

Detail Estimate (E & M)**Name Of Work:- C/o Boundary Wall with main Gate at Campus of NFSU at Atal Nagar Nava Raipur (C.G)**

Sr.No	Description of Item	Qty	Unit	Rate	Rate including Cost Index (DSR item) (1%)	Amount	Remarks (DSR-25 /MR)
	SH-I (Wiring)						
1.01	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 steel 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.						
a	Group C	21	Point	2101.00	2122.00	44562.00	1.3.3
1.02	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit alongwith 1 No 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required	20	Mtr	480	485.00	9700.00	1.5
1.03	Wiring for light/ power plug with 4X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit alongwith 2 Nos 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	20	Mtr	724	731.00	14620.00	1.6
1.04	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required						
a	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	50	Mtr	370	373.50	18675.00	1.7.1
1.05	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.						
a	20 mm	45	Mtr	254.00	256.50	11542.50	1.20.1
1.06	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.						
d	Telephone socket outlet	3	Each	168.00	169.50	508.50	1.24.6
1.07	Supplying and fixing following size/ modules, GI box along with modular base & cover plate for modular switches in recess etc as required.						
a	1 or 2 Module (75mmX75mm)	3	Each	354.00	357.50	1072.50	1.27.1

Sr.No	Description of Item	Qty	Unit	Rate	Rate including Cost Index (DSR item) (1%)	Amount	Remarks (DSR-25 /MR)
1.08	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch , connection etc. as required.	3	Each	545.00	550.50	1651.50	1.31
1.09	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch , connection etc. as required.	3	Each	757.00	764.50	2293.50	1.32
1.10	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 2 nos. 3 pin 5/6 A modular socket outlet and 2 nos. 5/6 A modular switch, connections etc. as required. (For light plugs to be used in non residential buildings).	3	Each	757.00	764.50	2293.50	1.56
1.11	Supplying and drawing following pair 0.5 mm dia FRLS/HFFR PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.						
a	2 Pair	30	Mtr	39.00	39.50	1185.00	1.18.2
	Total of SH-I (Wiring)					108104.00	
	SH-II (Fan & LED Fittings)						
2.01	Supplying, installation, Testing & Commissioning of LED Recessed / surface Down lighter (Round / square/ Rectangular) SMD type of following body material with PMMA and prismatic diffuser and construction as per IS : 10322 with driver as per the requirement with Driver efficiency >85%, Operating voltage AC 140-270 Volt, freq 50/60 hz, Operating temp range -15 deg to 40 deg centigrade, internal surge protection of 2.5 KV with Short & Open circuit protection ,THD < 10% , P. F.≥0.95, IP20, CRI >80 , UGR (Unified Glare Rating) < 19, Flicker free (flicker should be below 5 %), life time (LED,Driver & electrical circuitry), life time of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin), SDCM(Standard Deviation Color Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard and trade mark certificate (T.C.).						

Sr.No	Description of Item	Qty	Unit	Rate	Rate including Cost Index (DSR item) (1%)	Amount	Remarks (DSR-25 /MR)
	Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. "complete in all respect i/c connections with 1.5 sq mm FRLS, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥ 120 <135 lm/Watt output . LM79 & LM80 Test report from NABL lab for all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminum housing such that LED junction temperature shall not rise above 90°C).						
	Powder coated die cast /Extruded aluminum Body including trim						
(a)	12-15 watt	2	Each	715.00	722.00	1444.00	8.2.3
2.02	LED Batten light (System lumen efficacy ≥ 105 <120 lm/Watt)						
	Supplying, installation, Testing & Commissioning of LED surface mounted Batten light of following body material and construction as per IS : 10322 with driver (Replaceable) as per the requirement with Driver efficiency >85% ,Operating voltage AC 140-270 Volt, freq 50/60 hz, Operating temp range -15 deg to 40 deg centigrade, internal surge protection of 2.5 KV with Short & Open circuit protection ,THD < 10% , P. F. ≥ 0.95 , IP20, CRI >80, Flicker free, (flicker should be below 5 %), life time (LED,Driver & electrical circuitary), of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends, CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin), SDCM(Standard Deviation Color Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard and trade mark certificate (T.C.).						
	Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. complete in all respect i/c connections with 1.5 sq mm FRLS, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥ 105 <120 lm/Watt output . LM79 & LM80 Test report from NABL lab for all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminum housing such that LED junction temperature shall not rise above 90°C).						

Sr.No	Description of Item	Qty	Unit	Rate	Rate including Cost Index (DSR item) (1%)	Amount	Remarks (DSR-25 /MR)
	Powder coated die cast / Extruded aluminium Body (Thickness $\geq$ 1.20 mm)						
a)	18- 22 watt	6	Each	681.00	688.00	4128.00	8.9.1
2.03	Supply, Installation, Testing and commissioning of Post top luminaire. having Input power : 45W LED Symmetrical light distribution. Luminaire made of pure polyester UV resistance powder coated, die-cast aluminium housing with polycarbonate clear diffuser suitable for mounting Ø60mm OD pipe. All external screws are made of stainless steel. Protection class IP54. Available colour temperature 3000K / 4000K/5700K, Colour rendering index (CRI)>80. LED operating on 240V, 50Hz single phase ac supply. connections with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. complete as required.	4	Each	11709.00	11709.00	46836.00	MR
2.04	SITC LED Surface Mounted/suspended round high bay fitting made up of Al. Pressure Die Cast housing with a nominal system lumen output of not less than 6000 lumens and a minimum system lumen efficacy of 120 lm/W.The Color temperature should not be not less than 5700K. The luminaire shall meet IP65 rating i/c fixing arrangement on ceiling working on 230V 50Hz A.C Supply, connections with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. complete as required.	4	Each	6600.00	6600.00	26400.00	MR
2.05	Brush Less Direct Current (BLDC) Motor						
2.06	Supply, Installation, Testing and Commissioning of ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. metal (Aluminum alloy) blades, 30 cm long down rod, 2 nos. canopies, shackle kit,safety rope, copper winding, steel/Al body Power Factor not less than 0.9, Service Value (CM/M/W) minimum as below, 350 RPM (tolerance as per IS : 374-2019), THD (Total Harmonic Distortion) less than 10%, suitable for operation with regulator for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 degree C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC Ceiling Fan compliant to IS 374:2019 fan Supply, earthing etc. complete as req						
a)	1200mm, service value $\geq$ 6.0 CM/Min/Watt, air delivery 210 CM/Min (Minimum)	3	Each	2695.00	2722.00	8166.00	9.2.3

Sr.No	Description of Item	Qty	Unit	Rate	Rate including Cost Index (DSR item) (1%)	Amount	Remarks (DSR-25 /MR)
2.07	Supplying, Installation, testing and commissioning of 10 watt LED Lighting Fixture with extruded Polycarbonate 2 Ft length having Color temperature should not be not less than 5700K i/c fixing arrangement on wall, connections with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. complete as required.	1	Each	734.00	734.00	734.00	MR
2.08	Supplying, Installation, testing & commissioning of 250mm sweep Fresh air fan with louvers in the existing opening including making good the damage, connection with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable, testing, commissioning etc. as reqd.	1	Each	2343.00	2343.00	2343.00	MR
	Total of SH-II (Fan & LED Fittings)					90051.00	
	SH-III (MCB & DB'S)						
3.01	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc as required. (But without MCB/RCCB/Isolator)						
b	8 Way, Double door	3	Each	2773.00	2800.50	8401.50	2.3.2
3.02	Supplying and fixing Cable End Box (Loose wire box) (IP 43) suitable for following single pole and neutral , sheet steel.MCB distribution board, 240 V, on surface/recess , complete with testing and commissioning etc. as reqd .(make : Same as MCB DBs)						
a	For 8 way, Double door SPN MCB DB	3	Each	918.00	927.00	2781.00	2.23.2
3.03	Supplying and fixing of 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.						
a	Single pole	18	Each	285.00	288.00	5184.00	2.10.1
3.04	Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.						
b	40 amps	3	Each	2512.00	2537.00	7611.00	2.14.2
	Total of SH-III (MCB & DB'S)					23977.50	

Sr.No	Description of Item	Qty	Unit	Rate	Rate including Cost Index (DSR item) (1%)	Amount	Remarks (DSR-25 /MR)
	SH-IV (Cable laying)						
4.01	Supplying of following sizes XLPE (cross linked polyethylene) insulated PVC sheathed, armoured with galvanised steel strip/galvanized round steel wire U.G. Cable with aluminium conductor suitable for rated voltage of 1.1 KV grade and conforming to IS IS:1554 (Part-1) & IS:7098 (Part-1) & having ISI marking as required.						
a	3 x 10 sq. mm	30	Mtr	371.00	371.00	11130.00	MR
4.02	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC / HUME / METAL/HDPE pipe as required.						
a	Upto 35 sq. mm	24	Mtr.	47.00	47.50	1140.00	10.5.1
4.03	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.						
a	Upto 35 sq. mm (clamped with 1mm thick saddle)	6	Mtr.	64.00	64.50	387.00	10.7.1
4.04	Supplying and making end termination with brass compression gland and aluminium lugs for following sizes PVC Insulated and PVC sheathed XLPE aluminium conductor cable of 1.1 KV grade as required.						
a	3 X 10 sq. mm (22mm)	6	Each	312	315.00	1890.00	11.1.7
4.05	Supplying and laying of following size Double Walled Corrugated (DWC) High density polyethylene(HDPE) pipe Confirming ISI marked along with all accessories like socket,bend,couplers etc. complete with fitting and cutting,jointing etc. direct in ground (75 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc. complete as reqd.						
b	63 mm dia .(OD-63 mm & ID-51 mm nominal)	24	Mtr	289.00	292.00	7008.00	15.16.1
	Total of SH-VII (Cable laying)					21555.00	

Name Of Work:- C/o Boundary Wall with main Gate at Campus of NFSU at Atal Nagar Nava Raipur (C.G)

ABSTRACT OF COST			
	SH-I (Wiring)		108104.00
	Sub Head - II (Fan & LED Fittings)		90051.00
	SH-III (MCB & DB'S)		23977.50
	SH-VII (Cable laying)		21555.00
	Total		243687.50