	
	Line Out	1V/600	
	Pre Out	1V/600	
	Input 1–4	Mic 1.5 mV/1.1k 300mV/14k ; XLR, balanced 300mV/50k ; RCA, unbalanced	
	AUX	300mV/50k ; RCA, unbalanced	
	Frequency Range	80 –15000Hz, ±3dB	
	S/N ratio	> 75dB	
	Bass	+6dB/-10dB/100Hz	
	Treble	±10dB/10Hz	
	Power Supply	240V~/50Hz	
	External DC Supply	24V/9A	
	Dimensions (W x D x H)mm	482 x 305 x 95 (2U)	
<b>Wireless Mic For Teacher.</b>			
	Type:	Condenser	
	Impedance:	1-1.9K	
	Sensitivity:	-44±2dB RL=800 VS=1.5V (1KHz 0dB=1V/Pa)	
	Frequency Response:	50-16KHz	
	Direction:	Uni-direction	
	S/N Ratio:	More Than 58dB	
	Frequency:	672.5-684.5MHz	
	Radio Frequency Power	10dBm/10MV	
	On-off Control:	Physical Switch	
	Power Supply Voltage:	2*AA Batteries	
	Frequency:	672.5-684.5MHz	
	Sensitivity:	-95db	
	S/N Ratio:	More than 58dB	
	Frequency Response:	40Hz-15KHz	

	Power Supply:	USB,5V	
<b>Wireless Mic For Student</b>			
	Receiver	Dual Channel Non-Diversity	
	Frequency Response	40Hz-16kHz	
	Polar Pattern (Hand mic)	Cardioid	
	Output	Individual Channel: XLR Mix out: ¼" Jack	
	Power Req. (Hand mic)	2 x 1.5V AA	
	Receiver	240V AC 50Hz for AC Adaptor Supplied with the set	
<b>Speaker</b>			
	Speaker Type	Wall Mount	
	Speaker Units	3" Woofer & 1" Tweeter	
	Rated Power	30W	
	Power Tap Selection	20W / 10W / 5W / 2.5W/8	
	Frequency Response	90Hz-20KHz	
	Input Voltage (Max)	100V	
	Sensitivity	85±3dB (1W,1M)	
	Cabinet Material	ABS	
<b>Digital Podium (Glabus/Ekin/Spektron/Ahuja)</b>			
5	Advance digital podium which can be integrated with all Smart/Virtual Classroom		
	Customizable as per customer requirement		
	Elegant design and all in one compact solution with clutter free design		
	Single touch start and shutdown		
	Easy to use controller		
	Best suited for college class room, Conference room etc		
	Type of make MS fabricated Sheet with wooden sliding top and Lock.		
	Display:-21" or above touch display.		
	Console panel port RGB X 1, USB, RJ45, Power, Input selection		
	Must be housing CPU,PA System,Document Camera,Controller,		
	In-build processing system: - CPU, PA System and other accessories.		
<b>Cable and Accessories (Aten/Kramer/Xtron/Best-net/Ekin)</b>			
6	<b>HDMI Splitter( 1X4)</b>		
	HDMI Source input port	1	
	Display Device output port	2	
	Source port connector	19pin HDMI	
	Display device port connector	19pin HDMI	
	HDCP compliant	Yes	
	Signal link range	1920x1080p@60Hz	

Bandwidth	up to 225MHz	
Signal Speed	Up to 6.75Gbps	
Deep colour	30/36 Bit	
HDMI version	HDMI 1.4v	
The cable standard	26awg	
Vertical frequency range	60Hz	
Power consumption (max)	5 Watts	
Working voltage	DC5V	
Operation temperature	-15°C to 40°C	
The Length of input cable	10M	
The Length of Output cable	20M	
<b>HDMI Splitter Extender 1x4</b>		
Length of CAT-6 cable between Rx and TX up to	60m	
HDMI Input	24/50/60fs/1080p/1080i/720p/ 576p/576i/480p/480i	
Support audio format input/ output	DTS-HD/Dolby-trueHD/LPCM7.1/ DTS/Dolby-AC3/DSD	
HDMI Output	24/50/60fs/1080p/1080i/720p/ 576p/576i/480p/480i	
Max bandwidth	22.5MHz	
Max baud rate	6.75Gbps	
Input Video signal	0.5~1.5Volts p-p	
Output DDC signal	5Volts p-p (TT1L)	
Input HDMI cable distance	AWG24 5m, AWG26 5m	
Output HDMI cable distance	AWG24 5m, AWG26 5m	
Max working current(TX)	2000mA	
Max working current(RX)	600mA	
Power adapter format(TX)	Input:AC (50HZ, 60HZ) 100V-240V; Output: DC5V/3A	
Power adapter format(RX)	Input:AC (50HZ, 60HZ) 100V-240V; Output: DC5V/1A	
Operating Temperature range	(0 to +40°C)	
Operating Humidity range	5 to 90%RH (No Condensation)	
<b>Patch Coard</b>		
Material	CAT.6 CCA Patch Cord	
Cable Color	Red, Yellow, Blue, Gray, Black	
Characteristic Impedence	100±150 @ 1 ~ 250MHz	
Conductor Construction	Copper Coated Aluminum	
Conductor Resistance	93.80/km/20°C max	
Conductor Size	24AWG x 4pairs	
Connector Type	50 micron gold-plated connector	
Dielectric Strength	AC 1.75kV/0.15sec	
Flame Retardant Test	CM	
Operating Temperature	20°C ~ 85°C	
Storage Temperature	40°C ~ 60°C	
Insulation Material	HDPE	

	Jacket Diameter	5.9±0.15mm	
	Jacket Material	PVC	
	Mutual Capacitance	56pF/m max	
	Propagation Delay	536nS/100m max @ 550MHz	
	Rating	75°C, 300V	
	Spark Test	2.5kV	
	Standards Compliance	ISO/IEC 11801; TIA/EIA-568-B.2	
	Plug	CAT 6 Plug 03MU"	
	PVC	70P	
	Cable Tie	"C" MM	
	Color	Transparent White	
<b>HDMI Cable</b>			
	Conductor	Bare copper	
	Jacket	PVC	
	Connector	HDMI Plug 19P, Durable 24K gold plated	
	Housing	PVC moulded with metal shell	
	Shielding	Aluminum foil and Braiding	
	Color	Black	
	Ferrite core	Yes	
	Application	widely used in HDTV, EVD, HDVD, AMP, Home Theater, DVD player, projector, PS3, Xbox360, set-top boxes, Video wall etc.	
<b>PPT Presenter</b>			
Wireless Laser Presenter Powerpoint PPT Presenter Slide Changer Controller with USB Receiver Battery Indicator			
<b>65" Pannel/TV with Mounting Kit (Ekin/LG/Samsung/Sony)</b>			
7	Product Dimensions	145.6 x 26.4 x 89.8 cm; 18.5 Kilograms	
	Memory Storage Capacity	16 GB	
	Ram Memory Installed Size	2 GB	
	Operating System	Android	
	Hardware Interface	USB, HDMI	
	Graphics Coprocessor	Mali470x3 600MHz-800MHz	
	Response Time	8 Milliseconds	
	Resolution	4K	
	Special Features	Smart TV Features: 4K Android TV (Android 9.0) plus HDR   AI-Google assistant   Google cast plus T-cast   Bluetooth	
	Mounting Hardware	1 LED TV, 1 Table Top Stand, 1 Wall Mount Bracket, 1 User Manual, 1 Warranty Card, 1 Remote Control	
	Remote Control Description	Comes with navigation keys on the remote for better functions	
	Remote Control Type	IR, Bluetooth	
	Display Technology	LED	
	Standing screen display size	65 Inches	

	Display Type	A+	
	Viewing Angle	178 Degrees	
	Image Aspect Ratio	0.672916667	
	Image Brightness	High brightness	
	Image Contrast Ratio	208.3340278	
	Supported Image Type	PNG, JPEG	
	Screen Resolution	3840 x 2160 pixels	
	Resolution	3840x2160 Pixels	
	Supported Audio Format	Mp3_audio, Wma	
	Speaker Surround Sound Channel Configuration	AI Sound Engine   Dolby Audio	
	Audio Wattage	20 Watts	
	Power Source	AC	
	Batteries Included	No	
	Batteries Required	No	
	Refresh Rate	60 Hz	
	Total Usb Ports	2	
	Connector Type	USB, Built-in Wi-fi, HDMI	
	Maximum Operating Distance	8 Feet	
	Mounting Type	Wall Mount	
	Media Format	AVI, MPEG	
	Remote Control Included?	Yes	
<b>OFFLINE UPS 2KVA with 10 min backup (Microtech/Numeric/APC)</b>			
8	Input Voltage	110 V	
	Input Frequency	40Hz ~ 70 Hz	
	Output Voltage	240 V	
	Output Frequency	50 Hz ± 0.25 Hz or 60Hz ± 0.3 Hz	
	Output Power Wattage	750 W	
	Efficiency	88% / 86% %	
	Output Waveform	Pure Sineweave	
	Transfer Time	3 ms	
	Number of Outlet Plugs	3	
<b>Interactive Software (Ekin/Zoom/Google Meet)</b>			
9	Simple Online Meetings		
	High quality desktop and application sharing		
	Personal meeting ID and URL name		
	Instant or scheduled meetings		
	MP4 or M4A recording		
	Virtual backgrounds		
	Host controls		
	Raise hand		
	Cloud Video Conferencing		
	HD video		
	HD Voice with dynamic voice detection		
	Full screen and gallery view		



	Dual stream for dual screen		
	Feature-rich mobile apps for iOS and Android		
	Join as view-only attendee		
	Group Collaboration		
	Mac, Windows, Linux, Chromebooks, iOS and Android		
	Group messaging		
	Screen share documents, photos and video clips		
	Simultaneous screen sharing		
	iPhone/iPad screen share with iOS mirror		
	Annotation and co-annotation		
	Keyboard and mouse control		
	Whiteboarding		
<b>Desktop Computer /Mini PC (Ekin/HP/Dell/Lenovo)</b>			
10	Intel i5, HD Graphics 4600, HDD SATA 6 Gb/s 500 GB 7.2k RPM, 4 GB DDR3 RAM,) Monitor, Keyboard and Mouse.		
<b>Document Camera (Ekin/Fujitsu/Epson)</b>			
11	5 MP CMOS Active Pixels Main Camera		
	Optical Format: 1/3 inch		
	Active Pixels Max: 2592H X1944V		
	Image Resolution: 2592H X1944V		
	Shooting area: A3		
	Responsivity: 1.0 V/Lux-sec		
	Operating temperature: -30 to +70 ° C		
	Power supply : USB POWER CABLE		
	Power Consumption: <220mW		
	Suspend Current : <5 mA		
	Two LED Light		
	Communication Interface : USB2.0 With		
	UVC		
	AGC/AEC/ White Balance : Auto		

51	425	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	1.2. HT XLPE Cable - Polycab/ Gloster /Havells	C.2: TABLE: List of Approved List: 1.2. HT XLPE Cable - Polycab/ Gloster /Havells/KEI
52	425	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	2.4 D.G. Synchronization Panel - Jackson / Sterling Wilson/Mahindra	2.4 D.G. Synchronization Panel - Cummins / Sterling Wilson/Kirloskar/Ashok LeyLand
53	425	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	3.12 LT XLPE Cable Gloster / Havells / Polycab / KEI	3.12 LT XLPE Cable Gloster / Havells / Polycab / KEI/ RR Cable
54	425	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	4. LT Panel Components:	4. HT/LT Panel Accessories:
55	426	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	5.1. APFC Panel ( IEC 61921 Compliant) - L&T / Legrand /Schneider / Siemens	5.1. APFC Panel - ( IEC 61921 Compliant) L&T / Legrand /Schneider / Siemens / EPCOS
56	426	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	7.2. UPS System - APC/ Emerson/ Socomac / Delta/ AVO/ Numeric/ Schneider / Fuji Consul Neowatt	7.2. UPS System - APC/ Emerson/ Socomac / Delta/ AVO/ Numeric/ Schneider / Fuji Consul Neowatt / Riello
57	427	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	9.2 Lighting Fixtures - Bajaj/ Crompton/ Wipro/ Havells	9.2 Lighting Fixtures - Bajaj/ Crompton/ Wipro/ Havells / Phillips / Jaquar

58	427	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	9.4 LED Street Light - Bajaj/ Crompton/ Havells / Surya	9.4 LED Street Light - Bajaj/ Crompton/ Havells / Surya / Jaquar
59	427	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	9.5 LED Bollard & Post Top Light - Crompton/ IB LED / Jaquar / Surya	9.5 LED Bollard & Post Top Light - Crompton/ IB LED / Jaquar / Surya / Phillips
60	427	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	9.7 External Street Light Pole - Bajaj/ Transtel/ Utkarsh	9.7 External Street Light Pole - Bajaj/ Transtel/ Utkarsh / Surya
61	427	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	10.1 Addressable Fire Alarm System (Detectors- Smoke, Heat, Manual Call Box, Response Indicator, Hooter/Sounder) - Honeywell (Notifier)/Siemens/ GST / Bosch/ Ravel	10.1 Addressable Fire Alarm System (Detectors- Smoke, Heat, Manual Call Box, Response Indicator, Hooter/Sounder) - Honeywell /Siemens/ GST / Bosch/ Ravel / EDWARD /EST
62	427	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	10.2 Gas Fire Suppression System - Fire Line/ Tyco Fire/ Siemens	10.2 Gas Fire Suppression System - Fire Line/ Tyco Fire/ Siemens/ Fire Finder
63	427	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	11.6 PA Amplifier/ PA Speakers - Bose/ Honeywell X-618/ ATEIS /Ohm / Sennheiser	11.6 PA Amplifier/ PA Speakers - Bose/ Honeywell X-618/ ATEIS /Ohm / Sennheiser / BOSCH
64	427	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	11.10 Signal/ Control Cable - Finolex/ Havells/ Gloster/ Polycab/ KEI	11.10 Signal/ Control Cable - Finolex/ Havells/ Gloster/ Polycab/ KEI / LYNO

65	427	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	11.11 Line Matching Transformer - Bose/ Phillips/ Bosch	11.11 Line Matching Transformer - Bose/ Phillips/ Bosch / BA / Ohm
66	428	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List:	13.15 Pre fabricated Ducts - Radiant/ZECO/Camduct	13.15 Pre fabricated Ducts - Radiant/ZECO/Camduct/Ductofab
67	430	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List: 15. ELV SYSTEMS Sl. No. A. Public Address System	1 Voice alarm controller, Amplifier, Speaker - BOSCH/BOSE/HARMAN	1 Voice alarm controller, Amplifier, Speaker - BOSCH/BOSE/HARMAN/Ohm/Sennheiser/BA/OSL
68	430	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List: 15. ELV SYSTEMS Sl. No. A. Public Address System	3 Signal Cables - Delton/ Teleflex/ Finolex/ Thermo cables/ Varsha	3 Signal Cables - Delton/ Teleflex/ Finolex/ Thermo cables/ Varsha/ LYNQ

69	431	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List: 15. ELV SYSTEMS Sl. No. F. VIDEO CONFERENCE SYSTEM / AV system	5 Amplifier ,Mixture ,DSP & Controller - HARMAN/BOSE/EXTRON/LABGRUPEN	5 Amplifier ,Mixture ,DSP & Controller - HARMAN/BOSE/EXTRON/LABGRUPEN/Sennheiser/BA/OSL
70	431	Section 5.6	PART C: APPROVED MAKE: C.2: TABLE: List of Approved List: 15. ELV SYSTEMS Sl. No. F. VIDEO CONFERENCE SYSTEM / AV system	6 Cables and connector for AV Integration - BELDON/KRAMER/EXTRON/ CRESTON	6 Cables and connector for AV Integration - BELDON/KRAMER/EXTRON/ CRESTON/LYNQ
71	434-443	5.7		PAYMENT SCHEDULE	Revised Schedule Attached

**NOTE III: SUPPLY OF ITEMS AGAINST WHICH PAYMENT TO BE RELEASED OF  
CORRESPONDING ACTIVITY/ MILESTONE**

<b>Sl. No.</b>	<b>Items of Supply</b>	<b>Corresponding Activity (Clause No: 14.4)</b>	<b>Percentage of Payment</b>
1	LT Panels	<b>Activity Sl. No: 37</b> SITC of HT, LT, APFC Panels, Transformer, HT earthing and internal electrification etc. of Substation earthing & street light of entire project.	Payment to be released @ 20.00% of corresponding activity/ milestone, after civil work completion of Sub-station building.
2	HT Panels	<b>Activity Sl. No: 37</b> SITC of HT, LT, APFC Panels, Transformer, HT earthing and internal electrification etc. of Substation earthing & street light of entire project.	Payment to be released @ 15.00% of corresponding activity/ milestone, after civil work completion of Sub-station building.
3	Transformer	<b>Activity Sl. No: 37</b> SITC of HT, LT, APFC Panels, Transformer, HT earthing and internal electrification etc. of Substation earthing & street light of entire project.	Payment to be released @ 25.00% of corresponding activity/ milestone, after civil work completion of Sub-station building.
4	Chillers	<b>Activity Sl. No: 39</b> SITC of AC system & Mechanical ventilation system with all allied mechanical accessories complete in all respect.	Payment to be released @ 35.00% of corresponding activity/ milestone, after 80% completion of civil work of respective building.
5	All AHUs	<b>Activity Sl. No: 39</b> SITC of AC system & Mechanical ventilation system with all allied mechanical accessories complete in all respect.	Payment to be released @ 25.00% of corresponding activity/ milestone, after 80% completion of civil work of respective building.
6	Lift	<b>Activity Sl. No: 41</b> SITC of Lift including NOC from concerned authority for the entire project complete in all respect.	Payment to be released @ 60.00% of corresponding activity/ milestone, after 80% completion of civil work of respective building.
7	DG-Set	<b>Activity Sl. No: 43</b> SITC of DG-set including AMF panel, earthing, cabling & NOC from concerned authority complete in all respect.	Payment to be released @ 60.00% of corresponding activity/ milestone, after 80% completion of civil work of respective building.

**Sec. 5.7 PAYMENT SCHEDULE**

Sl.	Activity/ Milestone	% of Project Cost for Academic Building	% of Project Cost for Hostel Block	% of Project Cost for Staff Quarter	% of Project Cost for OPD Block	% of Project Cost for Hospital Block	% of Project Cost for Other Building (Central Workshop, Maintenance Office, Autopsy Block etc.)
1	On approval of Concept Plan	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
2	On approval of Architectural Plan, Elevation	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
3	On approval of Soil Investigation Report	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
4	On approval of Structural Details / Structural Modeling	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
5	On approval of Working Drawings (Architectural Plan) as required.	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%
6	On approval of Working Drawings (Architectural Elevation etc.) as required.	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%
7	On approval of Working Drawings (Structural) as required.	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
8	On approval of DBR for other Services, Design Details. (e.g. S & P Works, Water Supply, Fire, Power, Electrical facilities, Waste Water Disposal, Roads, Pavement, Drains, Landscaping etc.) including approval of the drawing & procurement of clearance from statutory bodies like Municipality, Panchayat, Fire, Pollution control Board etc.	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%
9	On approval of Working drawing for other Services, Design Details. (e.g. S & P Works, Water Supply, Fire, Power, Electrical facilities, Waste Water Disposal, Roads, Pavement, Drains, Landscaping etc.) including approval of the drawing & procurement of clearance from statutory bodies like Municipality, Panchayat, Fire, Pollution control Board etc.	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
10	On completion of "As Built Drawing".	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
11	RCC Pile Foundation/RCC shallow foundation, strip footing, isolated/raft foundation etc. (including dismantling of existing structures where required.)						
	a) On completion of first 25% in all respect.	3.00%	3.00%	3.00%	2.50%	2.50%	-
	b) On completion of next 25% (total upto 50%) in all respect.	3.00%	3.00%	3.00%	2.50%	2.50%	-
	c) On completion of next 25% (Total upto 75%) in all respect.	3.00%	3.00%	3.00%	2.50%	2.50%	-
	d) On completion of next 25% (Total upto 100%) in all respect.	3.00%	3.00%	3.00%	2.50%	2.50%	15.00%
12	Pile Cap/ Tie-Beam (as applicable) up to Plinth level including earth/sand, Brickwork and floor Grade slab (PCC/RCC) as required						
	a) On completion of Pile Cap/ Tie-Beam (as applicable) first 25% in all respect.	1.25%	1.50%	1.50%	1.25%	1.25%	-
	b) On completion of Pile Cap/ Tie-Beam (as applicable) next 25% (total upto 50%) in all respect.	1.25%	1.50%	1.50%	1.25%	1.25%	2.00%
	c) On completion of Pile Cap/ Tie-Beam (as applicable) next 25% (Total upto 75%) in all respect.	1.25%	1.50%	1.50%	1.25%	1.25%	-
	d) On completion of Pile Cap/ Tie-Beam (as applicable) next 25% (Total upto 100%) in all respect.	1.25%	1.50%	1.50%	1.25%	1.25%	2.00%
	e) On completion of plinth beam including brickwork as required.	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	f) On completion of 70% sand/earth filling as required.	0.35%	0.35%	0.35%	0.35%	0.35%	-
	g) On completion of 30% sand/earth filling as required.	0.15%	0.15%	0.15%	0.15%	0.15%	0.50%
	h) On completion of 70% grade slab in all respect	0.35%	0.35%	0.35%	0.35%	0.35%	-
	i) On completion of 30% (Total upto 100%) grade slab in all respect	0.15%	0.15%	0.15%	0.15%	0.15%	0.50%
13	RCC frame superstructure of the entire building except above roof structure.						
	a) On completion of first 15% in all respect.	2.75%	3.25%	3.25%	3.00%	3.00%	-
	b) On completion of next 15% (total upto 30%) in all respect.	2.75%	3.25%	3.25%	3.00%	3.00%	-
	c) On completion of next 15% (total upto 45%) in all respect.	2.75%	3.25%	3.25%	3.00%	3.00%	-
	d) On completion of next 15% (total upto 60%) in all respect.	2.75%	3.25%	3.25%	3.00%	3.00%	9.00%
	e) On completion of next 15% (total upto 75%) in all respect.	2.75%	3.25%	3.25%	3.00%	3.00%	-

Sl.	Activity/ Milestone	% of Project Cost for Academic Building	% of Project Cost for Hostel Block	% of Project Cost for Staff Quarter	% of Project Cost for OPD Block	% of Project Cost for Hospital Block	% of Project Cost for Other Building (Central Workshop, Maintenance Office, Autopsy Block etc.)
	f) On completion of next 15% (total upto 90%) in all respect.	2.75%	3.25%	3.25%	3.00%	3.00%	-
	g) On completion of next 10% (total upto 100%) in all respect.	2.00%	2.50%	2.50%	2.50%	2.50%	8.00%
14	RCC frame superstructure of above roof structure like overhead tanks, LMR, & staircase head rooms etc. in all respect.	1.00%	1.00%	1.00%	1.00%	0.90%	1.88%
15	On completion of Brick/AAC Block work of the entire building from ground floor to top floor including mummy.						
	a) On completion of first 25.0% (Upto Sill level)	0.50%	0.75%	0.75%	0.70%	0.60%	-
	b) On completion of first 25.0% (Upto Lintel level)	0.50%	0.75%	0.75%	0.70%	0.60%	-
	c) On completion of first 25.0% (Upto bottom of slab/beam or upto desired height)	0.50%	0.90%	0.90%	0.85%	0.75%	-
	d) On completion of next 25.0% (Up to 50.0%) (Upto Sill level)	0.50%	0.75%	0.75%	0.70%	0.60%	2.00%
	e) On completion of next 25.0% (Up to 50.0%) (Upto Lintel level)	0.50%	0.75%	0.75%	0.70%	0.60%	2.00%
	f) On completion of next 25.0% (Up to 50.0%) (Upto bottom of slab/beam or upto desired height)	0.50%	0.90%	0.90%	0.85%	0.75%	2.00%
	g) On completion of next 25.0% (Up to 75.0%) (Upto Sill level)	0.50%	0.75%	0.75%	0.70%	0.60%	-
	h) On completion of next 25.0% (Up to 75.0%) (Upto Lintel level)	0.50%	0.75%	0.75%	0.70%	0.60%	-
	i) On completion of next 25.0% (Up to 75.0%) (Upto bottom of slab/beam or upto desired height)	0.50%	0.90%	0.90%	0.85%	0.75%	-
	j) On completion of balance 25.0% (Up to 100%) (Upto Sill level)	0.50%	0.75%	0.75%	0.70%	0.60%	2.00%
	k) On completion of balance 25.0% (Up to 100%) (Upto Lintel level)	0.50%	0.75%	0.75%	0.70%	0.60%	2.00%
	l) On completion of balance 25.0% (Up to 100%) (Upto bottom of slab/beam or upto desired height)	0.65%	0.90%	0.90%	0.85%	0.75%	2.00%
16	Plastering (inside & outside) of the entire building from ground floor to top floor including mummy, external façade complete in all respect.						
	a) On completion of first 25.0% inside plaster.	0.35%	0.60%	0.60%	0.45%	0.45%	-
	b) On completion of next 25.0% (Up to 50.0%) inside plaster.	0.35%	0.60%	0.60%	0.45%	0.45%	-
	c) On completion of next 25.0% (Up to 75.0%) inside plaster.	0.35%	0.60%	0.60%	0.45%	0.45%	-
	d) On completion of balance 25.0% (Up to 100%) inside plaster.	0.35%	0.60%	0.60%	0.45%	0.45%	3.50%
	e) On completion of outside Plaster first 50.0%	0.50%	0.75%	0.75%	0.75%	0.75%	-
	f) On completion of outside Plaster next 50.0% (Up to 100%) including external façade complete in all respect.	1.00%	1.75%	1.75%	1.75%	1.75%	2.00%
17	Flooring & Cladding work in all respect of the building from ground floor to top floor.						
	a) On completion of first 25.0% flooring including skirting	0.60%	1.25%	1.25%	1.00%	1.00%	-
	b) On completion of first 25.0% cladding	0.65%	0.50%	0.50%	1.10%	1.10%	-
	c) On completion of next 25.0% (Up to 50.0%) flooring including skirting	0.60%	1.25%	1.25%	1.00%	1.00%	-
	d) On completion of next 25.0% (Up to 50.0%) cladding	0.65%	0.50%	0.50%	1.10%	1.10%	-
	e) On completion of next 25.0% (Up to 75.0%) flooring including skirting	0.60%	1.25%	1.25%	1.00%	1.00%	-
	f) On completion of next 25.0% (Up to 75.0%) wall cladding	0.65%	0.50%	0.50%	1.10%	1.10%	-
	g) On completion of balance 25.0% (Up to 100%) flooring including skirting	0.60%	1.25%	1.25%	1.00%	1.00%	3.00%
	h) On completion of balance 25.0% (Up to 100%) wall cladding	0.65%	0.50%	0.50%	1.10%	1.10%	2.00%
	i) On completion of Staircase flooring including skirting	0.40%	0.90%	0.90%	1.00%	1.00%	0.75%
	j) On completion of Staircase wall cladding	0.40%	0.85%	0.85%	1.00%	1.00%	0.75%
18	Supply and fixing of Doors (Wooden flush door, Panel door, Solid PVC door, Fire Resistant door & Metal door) and Windows with glass and grills etc.						
	a) On completion of Supply and fixing of Door frame in all respect first 25%	0.125%	0.15%	0.15%	0.15%	0.15%	-



Sl.	Activity/ Milestone	% of Project Cost for Academic Building	% of Project Cost for Hostel Block	% of Project Cost for Staff Quarter	% of Project Cost for OPD Block	% of Project Cost for Hospital Block	% of Project Cost for Other Building (Central Workshop, Maintenance Office, Autopsy Block etc.)
	b) On completion of Supply and fixing of Door frame in all respect next 25%(upto 50%)	0.125%	0.15%	0.15%	0.15%	0.15%	0.30%
	c) On completion of Supply and fixing of Door frame in all respect next 25%(upto 75%)	0.125%	0.15%	0.15%	0.15%	0.15%	-
	d) On completion of Supply and fixing of Door frame in all respect next 25%(upto 100%)	0.125%	0.15%	0.15%	0.15%	0.15%	0.30%
	e) On completion of Supply and fixing of Door shutter in all respect first 25%	0.375%	0.30%	0.30%	0.30%	0.30%	-
	f) On completion of Supply and fixing of Door shutter in all respect next 25%(upto 50%)	0.375%	0.30%	0.30%	0.30%	0.30%	0.60%
	g) On completion of Supply and fixing of Door shutter in all respect next 25%(upto 75%)	0.375%	0.30%	0.30%	0.30%	0.30%	-
	h) On completion of Supply and fixing of Door shutter in all respect next 25%(upto 100%)	0.375%	0.30%	0.30%	0.30%	0.30%	0.60%
	i) On completion of Supply and fixing of Windows with glass in all respect first 50%	0.125%	0.15%	0.15%	0.15%	0.15%	-
	j) On completion of Supply and fixing of Windows with glass in all respect next 25%(upto 50%)	0.125%	0.15%	0.15%	0.15%	0.15%	0.30%
	k) On completion of Supply and fixing of Windows with glass in all respect next 25%(upto 75%)	0.125%	0.15%	0.15%	0.15%	0.15%	-
	l) On completion of Supply and fixing of Windows with glass in all respect next 25%(upto 100%)	0.125%	0.15%	0.15%	0.15%	0.15%	0.30%
	m) On completion of Supply and fixing of Windows grill, collapsible gate, Rolling grill etc. in all respect first 50%	0.125%	0.15%	0.15%	0.15%	0.15%	-
	n) On completion of Supply and fixing of Windows grill, collapsible gate, Rolling grill etc. in all respect next 50%(upto 100%)	0.125%	0.15%	0.15%	0.15%	0.15%	0.30%
19	Supply and fixing of false ceiling (Metallic and Non-Metallic), stage craft, Acoustic treatment etc						
	a) On completion of first 25% false ceiling.	0.35%	-	-	0.75%	0.75%	-
	b) On completion of next 25% (Upto 50%) false ceiling.	0.35%	0.25%	0.25%	0.75%	0.75%	-
	c) On completion of next 25% (Upto 75%) false ceiling.	0.35%	-	-	0.75%	0.75%	-
	d) On completion of next 25% (Upto 100%) false ceiling.	0.35%	0.25%	0.25%	0.75%	0.75%	0.50%
	e) On completion of Accoustic Wall paneling and Stage Craft as required complete in all respect.	0.60%	-	-	1.00%	1.00%	-
20	Putty, Painting & other External finishes works from ground floor to top floor including Staircase.						
	a) On completion of first 25% putty as required	0.125%	0.20%	0.20%	0.15%	0.15%	-
	b) On completion of next 25% (Upto 50%) putty as required	0.125%	0.20%	0.20%	0.15%	0.15%	-
	c) On completion of next 25% (Upto 75%) putty as required	0.125%	0.20%	0.20%	0.15%	0.15%	-
	d) On completion of balance 25% putty (Upto 100%) as required	0.125%	0.20%	0.20%	0.15%	0.15%	0.80%
	e) On completion of first 25% internal painting.	0.25%	0.375%	0.375%	0.325%	0.325%	-
	f) On completion of next 25% (Upto 50%) internal painting.	0.25%	0.375%	0.375%	0.325%	0.325%	-
	g) On completion of next 25% (Upto 75%) internal painting	0.25%	0.375%	0.375%	0.325%	0.325%	-
	h) On completion of next 25% (Upto 100%) internal painting	0.25%	0.375%	0.375%	0.325%	0.325%	1.50%
	i) On completion of external painting & other external finishes (Up to 100%)	0.75%	1.00%	1.00%	0.90%	0.90%	1.00%
21	Staircase hand railing & other railing etc. of the entire building.						

Sl.	Activity/ Milestone	% of Project Cost for Academic Building	% of Project Cost for Hostel Block	% of Project Cost for Staff Quarter	% of Project Cost for OPD Block	% of Project Cost for Hospital Block	% of Project Cost for Other Building (Central Workshop, Maintenance Office, Autopsy Block etc.)
	a) On completion of first 50% as required	0.12%	0.25%	0.25%	0.25%	0.25%	-
	b) On completion of balance 50% (Upto 100%) as required	0.13%	0.25%	0.25%	0.25%	0.25%	0.50%
22	External Pipeline for treated water etc. of the entire building.						
	a) On completion of external water distribution line from OHT complete in all respect.	0.30%	0.50%	0.50%	0.50%	0.50%	0.50%
	b) On completion of external water supply line from UGR to OHT & STP to OHT complete in all respect.	0.10%	0.15%	0.15%	0.15%	0.15%	0.15%
	c) On completion of all other external water distribution line including water feeding for landscape gardening from STP or UGR etc. complete in all respect.	0.10%	0.15%	0.15%	0.15%	0.15%	0.15%
23	External Pipeline for rain water, waste water & sewerage network system etc. of the entire project.						
	a) On completion of external rain water, waster water pipe line of the entire building complete in all respect.	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%
	b) On completion of sewerage network system of the entire project complete in all respect.	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
24	Rain water harvesting complete in all respect.	0.15%	0.25%	0.25%	0.25%	0.25%	0.25%
25	External drainage network complete in all respect of the entire project.						
	a) On completion of external drainage network within the premises first 50% as required complete in all respect.	0.25%	-	-	-	-	-
	b) On completion of external drainage network within the premises balance 50% (Upto 100%)complete in all respect.	0.25%	-	-	-	-	-
	c) On completion of external drainage network outside the premises complete in all respect.	0.20%	-	-	-	-	-
	d) On completion of drainage lifting station including all electromechanical works complete in all respect.	0.40%	-	-	-	-	-
26	Internal Pipeline (for water supply) of the entire building.						
	a) On completion of first 25.0%	0.20%	0.375%	0.375%	0.20%	0.20%	
	b) On completion of next 25.0% (Up to 50.0%)	0.20%	0.375%	0.375%	0.20%	0.20%	-
	c) On completion of next 25.0% (Up to 75.0%)	0.20%	0.375%	0.375%	0.20%	0.20%	
	d) On completion of next 25.0% (Up to 100.0%)	0.20%	0.375%	0.375%	0.20%	0.20%	1.50%
27	Fixing of sanitary & Plumbing fittings/ fixtures for the entire building.	1.50%	3.50%	3.50%	1.50%	1.50%	3.50%
28	Roof Water Proofing Treatment and other water proofing works complete in all respect.	1.00%	2.00%	2.00%	1.50%	1.50%	2.00%
29	Civil work of Sub-Station building, DG foundation with shade etc. for the entire project.						
	a) On completion of structure upto plinth level except grade slab.	0.25%	-	-	-	-	-
	b) On completion of structural frame 100% except grade slab.	0.25%	-	-	-	-	-
	c) On completion of Block/Brick work & plastering work 100% including grade slab.	0.25%	-	-	-	-	-
	d) On completion of finishing work complete in all respect after installation of equipment.	0.25%	-	-	-	-	-
30	Underground Reservoir with water proofing including punp house (Fire fighting / Drinking water) for the entire project.	0.70%	-	-	-	-	-
31	a) Sewage Treatment Plant of the entire project.	0.40%	-	-	-	-	-
32	Road, Pathway, plinth protection etc. complete in all respect of the entire Project.						
	a) On completion of first 30.0% with M40 grade Concrete Road complete in all respect.	1.50%	-	-	-	-	-

Sl.	Activity/ Milestone	% of Project Cost for Academic Building	% of Project Cost for Hostel Block	% of Project Cost for Staff Quarter	% of Project Cost for OPD Block	% of Project Cost for Hospital Block	% of Project Cost for Other Building (Central Workshop, Maintenance Office, Autopsy Block etc.)
	b) On completion of next 30.0% (Up to 60.0%) with M40 grade Concrete Road complete in all respect.	1.50%	-	-	-	-	-
	c) On completion of balance 40.0% (Up to 100%) with M40 grade Concrete Road complete in all respect.	2.00%	-	-	-	-	-
	d) On completion of pathway (covered as required) complete in all respect of the entire project.	0.50%	-	-	-	-	-
	e) On completion of plinth protection complete in all respect of the entire project.	0.15%	-	-	-	-	-
33	Boundary wall including barbed wire Gate, Security Room etc.	0.80%	-	-	-	-	-
34	Fire Fighting arrangement with Extinguisher, Yard Hydrant, Wet Riser, Down Comer, Sprinkler system etc. as required complete in all respect for both external and internal for the entire building including NOC from concerned authority.						
	a) On completion of first 50% internal Fire Fighting arrangement as per Fire Safety Recommendation (FSR) of concerned authority	0.10%	-	-	0.50%	0.50%	-
	b) On completion of balance 50% (Upto 100%) internal and external including NOC from concerned authority.	0.15%	0.25%	0.25%	0.75%	0.75%	0.25%
35	Bore-Well, Pump, WTP, water purification system etc. for the entire project.	1.25%	-	-	-	-	-
36	Internal electrical installation including Conduiting, Cabling, Wiring including all type of switch boards, proper electrical dressing with ferruling arrangement/tagging etc.						
	a) On completion of 50% Roof conduiting complete in all respect.	0.10%	0.15%	0.15%	0.10%	0.10%	-
	b) On completion of 100% Roof conduiting complete in all respect.	0.10%	0.15%	0.15%	0.10%	0.10%	0.60%
	c) On completion of 25% wall conduiting, chase chutting, back encloser fixing for switch board & DB complete in all respect.	0.10%	0.15%	0.15%	0.10%	0.10%	-
	d) On completion of 50% wall conduiting, chase chutting, back encloser fixing for switch board & DB complete in all respect.	0.10%	0.15%	0.15%	0.10%	0.10%	-
	e) On completion of 75% wall conduiting, chase chutting, back encloser fixing for switch board & DB complete in all respect.	0.10%	0.15%	0.15%	0.10%	0.10%	-
	f) On completion of 100% wall conduiting, chase chutting, back encloser fixing for switch board & DB complete in all respect.	0.10%	0.15%	0.15%	0.10%	0.10%	1.25%
	g) On completion of 50% electrical wire pulling complete in all respect.	0.35%	0.70%	0.70%	0.35%	0.35%	-
	h) On completion of 100% electrical wire pulling complete in all respect.	0.35%	0.70%	0.70%	0.35%	0.35%	3.00%
	i) On completion of 50% Switch Board & Accessories fixing complete in all respect.	0.10%	0.15%	0.15%	0.10%	0.10%	-
	j) On completion of 100% Switch Board & Accessories fixing complete in all respect.	0.10%	0.15%	0.15%	0.10%	0.10%	0.60%
	k) On completion of 50% laying of internal cable with cable tray complete in all respect.	0.20%	0.30%	0.30%	0.20%	0.20%	-
	l) On completion of 100% laying of internal cable with cable tray complete in all respect.	0.20%	0.30%	0.30%	0.20%	0.20%	1.20%
37	SITC of HT, LT, APFC Panels, Transformer, HT earthing and internal electrification etc. of Substation earthing & street light of entire project.						
	a) On completion of SITC of HT Panel	0.25%	-	-	-	-	-
	b) On completion of SITC of LT panel including APFC Panels	1.00%	-	-	-	-	-
	c) On completion of SITC of Transformer	0.40%	-	-	-	-	-
	d) On completion of SITC of HT cable, Internal electrification including earthing etc. of Substation.	0.10%	-	-	-	-	-
	e) On completion of SITC of Earthing & street light of entire project..	0.50%	-	-	-	-	-

Sl.	Activity/ Milestone	% of Project Cost for Academic Building	% of Project Cost for Hostel Block	% of Project Cost for Staff Quarter	% of Project Cost for OPD Block	% of Project Cost for Hospital Block	% of Project Cost for Other Building (Central Workshop, Maintenance Office, Autopsy Block etc.)
38	Supply & installation of Building Electrical Panels with components, floor DBs with components, distribution of cables from Sub-Station to different buildings, UPS, all cable termination complete in all respect.						
	a) On completion of Supply & installation of Building Electrical Panels with components all cable termination complete in all respect.	0.60%	0.90%	0.90%	0.60%	0.60%	0.90%
	b) On completion of Supply & installation of DBs, UPS with components all cable termination complete in all respect.	0.80%	1.20%	1.20%	0.80%	0.80%	1.20%
	c) On completion of Supply & installation of Distribution of cables from Sub-Station to different buildings complete in all respect.	0.60%	0.90%	0.90%	0.60%	0.60%	0.90%
39	SITC of AC system & Mechanical ventilation system with all allied mechanical accessories complete in all respect.	3.00%	-	-	8.50%	3.00%	2.00%
40	SITC of AC system with all allied mechanical accessories at guest rooms attached with the teaching staff quarter complete in all respect.	0.15%	-	-	-	-	-
41	SITC of Lift including NOC from concerned authority for the entire project complete in all respect.	1.50%	5.00%	5.00%	1.50%	1.50%	-
42	SITC of devices for Fire Detection System including all controlling system excluding hydrant complete in all respect.	0.30%	0.10%	0.10%	0.50%	0.50%	0.10%
43	SITC of DG-set including AMF panel, earthing, cabling & NOC from concerned authority complete in all respect.	1.50%	-	-	-	-	-
44	P.A./ Sound System, CCTV, ELV system ie. LAN & Telephone network, Telecommunication equipment, Cable TV network, BMS & IT-systems complete in all respect.						
	a) On completion of first 50% complete in all respect.	1.00%	-	-	1.00%	1.00%	-
	b) On completion of balance 50% (Upto 100%) complete in all respect.	1.00%	0.50%	0.50%	1.00%	1.00%	0.50%
45	SITC of all electrical fittings & fixtures (all types of light & fan etc.), complete in all respect.						
	a) On completion of 25% SITC of electrical fittings & fixtures complete in all respect.	0.45%	0.77%	0.77%	0.35%	0.35%	-
	b) On completion of next 25% (upto 50%) SITC of electrical fittings & fixtures complete in all respect.	0.45%	0.77%	0.77%	0.35%	0.35%	-
	c) On completion of next 25% (upto 75%) SITC of electrical fittings & fixtures complete in all respect.	0.45%	0.77%	0.77%	0.35%	0.35%	-
	d) On completion of next 25% (upto 100%) SITC of electrical fittings & fixtures complete in all respect.	0.45%	0.77%	0.77%	0.35%	0.35%	5.00%
46	On completion of SITC of Solar Power System complete in all respect.	0.75%	-	-	-	-	-
47	SITC of Signage both internal and external of the buildings including directional signage for the entire project.	0.25%	0.05%	0.05%	0.38%	0.38%	0.05%
48	SITC of Lighting Conductor, Electrical Landscaping, Façade lighting of the buildings for the entire project.						
	a) On completion of SITC of Lighting Conductor for the entire project complete in all respect.	0.30%	-	-	-	-	-
	b) On completion of SITC of Electrical Landscaping, Façade lighting of the buildings for the entire project complete in all respect.	0.30%	-	-	-	-	-
49	Landscaping & Site clearance of the entire project.	2.50%	-	-	-	-	-
50	a) On completion of total electromechanical work for Sewage Treatment Plant including NOC from concerned authority of the entire project.	0.28%	-	-	-	-	-
51	On completion of Civil structural work of MGPS plant Building.					0.40%	

Sl.	Activity/ Milestone	% of Project Cost for Academic Building	% of Project Cost for Hostel Block	% of Project Cost for Staff Quarter	% of Project Cost for OPD Block	% of Project Cost for Hospital Block	% of Project Cost for Other Building (Central Workshop, Maintenance Office, Autopsy Block etc.)
52	On completion of Civil Block work, all finishing work, electrification work, PHE work etc. of MGPS plant Building.					0.40%	
53	On completion of supply of all materials (Pipe, Valves etc.) for MGPS work at Hospital Block, after 80% completion of civil work of Hospital Building & MGPS Plant Building.	-	-	-	-	1.00%	-
54	On completion of supply of all equipments for MGPS work at Hospital Block, after 80% completion of civil work of Hospital Building & MGPS Plant Building.					1.00%	
55	On completion of installation of whole MGPS system at Hospital building including all installation of equipments and pipelines etc. at MGPS Plant & manifold room.	-	-	-	-	1.00%	-
56	On completion of 3rd party inspection, certificate & commissioning of whole MGPS system at Hospital building including MGPS Plant & manifold.	-	-	-	-	1.00%	-
57	Supply of consumables and maintenance including renewal of all NOC from concerned authority during DLP for the entire project and supply of consumables, operation and maintenance MGPS installed at Hospital Building	-	-	-	-	-	-
	a) On completion of 1st quarter of 1st year.	0.08%	0.08%	0.08%	0.08%	0.20%	0.08%
	b) On completion of 2nd quarter of 1st year.	0.08%	0.08%	0.08%	0.08%	0.20%	0.08%
	c) On completion of 3rd quarter of 1st year.	0.08%	0.08%	0.08%	0.08%	0.20%	0.08%
	d) On completion of 4th quarter of 1st year.	0.08%	0.08%	0.08%	0.08%	0.20%	0.08%
	e) On completion of 1st quarter of 2nd year.	0.12%	0.12%	0.12%	0.12%	0.30%	0.12%
	f) On completion of 2nd quarter of 2nd year.	0.12%	0.12%	0.12%	0.12%	0.30%	0.12%
	g) On completion of 3rd quarter of 2nd year.	0.12%	0.12%	0.12%	0.12%	0.30%	0.12%
	h) On completion of 4th quarter of 2nd year.	0.12%	0.12%	0.12%	0.12%	0.30%	0.12%
	i) On completion of 1st quarter of 3rd year.	0.18%	0.18%	0.18%	0.18%	0.38%	0.18%
	j) On completion of 2nd quarter of 3rd year.	0.18%	0.18%	0.18%	0.18%	0.38%	0.18%
	k) On completion of 3rd quarter of 3rd year.	0.18%	0.18%	0.18%	0.18%	0.38%	0.18%
	l) On completion of 4th quarter of 3rd year.	0.18%	0.18%	0.18%	0.18%	0.38%	0.18%
	<b>Total =</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

Note (A): No additional area will be considered for services & utilities mentioned in Sl. No. 25, 29, 30, 31, 32, 33, 35, 37, 39, 40, 43, 48, 49, 50 in the Payment Schedule. Payment for these works will be disbursed as per provision made in the Payment Schedule for the Academic Building.

Note (B) for Sl. No. 51: - i) Supply, repair and maintenance of Sanitary and Plumbing system, door and windows along with its fittings and fixtures will be under the scope of bidder.  
ii) Repair, Maintenance, renewing including supply of Consumables for all Electro-Mechanical equipments (except D.G fuel, SOT products for MGPS, Supply of oxygen & Nitrous Oxide gas) will be under the scope of bidder.

72	452	6	1.7	The Contractor shall give all notices, pay <b>all taxes, duties and fees</b> , and obtain all permits, licences and approvals, as required by the Laws in relation to the planning, design, execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Employer harmless against and from the consequences of any failure to do so. However, the Employer shall assist and/or facilitate (without any recourse or liability) obtaining of all permits, licences and approval, as required by the Laws and shall sign such documents as may be required by statute.	The Contractor shall give all notices, pay <b>all taxes, cess (including labour cess), duties and fees</b> , and obtain all permits, licences and approvals, as required by the Laws in relation to the planning, design, execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Employer harmless against and from the consequences of any failure to do so. However, the Employer shall assist and/or facilitate (without any recourse or liability) obtaining of all permits, licences and approval, as required by the Laws and shall sign such documents as may be required by statute.
73	476	6	4.35	Not Applicable	After 4.34, following Clause 4.35 is inserted as follows: <b>"4.35. No Assignment or Sub-contracting</b> (a) The Contractor shall not be entitled to assign its rights and obligations under this Contract or any part thereof in favour of any third party, without first obtaining prior written consent from the Employer. (b) The Contractor shall not be entitled to sub-contract any part of the Works, save and except for certain specialized components of the Works such as HVAC, MGPS, ELV, STP & WTP system and waterproofing. Provided, however, the Contractor first obtains prior written permission from the Employer before appointing sub-contractor to carry out such abovementioned specialized Works. The Employer shall approve or provide permission for appointment of the sub-contractor, after examining their experience and financial capability.
74	487	6	8.2	Time for Completion of the entire project is 24 months.	Time for Completion of the entire Project is <b>30</b> months.
75	506	6	14.1.(b)	The Contractor shall pay <b>all taxes, duties and fees</b> required to be paid by it under the Contract, and the Contract Price shall not be adjusted for any of these costs.	The Contractor shall pay <b>all taxes, cess (including labour cess), duties and fees</b> required to be paid by it under the Contract, and the Contract Price shall not be adjusted for any of these costs.
76	506	6	14.2.(a).(iii)	Mobilisation Advance not exceeding 10% of the Contract Price may be given, if requested by the Selected Bidder/Contractor in writing within 30 (thirty) days of the issue of Notification of Award. The Employer shall pay the Mobilisation Advance to the Contractor, in the following 2 tranches, upon completion of the following events :- (a) First tranche of <b>5% of the Mobilisation Advance shall be paid by the Employer</b> , upon completion of the following events/ activities: (i) Construction of labour camp, Contractor's site office and making arrangements for water supply (ii) Construction of the Employers' temporary site office at the site. (iii) Obtaining a Mobilisation Advance Bank Guarantee from a scheduled bank as per form given in Section - 7 (Contract Forms) <b>aggregating to the full amount of Mobilization Advance (including both tranches)</b> in favour of the Employer and submission of such Bank Guarantee to the Employer.	Mobilisation Advance not exceeding 10% of the Contract Price may be given, if requested by the Selected Bidder/Contractor in writing within 30 (thirty) days of the issue of Notification of Award. The Employer shall pay the Mobilisation Advance to the Contractor, in the following 2 tranches, upon completion of the following events:- (a) First tranche of the Mobilisation Advance <b>equivalent to 5% of the Contract Price shall be paid by the Employer</b> , upon completion of the following events/ activities: (i) Construction of labour camp, Contractor's site office and making arrangements for water supply (ii) Construction of the Employers' temporary site office at the site. (iii) Obtaining a Mobilisation Advance Bank Guarantee from a scheduled bank as per form given in Section - 7 (Contract Forms) <b>aggregating to 5% of the Contract Price, being equivalent to the first tranche of the Mobilization Advance</b> , in favour of the Employer and submission of such Bank Guarantee to the Employer.

77	506	6	14.2.(b)	<p>Second tranche of 5% of Mobilisation Advance will be released by the Employer to the Contractor, upon completion of payment by the Employer, of 15% of the total Contract Price.</p>	<p>Second tranche of 5% of Mobilisation Advance will be released by the Employer to the Contractor, upon completion of payment by the Employer, of 15% of the total Tendered Amount <b>and upon the Contractor obtaining a Mobilisation Advance Bank Guarantee from a scheduled bank as per form given in Section - 7 (Contract Forms) aggregating to 5% of the Contract Price, being equivalent to the second tranche of the Mobilization Advance, in favour of the Employer and submission of such Bank Guarantee to the Employer.</b></p>
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