

BOQ FOR CONSTRUCTION OF RAIN WATER HARVESTING SYSTEM WITH GROUND WATER RECHARGE SOAK PIT AT DIBRUGRAH UNIVERSITY BRANCH					
PART A) RAIN WATER HARVESTING SYSTEM					
Sl.No	Description of items	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and for all lift and disposal, as directed by Engineer-in-charge.	cum	49		
2	Providing and laying dry brick soling using first class burnt clay bricks of approved quality(minimum compressive strength 75kg/sqcm), laid flat or on edge in pattern over a prepared, levelled and compacted subgrade. The joints shall be kept as close as possible and filled with sand or local earth by sweeping into the joints. The rate is inclusive here of filling material. The surface shall be watered lightly (if required) and compacted with a hand rammer/plate compactor to achieve a firm and even surface, complete in all respects as directed by EIC	sqm	9		
3	Providing and laying in position of cement concrete of specified grade excluding the cost of centering and shuttering - All work above plinth level : 1:2:4 (1 Cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 20 mm nominal size). Make:Ultra Tech, ACC, Ambuja, Dalmia Bharat or equivalent. The rate is inclusive of applying neat cement slurry for proper binding.	cum	1.5		
4	Providing and laying in position of reinforced cement concrete of specified grade excluding the cost of centering and shuttering - All work above plinth level : 1:2:4 (1 Cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 20 mm nominal size). Make:Ultra Tech, ACC, Ambuja, Dalmia Bharat or equivalent. The rate is inclusive of applying neat cement slurry for proper binding. Also keep space for Manhole while casting the slab say 900mmX900mm.	cum	1		
5	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Mild steel and Medium Tensile steel bar.	kg	90		
6	Centering and shuttering including strutting, propping etc. and removal of form for : foundation, slab.	sqm	9.5		
7	Brick work with common burnt clay F.P.S (non modular) bricks of class designation 7.5 in cement mortar 1:3 (1 cement: 3 coarse sand) in foundation and plinth level	cum	11		
8	12mm - 15mm cement plaster of mix: 1:4(1 cement:4 sand) with neat cement slurry finish.	sqm	54		
9	Providing and fixing Unplasticized Polyvinyl Chloride(UPVC) pipes of 25mm dia having thermal stability for hot and cold water supply including all UPVC plain fittings. This includes jointing of pipes & fittings with one step UPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge.Rate should include necessary excavation in trenches and refilling and repairing the surface to its original position including execution of work at all heights and locations with necessary scaffolding, staging etc. complete. Make: Astral, Supreme, Ashirvad, Prince or equivalent approved by the Bank. The rate is also inclusive of all clamps, support and fittings accessories whatever required for supporting the rain water harvesting system as directed by Engineer-in-charge	m	80		
10	Supplying,fitting and fixing PVC pipes of 6kg/cm2 (Supreme/Prince) or other ISI approved including joining,fitting and fixing with clamps etc as necessary complete at all levels including below G.L as directed as specified. The rate is also inclusive of all clamps,support and fitting accessories whatever required for supporting the rain water harvesting system as directed by Engineer-in-charge a) In exposed surfaces or trenches 110 mm dia	rm	100		
11	Providing, placing & fixing PVC water storage tank of approved make and quality including all accessories, fittings, connections and making the system functional as required and directed by Engineer-in-charge.	Liter	2000		
12	5HP three phase Centrifugal monoblock pump set(Crompton Greaves/Aquatic/CRI/V-guard/Calma make 2900 rpm A class insulation with DOL starter(Crompton Greaves/Aquatic/CRI/V-guard/Calma make) .The rate also includes necessary supply and installation of wires from main source complete in all respect.	nos	1		

PART B) GROUND WATER RECHARGE SOAK PIT					
1	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and for all lift and disposal, as directed by Engineer-in-charge.	cum	27		
2	Providing and laying dry brick soling using first class burnt clay bricks of approved quality(minimum compressive strength 75kg/sqcm), laid flat or on edge in pattern over a prepared, levelled and compacted subgrade. The joints shall be kept as close as possible and filled with sand or local earth by sweeping into the joints. The rate is inclusive here of filling material. The surface shall be watered lightly (if required) and compacted with a hand rammer/plate compactor to achieve a firm and even surface, complete in all respects as directed by EIC	sqm	6.25		
3	Providing and laying in position of cement concrete of specified grade including the cost of centering and shuttering - All work above plinth level : 1:2:4 (1 Cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 20 mm nominal size). Make:Ultra Tech, ACC, Ambuja, Dalmia Bharat or equivalent. The rate is inclusive of applying neat cement slurry for proper binding.	cum	1		
4	Providing and laying in position of reinforced cement concrete of specified grade including the cost of centering and shuttering - All work above plinth level : 1:2:4 (1 Cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 20 mm nominal size). Make:Ultra Tech, ACC, Ambuja, Dalmia Bharat or equivalent. The rate is inclusive of applying neat cement slurry for proper binding. This rate is inclusive of centering and shuttering.	cum	0.50		
5	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Mild steel and Medium Tensile steel bar.	kg	25		
6	Brick work with common burnt clay F.P.S (non modular) bricks of class designation 7.5 in cement mortar 1:3 (1 cement: 3 coarse sand) in foundation and plinth level	cum	2.25		
7	12mm - 15mm cement plaster of mix: 1:4(1 cement:4 sand) with neat cement slurry finish.	sqm	16		
8	Preparation of site for placement of the drilling rig including excavation of mud pit, circulation drain, collection chamber etc. all complete as directed by Engineer-in-charge	Job	1		
9	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part 1), including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level. For all type of soils of 300mm size dia .	m	40		
10	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge, 150mm nominal size dia.	m	40		
11	Labour charge for providing bentonite clay packing (including the cost of bentonite clay) around from 150/200 top mm with dia 250 tube mm well dia supplying the bentonite clay and carriage of materials all complete as directed and specified by Engineer in-charges	m	40		
12	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	cum	3.2		
13	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	1.2		
14	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge	cum	1.2		
15	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	2		
Total (part A + part B)					
All rates all exclusive of GST					