

**TATA INSTITUTE OF FUNDAMENTAL RESEARCH
INTERNATIONAL CENTRE FOR THEORETICAL SCIENCES**

Name of Work : Providing and constructing external Amphitheater, Dining area and central hardscape works at ICTS-TIFR Campus, Shivakote village, Bengaluru north.

Schedule of Quantities

Sl No.	Description of Items	Unit	Qty	Rate	Amount
1	Earth work excavation in foundation pits, plinth / tie beams, cable trenches/pits , pipe lines , sewers, man holes, chambers, etc.in all soils other than soft & hard rock for depths mentioned below including shoring if necessary, dressing the sides, trimming, ramming and preparing the bed for foundation and refilling around the foundation and in plinth with selected excavated earth, in layers not exceeding 250mm. thick, watering, consolidation and disposing of the surplus earth within a distance of 150M etc. complete as per specifications, drawings and as directed by the Engineer-in-charge.				
a	Depth not exceeding 1.5 m from Ground Level.	Cum	965		
2	Plain Cement concrete of following mix in bed concrete to plinth beams, foundations, pedestal, encasing pipes etc. at all locations & depths using graded stone aggregate of 20mm.maximum size including necessary form work, machine mixing, transporting, placing in position consolidation, finishing, curing etc. complete as per specifications, drawings & as directed by the EIC. (All works up to plinth level).				
a	Using cement concrete 1:4:8 mix for PCC.	Cum	325		
b	Coping concrete with grade 1:2:4 with simultaneous smooth buffed/brush/sponge finish.	Cum	2		
3	Providing and constructing at all levels concrete block walls with CEMENT CONCRETE SOLID BLOCKS using 400x200x200/400x 150x200mm with approved quality and confirming to a crushing strength of not less than 50Kgs/Sqcms in CM 1: 6 to correct line, level and plumb including racking out joints, curing scaffolding, at all levels/ floors , lead, lifts and height for walls , platforms and packing the junction of wall with ceiling with 1:3:6 mix and plant required for the execution of the work etc. Complete as per specifications, & as directed by EIC.				
		Cum	250		
4	Providing and applying 20mm thick external and 15mm internal thick plaster of following finish in CM 1:4 (1 cement :4 river sand) for seaters & planter boxes, columns etc. including all lead & lift and curing etc. complete all as per specifications, drawing and as directed by the Engineer in charge. Note : Plaster finish shall be neat coat of cement/Brush/smooth buffed/any approved finish for all plaster works whereever specified.				
a	Finished rough external plastering for chambers seaters & planter boxes etc., with neat cement coat.	Sqm	1450		
b	Finished smooth internal including mixing approved waterproof compound of approved manufacturer etc., with neat cement coat.	Sqm	100		
5	Providing and Laying 230mm dry rubble stone hard core soling consolidated thickness in sub base to floor and driveway subgrade with 150-90mm size stone aggregate, stones scree ding of 12.5mm max. size in layers as specified below, each layer of 150mm thick laid loose and consolidated to 115mm thickness including breaking stone if required, screening, sorting, spreading to regular line, level, template and supplying and blinding with stone dust, watering, consolidating including cost labour, finishing to proper gradient, camber and including mechanical vibration etc. complete as per specifications & as directed by the Engineer-in-Charge.				
		Sqm	750		
	Quoted rate shall be inclusive of all leads and lift.				

6	Providing and laying precast form finish chamfered kerb M30 grade of M/s. Besant Betons or at par quality of approved manufacture of size 600mm length x 375mm high x 150mm thick as shown in the drawing with laid vertically/ horizontally for parking approach etc., laid over 20mm thick CM 1:4 with a gap of 6-8mm and pointing the gap with 1:4 CM neatly finished with cement punning matching with kerb etc., sub-base mortar, pointing etc., complete as detailed in drawing and as directed by Engineer-in-charge.				
	(a) Material supplied by the contractor	RM	480		
7	Supply and installing Rectangular block/grey pavers of M/s Basant Baton or equivalent elganza grey/black colour or as approved sizes with min 60mm thick concrete paver blocks for heavy traffic as detailed on the plans including all labour, materials, testing, submittals, tools and equipment necessary to install the blocks to the lines and grades shown on the plans including any incidentals thereto etc. complete all as per specifications, drawing and as directed by the Engineer in charge.	Sqm	750		
	i)The paver blocks shall be with different dimensions with minimum load bearing capacity of 40 MT.				
	ii) The interlocking concrete block should be of crushing strength not less than 250 Kg/Sq.Cm, approved type (60 + or - 3mm thick).				
	iii) Additional cement mortar required for end joints etc., to maintain, line, level, camber, gradient etc. shall be included in quote rates.				
8	Painting external surfaces with two coats of exterior grade Acrylic premium emulsion paint of approved manufacture of approved colour and shade over a coat of cement based primer of approved make as mentioned below all as per manufacturer's recommendations and as per the approved sample including providing necessary scaffolding/staging, cleaning the surface with water to remove all coating, dust, filling up cracks & crevices with approved putty, curing the surface etc. at all heights, locations and lead etc., complete as per specifications and as directed by EIC.	Sqm	1300		
9	Reinforcement for RCC work using Thermo Mechanically Treated bars of grade Fe-500 manufactured by SAIL/TATA STEEL/RINL only as per the following including loading, unloading, transporting, decoiling, straightening, cutting, bending, placing in position and binding with 18 gauge, soft drawn annealed steel binding wire including carrying out various tests as required etc. all as per specifications, drawings & as directed by the EIC.	MT	2.00		
10	Providing rigid and water tight centering and shuttering for all RCC works in all geometric shape (plain/curve) using best quality wood/ plywood/steel forms and centering with steel props, acro tubes etc., includingstrutting, propping, bracing, staging etc., complete for all RCC items fixed in position as required including labour for careful removal of form work etc., complete all as per specifications at all heights for all geometric shapes and sizes at all leads and lifts.	Sqm	30.00		
11	Providing and laying in position REINFORCED CEMENT CONCRETE M-25 for all RCC works in all geometric shape (plain/curve)from approved RMC plant using graded hard granite stone aggregate of 20mm nominal size obtained from approved quarry including mechanical mixing, vibrating, compaction, finishing, curing, etc; complete all as per specifications but excluding the cost of form works and steel reinforcement. (Rate to include labour for keeping embedments if any, wherever required while casting). Mix ratio is specified is for (cement : coarse sand : graded stone aggregate) UPTO FLOOR FIVE LEVEL IN beams, suspended floors, roofs having slope upto 15 degree, landings, balconies, shelves, chajjas, lintels, bands, plain window sills , staircases and spiral staircases etc.. complete.	Cum	5.00		

12	Filling in low lying areas, pathways, parking etc. with approved red earth excavated including transporation, all leads, lifts, loading, unloading from nearby approved borrow areas outside the campus by mechanical stacking, levelling, spreading in layers not exceeding 150 mm thick, breaking clods, watering, consolidation to obtain 90% proctor density etc. all complete as per specifications, drawings & as directed by the Engineer in Charge. Note : Actual quantity of truck measurement will be considered deducting 20% void for payment.				
a	With earth from outside by mechanical transport with all lead.	Cum	4000.00		
13	Providing and laying 15mm thick terracotta tiles in 20mm thick CM 1:4 jointed with cement slurry as per design including transportation, cutting, labour,wastage, acid wash etc. complete all as per specifications, drawing and as directed by the Engineer in charge.				
a	Terracotta tiles of 230mm x75mm x 15mm thick.	Sqm	220.00		
b	Terracotta tiles of 230mm x230mm x 15mm thick.	Sqm	140.00		
c	Terracotta tiles of 230mm x75mm x 15mm thick supplied by the department Note : Contractor have to shift the departmental availabe material stacked at various locations in & around the campus.	Sqm	5.00		
d	Terracotta tiles of 230mm x230mm x 15mm thick supplied by the department. Note : Contractor have to shift the departmental availabe material stacked at various locations in & around the campus.	Sqm	5.00		
14	Providing and laying 30 mm uniform thick machine cut Sira stone slabs of following size in 20mm thick CM 1:4 with paper joints as per design including transportation, cutting, labour, wastage, acid wash etc. complete all as per specifications, drawing and as directed by the Engineer in charge.				
a	Laying polished grey Sira stone of size 1500x500mm.	Sqm	125.00		
15	Providing and laying 40 mm uniform thick machine cut Sira stone slabs of following size in 20mm thick CM 1:4 with paper joints as per design including transportation, cutting, labour, wastage, acid wash etc. complete all as per specifications, drawing and as directed by the Engineer in charge.				
a	Laying polished grey Sira stone of size 1500x450mm and 1200mm x 1200mm.	Sqm	140.00		
b	Laying Undressed Sira stone of size 1500mm x 900mm.	Sqm	470.00		
16	Supply and filling 20mm -25mm uniform size aggregate for gravel bed to a depth of 75mm thick laid on 50mm thick cement concrete bed using 20mm max size aggregate etc. complete all as per specifications, drawing and as directed by the Engineer in charge.	Cum	56		
	Note: 1.Concrete will be paid under relevant item.				
	2.Aggregate size less than 20mm will be rejected for carrying the work.				
17	Providing and laying of 75mm uniform thick undressed machine cut Sira stone slabs in 20mm thick CM 1:4 of following sizes laid in a crazy pattern/ radial pattern with 50mm thick grass joints as per design including transportation, cutting, labour, wastage, acid wash etc. complete all as per specifications, drawing and as directed by the Engineer in charge.				
	a) Random length of max. 2100mm & min. 600mm x 600mm wide.	Sqm	350		

18	Providing and constructing using machine pressed wire cut bricks of size 230mm X 75mm X 55mm size bricks for external cladding in single layer laid in cement mortar 1:4 (1 cement : 4 coarse sand) including raking out joints 15mm deep, to have exposed finish of bricks all-round with 15mm X 15mm grooves horizontally & vertically including sunk pointing with 1:2 Cement mortar with waterproofing compound as per manufacturer specification and first quality red oxide to match with the brick colour, curing, shoring / scaffolding, etc., including tooting / bonding with cross walls of normal brick work (built with class 7.5 bricks "minimum average compressive strength not less than 7.5N/sqm") to line and level at all levels, leads , heights and lifts including cleaning the surface completely & removing the cement mortar splashes and make the surface neat & clean etc., complete all as per drawings and as per direction of Engineer in charge. (NOTE: 1. Solid brick masonry around opening such as doors, windows, ventilators to be provided and the quoted rate should include the same and no extra will be permissible on account of this. 2) Actual area of brick cladding/lining is measured for payment.)	Sqm	250		
19	Providing and laying 20mm uniform thick machine cut pink stone slabs of following sizes laid in a crazy pattern/ radial pattern in 20mm thick CM 1:4 with paper joints as per design including transportation, cutting, labour, wastage, acid wash etc. complete all as per specifications, drawing and as directed by the Engineer in charge				
	Laying polished pink stone slabs of size 1000-1500 x 600-900mm.	Sqm	150		
		Total Rs.			

Note: 1. Rate inclusive of all WCT, Labour cess and taxes if any.

2. Water and electricity will be provided by department free of cost.

3. Quoted rate shall hold good for cutting the stones to any geometric shape in plain and curve and wastage at all lead and lift etc.,.

4. Quoted rate shall be inclusive of removing all debris generated and disposing at a designated place as per the statutory authorities.

5. Damage to any existing installations, underground, PH and electrical services lines shall be restored without any additional cost to department.

(Rupees

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Contractor's Seal with Signature