

BILL OF QUANTITY

Name of work: Repair and renovation of swimming pool at IITG Campus..

Item No.	Description of item	Unit	Qty	Rate in figure (')	Rates in Words	Amount (')
1	Providing and fixing fibre gutter cover 300 mm long 3 pin white colour as approved by the Engineer in charge.	Rm	102.00			
2	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.					
	(a) In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	Kg	245.00			
	Total Amount =					
	Rebate if Any =					
	Net Total amount after rebate =					
	Rounded off =					

(Rupees only)

Item No;	Description of Items	Unit	Qty	Rate (')	Amount (')
	PART-C: Airconditioning Works				

1	Supply,installation,testing and commissioning of sheet metal sectionalised construction type Double Skin direct driven AHUs of following capacities with filter section with prefilters of 50 mm thick, efficiency 90% down to 10 micron, chilled water cooling coils of Copper tube and Aluminium Fins construction,insulated drain pan,squirrel cage induction EFF1 type motor,DIDW backward curved centrifugal/Plug fans,vibration isolators(spring mounted),proportionate thermostatew, coil shall be selected for a max.face velocity of 500 FPM and static shall be 50 mm.Motor shall be suitable for 415V/3Ph/50 Hz AC AC supply. Air moving capacities shall be as per the specifications etc. complete as required.					
a MR	Double skin ceiling suspended direct driven AHU , 1000 CFM , 30mm SP, 4RD , Coil Compete as required.	nos	1	82787.00		82787.00
3	Supplying & laying , testing & commissioning mild steel ' C ' class pipe of size as mentioned below on exposed surface,wooden support, MS angle- clamp alongwith priming coat of steel primer as per standard specification complete as required.					
a MR (based on DSR rates)	40mm dia	meter	4.00	426.00		1704.00
b MR (based on DSR rates)	32mm dia	meter	24.00	365.00		8760.00
c MR (based on DSR rates)	25 mm dia	meter	12.00	284.00		3408.00
4	providing and fixing Chilled water pipe insulation with 50 mm thick TF quality expanded polystyrene of 20 kg/ m3 density and finally covered with chicken wire mesh and 10 mm thick sand cement plaster in two layer and two coat of approved brand of painting on the pipes - For over ground pipes.					

a MR (based on DSR rates)	40 mm dia.	meter	4.00	318.00		1272.00
b MR (based on DSR rates)	32 mm dia.	meter	24.00	305.00		7320.00
c MR (based on DSR rates)	25 mm dia.	meter	12.00	281.00		3372.00
5	Providing and fixing in position the following insulated butterfly valves.					
b DSR'1 4 16.7.1. 8	40mm dia	Nos	2.00	2629.00		5258.00
6	Providing and fixing in position the following insulated balancing valves as per the specifications complete as required.(supply)					
a DSR'1 4 16.7.2. 8	40 mm	Nos	1.00	3119.00		3119.00
7 DSR'1 4 16.7.4. 7	Providing and fixing in position the following insulated Y-stainer of (40) mm dia as per the specifications complete as required.	Nos	1.00	2423.00		2423.00
8 MR	Providing and fixing of insulated motorised 2-way valve 25 mm with actuator ,position feedback etc complete as required.	Nos	1.00	11500.00		11500.00
9	Grilles/Diffusers					
	Providing and fixing of extruded aluminium powder coated grills/diffusers as per specifications and drawings.					

a DSR'1 4 16.16	S/F of Aluminium extruded grill ,but without damper complete as required.	sqm.	1.50	4040.00		6060.00
b DSR'1 4 16.17	S/F of Aluminium extruded diffuser , but with damper complete as required.	sqm.	1.50	8661.00		12991.50
c DSR'1 4 16.18	S/F of Aluminium extruded diffuser , but without damper complete as required.	sqm.	1.70	5594.00		9509.80
10	supplying,installation,testing and commissioning of following industrial type thermometer and pressure gauge with ball valves for isolation complete as required(supply)					
a MR	Thermometer	Nos	2.00	850.00		1700.00
b core- III	pressure gauge	Nos	2.00	1100.00		2200.00
c core- III	Auto Air-purge valve of 25mm dia	nos	2.00	1050.00		2100.00
11	Electrical work					
12	Control Panels for AHUs					
	Supply,installation,testing and commissioning of the following cubicle type openable front ,sheet steel wall mounted control panels sleeve type Al. bus bar including anchoring into the wall.These panels shall be complete in all respects as per the the specifications. The panel shall include the following accessories (I to XI) as mentioned below.					
	MCCB as per rating given below.					
	Terminal block for power distribution.					
	Undervoltage and high voltage protection					
	LED Phase indicating lights and indicating lights for ON/TRIP status.					
	Digital type Ammeter and suitable size CT and selector switch,Voltmeter.					
	Time delay relay for automatic restart of AHUs motors.					
	Auto/Manual stop selector switch shall be provided in each AHU Panel.The same should provide potential free contact for position monitoring to BMS system.					
	All starters shall have suitable potential free contacts					
	Wiring for microswitch for stopping the fan when fire dampers closes.					

	suitable contactor and relay for CILP connection					
	Suitable space for VFD to be provided inside AHU Panel for installing it.i/c 0-24V Transformer.					
	The number of AHU panel shall be as detailed below :					
MR	40 amps DP MCB with 1 No 2.5 to 4 HP DOL Starter for AHU.	sets	1	21000.00		21000.00
14.0	Power Cabling					
14.1	Supply,installation,testing and commissioning of PVC insulated sheathed 1.1 KV grade armoured Al. Power cables from various panels upto their respective equipment on MS painted perforated trays with appropriate clamps/fixing arrangements as per specifications and drawings.(supply)					
a core-III	3 C X 16 mm2 Aluminium Cable	RM	10	650.00		6500.00
15 core-III	Control Cable 1.5 X 3core (copper for 2-way valve)	RM	8	250.00		2000.00
16	Earthing :					
	Supply,installation,testing and commissioning of double earthing continuity conductor of GSS from Panels to respective equipment (supply)					
a core-III	6 SWG wire	RM	20	60.00		1200.00
16	Ducting					
	Supplying installation balancing and commissioning of site fabricatedGSS sheet metaly rectangular/ round ducting with flanged joint completeas required					
a DSR'1 4 16.12. 2.1	Thickness 0.63 mm sheet	sqm	20	605		12100.00
17 Biotec h	Supplying,fixing,testing and commissioning of underdeck insulation of 25 mm thick selfadhesive type close cell nitrile Rubber/FR-XLPE with all accessories to complete the work i/c fastener,GI wire ,washers etc as required	sqm	80	750		60000.00
	Total Amount of (PART-C) =					2,68,284.30

