

SUMMARY

BILL OF QUANTITIES CONSTRUCTION AND RENOVATION OF FACILITIES FOR STAFF, & STUDENTS IN MAYO CAMPUS

(Quantities may vary subject to site condition)

Items mentioned below are for all floors&levels unless otherwise mentioned in each item.

ESTIMATED COST RS 45.00 LACS

S.NO.	PARTICULARS		AMOUNT
1	CIVIL WORK		
2	SANITARY AND PLUMBING WORK		
3	ELECTRICAL WORK		
	TOTAL		
	GST 18%		

BILL OF QUANTITIES CONSTRUCTION AND RENOVATION OF FACILITIES FOR STAFF AND STUDENTS IN MAYO COLLEGE ,AJMER

(Quantities may vary subject to site condition)

Items mentioned below are for all floors&levels unless otherwise mentioned in each item.

S No	Description	Unit	Quantity	Rate	Amount
1	EARTH WORK AND SITE DEVELOPMENT				
1.1	Earth work in excavation in foundation trenches or drains (not exceeding 1.5m in width as well as 10 sqm.on plan) including dressing of sides and ramm-ing of bottoms, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed or used in backfilling.				
a	Hard rock (blasting prohibited)	Cum	30		
1.2	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	Cum	15		
1.3	Clearing of the site and roughly dressing the same using mechanically operated devices, including removal of the roots and disposing and stacking all debris.				
a	upto 50m lead	Sqm	35		
b	beyond initial lead of 50m upto 500m	Sqm	75		
2	CONCRETE WORK (PCC AND RCC)				
	Plain cement concrete				
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
2.1.1	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	Cum	3		
2.1.2	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	5		
2.2	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work above plinth level :				
2.2.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	10		
	Damp proof course				
2.3	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size).	Sqm	15		
2.4	Applying a coat of residual petroleum bitumen of grade of VG-10 of approved quality using 1.7kg per square meter on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	Sqm	15		
	Cast - in -situ concrete				

2.5	Providing and laying in position machine batched and machine mixed design mix M-20 (as per the structural design) grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				
2.5.1	All works upto plinth level.	Cum	5		
2.5.2	All works above plinth level upto floor V level.	Cum	15		
	Centering and shuttering				
2.6	Centering and shuttering including steel plates /Ply strutting, propping etc. and removal of form for: All work up to plinth level :				
2.6.1	Foundation, Plinth beams with water proof ply 12mm thick.	Sqm	50		
2.7	Centering and shuttering including steel plates /Ply strutting, propping etc. and removal of form for: All work above plinth level :				
2.7.1	Suspended floors, roofs, landings, balconies and access platform. with water proof ply 12mm thick.	Sqm	100		
2.7.2	Lintels, beams, girders, bressumers and cantilevers. with water proof ply 12mm thick.	Sqm	20		
	Reinforcement steel				
2.8	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.				
2.8.1	Thermo-Mechanically Treated bars.	KG	3000		
2.9	Providing, fabricating and fixing MS jali including cutting and welding the members as per detailed drawing and design and as directed by engineer-in-charge. The rate shall include 1 coat of Rustocap and 2 coat of Hi-Gloss Metal PU Paint of Asian paint over all the surfaces or specified by engineer-in-charge of approved make over a 2 coats of zinc chromate yellow oxide primer. (Actual measurement shall be paid for).				
2.9.1	MS Weld mash jali (25mm x 25mm size of 12 gauge)	Sqm	10		
2.10	Providing and fixing CC jali 50mm thick Red/Pink as per ornamental design to fixed with white cement/epoxy mortar including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of brick powder matching the stone shade.	Sqm	10		
3	STEEL WORK				
3.1	Structural steel work in single section fixed without connecting plate including cutting, hoisting, fixing in position and applying steel primer above plinth level up to 4.5 meter height				
a	In RS joints, tees, angles, channels, etc.	Kg	100		

3.2	Structural steel work welded in built up section, trusses and framed work. Including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete above plinth level up to 4.5mtr height.				
a	In flats, tees, angles, channels, etc.	Kg	100		
4	MASONARY WORK				
4.1	Brick work in superstructure				
4.1.1	4.5" Th brick masonry. BSR 2011/B-29/5.8.4+5.9	Sqm	20		
4.1.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	10		
4.2	Brick work in staircase steps.				
4.2.1	Providing and constructing brickwork in staircase steps using selected quality burnt clay FPS bricks of class designation 7.5 in cement mortar 1:3 (1 cement : 3 coarse sand) at all heights and levels including cutting, chamfering, scaffolding, curing, complete as per specification.	Cum	5		
4.3	Stone work in foundation				
4.3.1	Random rubble masonry with hard stone in foundation and plinth including beveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at plinth level with cement mortar 1:6 (1 cement : 6 coarse sand).	Cum	25		
4.3.2	Add Extra for Coursed rubble masonry (second sort) with hard stone in foundation and plinth.	Sqm	10		
4.3.3	Random rubble masonry with hard stone in super structure including beveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at plinth level with cement mortar 1:6 (1 cement : 6 coarse sand).	Cum	65		
4.3.4	Add Extra for Coursed rubble masonry (second sort) with hard stone in Super Structure.	Sqm	250		
4.3.5	Add Extra for Decorative Facing Masonry same as per existing building.	Sqm	150		
4.3.6	Providing, laying and compacting dry stone Kharanja under floors for soling	Cum	10		
5.0	WATER PROOFING				
	Note: (The Water proofing work must be executed by an approved specialised Agency. The Contractor shall give a 10 years guarantee as per instruction of the Project Manager).				
5.1	Brick bat coba waterproofing				

	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc. consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/Sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 75 mm to 150mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineering-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs				
	c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ Sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) d) Finishing the surface with 20 mm thick joint less cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fiber cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :				
5.1.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	Sqm	100		
5.1.2	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	8		
5.3	Providing and laying on sunken areas broken matka (earthen pots) consolidated, finished smooth, including finishing & grouting the top layer with water proof cement mortar with CICO and as per specifications and drawing.	Cum	150		
5.4	Providing and fixing single color (white/ivory) broken ceramic tiles with water proofing compound on 20mm thick bed of cement mortar 1:4 on roof top, jointing of tiles in CM 1:2 complete.	Sqm	110.00		
5.5	Providing batta (gola 75x75 mm in cement concrete (1:2:4) including finishing with cement mortar 1:3 as per standard design.	Rmt	25.00		
5.6	Water proofing of terrace with 4mm thick Polyester reinforced APP Mineral finish membrane (SIKA)over substrate and primed using bitumen primer. All works including cleaning of surface, making gola,repaing of slab with cement mortar 1:4 ,curing etc complete.	Sqm	110.00		

6	WOOD WORK				
	All woodwork includes required SS hardware and holdfasts as required.				
	Door frame				
6.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length.				
	Sal wood	Cum	0.75		
	Flush door				
6.2	Providing and fixing phenol bonded flush door shutters of approved quality and make non decorative type core of block board construction with internal frame of 1st class hard wood and well matched 3mm commercial ply veneering with vertical grains or cross bands including providing and fixing 4 nos. 121mm long and 3.1mm thick stainless steel hinges, 6 mm thick teak wooden lipping all around, nails, screws, fabricol etc. complete as per specification. Rates to be inclusive of all necessary hardwares in SS. Locks to be paid separately.				
6.2.1	35mm thick including ISI marked Stainless steel butt hinges with necessary screws finished with laminate on both sides, including 4mm thick 200-250mm wide teak veneer on single side.	Sqm	10		
6.3	Providing and fixing single leaf shutter Doors in 35 mm thick in 2nd class Ghana teak wood as per approved design including all hardware's with styles of 100mm and lock rail 150mm and bottom rails of 200mm thick including teak wood beading of size 19mm x 12 on both faces. AS PER DRAWINGS				
6.3.1	Fully Paneled shutter with 40 mm thick teak wood panel. AS PER DRAWINGS	Sqm	10		
6.3.2	Single leaf shutters with S S wire gauge 24 gauge 14 mesh of IS designation 85 gauge wires of dia 56mm. AS PER DRAWINGS	Sqm	10		
6.4	Providing and fixing double leaf shutter Doors in 35 mm thick in 2nd class Ghana teak wood as per approved design including all hardware's with styles of 100mm and lock rail 150mm and bottom rails of 200mm thick including teak wood beading of size 19mm x 12 on both faces. AS PER DRAWINGS				
6.4.1	Fully Paneled shutter with 40 mm thick teak wood panel. AS PER DRAWINGS	Sqm	10		
6.4.2	Double leaf shutters with S S wire gauge 24 gauge 14 mesh of IS designation 85 gauge wires of dia 56mm. AS PER DRAWINGS	Sqm	10		
6.5	Providing and fixing double leaf shutter for Windows, bay windows & Ventilators in 35 mm thick 2nd class Teak wood as per approved design including all S S hardware's with width of styles, bottom & top rails 75 mm including intermediate rails and beading of 25mm by 15 size on both faces.				
6.5.1	Fully glazed with 4mm thick frosted/ Palin glass	Sqm	5		
6.5.2	Providing and fixing Godrej make Mortice lock with key	No	10		

6.6	Providing and fixing Godrej make handle mortise lock without key	No	10		
7	FLOORING WORKS				
7.1	Providing and fixing in 75-100 mm wide Granite stone bend with edge molding on bathrooms walls above tiles with cement sand mortar 1:4 and joint to be filled with white cement slurry mixed with pigment to match the shade of stone.	Rmt	50		
7.2	Providing and laying tiles in cladding/ dado/ jamb/ soffit/ cill of uniform thickness, size, shade and pattern as approved by Architect/Project Manager laid with rich cement slurry over a bedding plaster of 6mm (avg.) thick cement mortar 1:4 (1 cement : 4 fine sand) including the cost of 12mm average thick rough base plaster of mix 1:4 (1 cement : 4 coarse sand), providing grooves using 3/4 mm PVC spacers and grouted with tile groute (Ball grout) of matching shade of tile, cutting, curing etc. complete in all respects as per drawing.				
7.2.1	With Mat Finished Vitrified and normal ceramic tile. As per existing (Basic rate of tiles Rs. 30-35/- Sqft)	Sqm	150		
7.3	Providing and laying tile flooring of approved make, shade and pattern as approved by Architect laid over 20/12mm average thick bed of cement mortar 1:4 (1 cement : 4 coarse sand), grooves using 3/4mm PVC spacers and epoxy grouted with tile groute of matching shade of tile including cutting, grouting the joints with white cement and pigment to match the shade of tile including cutting, etc. complete in all respects as per pattern and drawing. With Ceramic tile. (KAJARIA MAKE OR EQUIVALENT & AND BASE COST OF TILE TO BE ASSUMED AT RS. 30/- PER SQFT)	Sqm	100		
7.4	Providing and laying machine cut pre-polished stone slab/ / tile in required size of approved quality in counters fixed over average 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and joints neatly finish with cement paste mixed with matching pigment including edge chamfering, molding, making openings/ holes for sink/ wash basin, mixers, soap dispenser, ledge/ surrounding of bath tub, back splash, Facia, ledges of shower area etc. as required and mirror polishing of molding and cut edges, filling silicon at junctions with sanitary fixtures and corners with wall wherever required etc. complete as per drawing.				
7.4.1	With 18 to 20mm thick Granite stone and joint to be filled with white cement slurry mixed with pigment to match the shade of stone including rubbing and mirror polishing complete (base rate of stone Rs 125/- per Sqft)	Sqm	20		
8	FINISHING WORKS				
	(Quoted Rate shall be for all heights, depths, levels, leads and lifts and to include providing and fixing chicken wire mesh in junction RCC and brick / AAC Block walls and all chasing for electrical & plumbing conduits, pipes etc. for internal and external plaster works).				
8.1	Ceiling plaster				

8.1.1	Providing and applying 12-16 mm thick plaster to RCC/stone slab in cement mortar 1:4 (1 cement : 4 fine and coarse sand in equal proportion) finished smooth including hacking the surfaces, scaffolding, curing, making grooves at desired location etc. complete as per drawing.	Sqm	85		
8.2	Wall plaster				
8.2.1	Providing and applying 20-25mm thick plaster to masonry, RCC walls, columns and beams etc. in cement mortar 1:6 (1 cement : 6 fine and coarse sand in equal proportion) finished smooth including hacking the surfaces, scaffolding, curing, making grooves at desired location etc. complete as per drawing.	Sqm	150		
8.2.3	Providing cement plaster 50mm average thickness in two coats first for repairing the surface of stone masonry walls using chicken wire mesh (wherever necessary) in the undercoat in cement plaster 1:6(1 cement:6 coarse sand) and finished with top layer in cement plaster (1 cement : 6 fine sand) as per requirement and as per site conditions	Sqm	150		
8.3	Acrylic distemper				
8.3.1	Distemping with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer and of required shade and Colour complete. Including scaffolding etc. complete.	Sqm	400		
8.4	Providing and laying J K white cement based putty over cement plaster surface for making even surface.	Sqm	450		
8.5	Painting with synthetic enamel paint including priming coat with primer of approved brand and manufacture of required color to give an even shade, Two or More over as under coat of suitable shade with ordinary paint of approved brand and manufacture for door / window / ventilator frames & Shutters including beading etc. fixed on it.	Sqm	100		
8.6	Providing and applying melamine polish on doors and windows.	Sqm	120		
8.7	Flush pointing on the following work with OPC Cement Mortar 1:2 (1 Cement : 2 Fine Sand)	Sqm	175		
8.8	Lime Pointing on decorative masonry with lime as per existing pointing.	Sqm	175		
8.9	Neat cement punning on plaster in Sunken areas.BSR 2011/B125/12.15	Sqm	35		
8.10	Providing and fixing hexagonal chicken mesh of size 20 mm. x 20 mm. of 22 gauge at junction of concrete and brick work or between different materials, etc. as directed by engineer in charge.	Sqm	10		
9	REPAIRS TO BUILDINGS				
9.1	Repair to stone masonry in cement sand mortar 1 : 6 with old and new stone B-139/13.1	Sqm	65.00		
9.2	Providing and fixing S S wire gauge (304 grade) of 14mesh x24 gauge with 75x10 beading on Chowkhat.	Sqm	50.00		
9.3	Providing and fixing glass in windows, Vent and doors. 4/5 mm thick.	Sqm	50.00		
9.4	Pointing in stone masonry for all levels including cleaning etc. after removing / dismantling existing pointing:				
a	White Zikri pointing on existing stone masonry with white cement and Zikri (Mayo Pattern) 1:3	Sqm	105.00		

9.5	Pointing on stone slab ceiling with cement mortar 1:3 including scaffolding complete	Rmt	350.00		
9.6	Providing & laying 50mm thick Bhilwara stone over average 20mm thick CM 1:6 . BSR 2013/B-37/6.15.3	Sqm	10.00		
9.7	Providing and fixing 30 to 40 mm thick stone Chajja. BSR 2013/B-38/6.18.2	Sqm	20.00		
10	DHOLPUR STONE WORK				
10.1	Providing and fixing 50mm thick Dholpur beige/ pink stone Chajja including fastener, adhesive necessary scaffolding etc. As per drawing OR same as existing.	Sqm	10.00		
10.2	Providing and fixing 50 mm thick Dholpur beige / Pink Stone Coping over 20mm (Av.) thick base in CM 1:6 including pointing with cement sand mortar 1:2 with and admixture of pigment to match the shade of stone with Joints as per drawing OR same as per existing.	Sqm	10.00		
10.3	Providing and fixing 40 mm thick Dholpur beige / Pink Stone Coping over 20mm (Av.) thick base in CM 1:6 including pointing with cement sand mortar 1:2 with and admixture of pigment to match the shade of stone with Joints as per drawing OR same as per existing.	Sqm	8.00		
10.4	Providing and fixing 30 mm thick Dholpur beige / Pink Stone Coping over 20mm (Av.) thick base in CM 1:6 including pointing with cement sand mortar 1:2 with and admixture of pigment to match the shade of stone with Joints as per drawing OR same as per existing.	Sqm	8.00		
10.5	Providing and fixing 75mm thick Dholpur beige/ pink Stone Brackets below chajjas with fastener. Size of bracket 300 x 600 mm.	Each	8.00		
10.6	Providing and fixing 40mm thick Dholpur beige/ pink Stone Jali. Including pointing with cement sand mortar 1:2 with and admixture of pigment to match the shade of stone with joints. As per drawing OR same as per existing.	Sqm	10.00		
11	DISMANTLING				
	NOTE: ALL MALBA/ DEMOLISHED MATERIAL TO BE REMOVED FROM SITE AND TRANSPORTED TO LOCAL MUNICIPAL APPROVED DUMP/ LOCATION AND HANDING OVER THE USABLE MATERIAL TO MAYO COLLEGE				
11.1	Complete Civil, Sanitary plumbing & Electrical work dismantling of existing building like all plaster, external, internal pointing, necessary stone masonry, flooring, PCC, soling, brick work, doors and windows, all sanitary and plumbing fittings, all electrical fitting etc complete. including removing of malba and protection of existing floor. Plinth area to be measured only.	Sqm	100.00		
	TOTAL AMOUNT				

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MAYO COLLEGE ,AJMER

(Quantities may vary subject to site condition)

Items mentioned below are for all floors&levels unless otherwise mentioned in each item.

S No	Description	Unit	Quantity	Rate	Amount
SANITARY AND PLUMBING WORK					
1	SANITARY FIXTURES, FAUCETS & TOILET REQUISITES				
1.1	Providing and fixing white vitreous china floor mounted water closet with proprietary solid plastic seat and lid with C.P. brass hinges and rubber buffers, including cutting and making good the walls and floors where required, of approved make.20011	Each	12		
1.2	Providing and fixing white vitreous china wash basin including C.P. brass waste of standard pattern complete including cutting and making good the walls and floors, wherever required of approved make with PVC waste pipe with CP nut 32mm and 450mm long Pvc connection. (Item not to include C.P. cast brass bottle trap with unions & Extensions)				
a	Size:550x400 mm ; flat back with wall mounted fitting	Each	12		
1.3	Providing and fixing 10 liter capacity white colored, PVC low level flushing cistem with manually controlled device (handle lever) conforming to IS 7231 with all fittings / fixtures complete				
a	40/32 mm dia inlet and 32 mm dia outlet.	Each	12		
1.5	Providing and fixing 15 mm dia C.P. Brass Basin mixer with Flange of Jaquar Make. BSR 2013 / S-29/2.33.12	Each	12		
1.6	Providing and fixing C.P. Brass Bottle Trap etc. complete. Jaquar Make	Each	12		
1.7	Providing and fixing PVC west pipe 32 / 40 mm dia 750 mm long etc. complete. BSR 2013/S-10/1.46.1	Each	8		
1.8	Providing and fixing of the 15 mm dia C P brass bib cock with wall flange and extension pieces as required complete of Jaquar make. Short Body. BSR 2013/S-29/2.33.3	Each	12		
1.9	Providing and fixing of the 15 mm dia C P brass bib cock with wall flange and extension pieces as required complete of Jaquar make. Long Body BSR 2013/S-29/2.33.4	Each	40		
1.10	Providing and fixing of 15 mm dia brass angle valve (inlet fitting ball valve type) having strainer screen complete with wall flange of Jaquar make. BSR 2013/S-29/2.33.6	Each	84		
1.11	Providing and fixing of 15 mm dia, 450 mm long flexible connection pipe having EPDM rubber internal core and stainless steel braided outer sheath complete with C.P brass end nuts etc. complete. BSR 2013/S-22/2.13.3	Each	36		
1.15	Providing and fixing heavy duty C.P. brass Towel rail. Size 600mm	Each	12		
1.16	Providing and fixing Ist quality WVC Urinal Flat back (large) Size 610x400x80mm	Each	12.00		
2.0	SOIL, WASTE AND VENT PIPE WORK				
	All Required uPVC Pipes & Fittings will be Supreme Make (IS Type " B' IS 13592 SWR Range)				
	Note : No. extra Payment shall be made for any uPVC Fittings, all are inclusive with piping rates				

2.1	Providing and fixing uPVC pipes (SWR type " B " Supreme make) conforming to IS 19592 including all fittings (plain or door) e.g. bends, junction tees, offsets, access pieces cowls and fixing with as recommended by the manufacturer, necessary fixing arrangement including cutting chase or holes in walls/floors and making good the same complete as per specification.				
a	63 mm dia 4 kg /cm ² (Class III)	Rmt	50		
b	75mm dia	Rmt	150		
c	110mm dia	Rmt	200		
d	d) 160mm dia 4kg/ cm ² (Class III)	Rmt	100		
2.2	Providing and fixing uPVC " P " trap of self cleansing design without vent horn complete and setting in cement concrete 1:2:4 mix, including cost of cutting and making good the walls and floors where required complete.				
a	100mm inlet and 100mm outlet	Each	4		
2.3	Providing and fixing of Floor traps / Nahani Traps formed of Cast Iron 'P' traps with 50 mm water seal complete, including cost of cutting and making good the walls and floors wherever required.				
	a) 100 mm	Each	20		
2.4	Providing and fixing 125 mm dia and 4 mm thick stainless steel grating (With to without hole) with frame, embedded in floor, all complete.	Each	48		
3.0	WATER SUPPLY				
	Sub-Head - III Water Supply System				
	All require pipes & fittings will be " C.P.V.C.Make (Astral, Supreme, Prince)				
3.1	Providing and fixing in position CPVC pipes conforming to IS: 15778:2007 with all fittings,(MABT,FABT) brass threaded adaptors and specials, solvent cement/threaded jointing, effecting proper connections, cutting chases in walls and floors and making good, Note: Pipe work in shafts, ceiling voids and terrace shall be supported/ fixed on MS structural supports with U-clamps complete with nuts and washers. Cost for MS structural work for supports shall be included in the rates all complete. Note : 1) Solvent Cement shall be of make and grade as specified by the manufacturer of CPVC piping system. 2) The entire CPVC piping system shall be installed, tested and commissioned following the recommendation of the manufacturer. 3) Cost for MS structural work for supports shall be included in the rates				
	(FOR R.O. WATER SUPPLY)				
a	1/2" N.D.(SDR 11 Rated)	Rmt	50		
b	3/4" N.D.(SDR 11 Rated)	Rmt	200		
c	1" N.D. (SDR 11 Rated)	Rmt	200		
d	1 1/2" N.D. (SDR 11 Rated)	Rmt	50		
3.2	Providing, fixing, testing and commissioning of Full Bore Ball Valves of approved makes.				
	MOC:				

	Body : Nickel plated brass				
	Ball : Chrome plated brass				
	Washers : PTFE				
	Operating Handle : Aluminum Painted				
	Pressure Rating : Minimum 20 Bar				
	Temperature Withstanding : 900 C Min.				
a	1/2" N.D	Each	10		
b	3/4" N.D.	Each	20		
c	1" N.D.	Each	25		
d	1 1/2" N.D.	Each	10		
e	2" N.D.	Each	5		
3.3	Providing and fixing Cast Iron butterfly valve as per IS: 13095 of Class PN 16, having epoxy coated disc, carbon steel shaft, EPDM body lining and of approved make. including a set of MS flanges, required No. of nut & bolts all complete.				
a	25 mm dia	Each	5		
b	40 mm dia	Each	5		
3.4	Providing and fixing brass float valve with P.V.C. float, high pressure type, conforming to IS:1703-1977.				
	a) 25/32 mm dia	Each	8		
3.6	Providing and fixing high/low density Polyethylene (Nircon type, Ivory color) single piece water storage tanks with cover, inlet and outlet scour and overflow & vent connections shall be provided with mosquito proof wire mesh couplings.	Liters	6600		
4.0	SEWERAGE				
4.1	Constructing brick masonry manhole / chambers with 75 class designation bricks in cement mortar 1 : 5 (1 cement : 5 fine sand) 40mm thick Bhilwara/ Kota stone, earth work, excavation in all kinds of soil, foundation concrete 1 : 4 : 8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) inside plastering 12 mm thick with cement mortar 1 : 3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement neatly finished complete as per standard design :				
a	450 by 450 internal size	Each	15		
b	450 by 600 internal size	Each	5		
c	600 by 600 internal size	Each	10		
4.2	Providing and fixing square mouth S.W. gully trap grade 'A' complete with C.I. Grating brick masonry chamber including internal plaster with floating coat with bricks of class designation 75 and water tight SFRC (Steel Fiber Reinforced Concrete) covers and frame of size 300x300mm (inside) conforming to ISI load test, including necessary exaction & disposal of surplus earth				
	a) 100x100mm size P type	Each	12		

4.3	Construction of Septic Tank in all types of soil with 40 Cm. thick masonry in CM 1:6, 15 Cm. thick c.c. bed of 1:4:8, M-15 grade C.c. flooring & over stone slab covering, 80 mm thick slab, jointing of slab- in CM 1:3 Ralthal, Kharanja, 50 mm thick stone partition walls, 20 mm thick plaster in CM 1:6 finished with neat floating cement, 4 No. stone foot rests of approved design, two No. 450mm dia high density Ferro cement cover with frame, earth work etc. complete as per approved drawing including disposal 'of surplus earth within a lead of 50 mtr.				
a	Size 230 X 110 X 150 cm (for 20 users)	Each	1		
4.4	Construction of Open surface drain with 115 mm thick brick masonry in CM 1:4, 100 mm thick base concrete 1:4:8 with 20mm grit, 40 mm thick M-15 grade CC flooring, 12 mm 1:4 cement plaster with neat cement coat on all exposed faces of walls including top surface excavation & disposal of earth complete in all respects				
a	150 mm drain, 250 mm average depth	Rmt	100		
4.5	Construction of soakage well in all type of soil with 300mm thick brick masonry, top and bottom 300mm course in CM 1:6, 80mm thick stone slab, jointing of slab in CM 1:3, Ralthal, Kharanja, 40mm thick M-15 grade CC flooring, earthwork complete as per approved drawing including disposal of earth within a lead of 50mtr				
	Size 240cm dia outside & 240cm depth	Each	1		
5.0	MISCELLANEOUS ITEMS				
5.1	Providing and fixing M.S. structural work fabricated from standard sections i.e. rounds, solid angles, slotted angles, tees, flats, channels including cutting to size, drilling, welding to insert plates in R.C.C structural members, painting with two coats of enamel paint of approved quality and shade over a coat of steel primer as directed by Engineer-in-charge including cutting and making good the walls and floors (for pipe hangers, supports, clamps, ladders and lockable covers for water storage tanks, etc.).	Kg	25		
5.2	Providing and laying 1:5:10 all around pipe BSR-S-34/3.3.1	Rmt	50		
	Total for Miscellaneous item				

BILL OF QUANTITIES CONSTRUCTION AND RENOVATION OF FACILITIES FOR STAFF AND STUDENTS IN MAYO COLLEGE ,AJMER

(Quantities may vary subject to site condition)

Items mentioned below are for all floors&levels unless otherwise mentioned in each item.

S No	Description	Unit	Quantity	Rate	Amount
ELECTRICAL WORK					
1	POINT WIRING AND SUB MAIN WIRING				
	1. The point wiring shall include the rates for				
	2. Before placing order for the items like switch, conduit, wire etc., samples should be submitted and approved from consultant and client. All items used at site shall be displayed on a sample plate.				
	3. Point wiring will include cost of minor civil work like providing expanded metal mesh of 10 x 15 mm strand, 150mm wide, 1 mm thick over recessed vertical conduit in walls along with the steel hooks and finally covered with the cements mixture (Murg Jali). The point wiring cost will include circuit wiring, conduits, accessories, wires, switches, switch plate, G I boxes, junction boxes etc.				
	4. The wiring item shall also include the cost of providing and fixing the numbering ferrules in all the wires.				
	5. For point wiring the cost of flexible conduits, conduit coupler and connector shall be included in the rates quoted.				
1.1	Wiring for following points with 1.5 sq.mm PVC insulated flexible copper conductor single core wires of 1100 V grade in recess or surface PVC medium grade ISI marked conduit (IS-9537- Part - III) with Anchor / Hevells make modular switches and accessories complete with accessories such as bends, junction boxes, pull wire including 1.0 sq.mm copper conductor green color earth wire for earthing of all metal boxes, light fixtures, exhaust fan etc. complete as required including circuit wiring.				
	a) One light point controlled	No.	35		
	b)Exhaust fan point with 6A 3 pin socket outlet near exhaust fan and controlled with 1 No. 6A switch	No.	15		
1.2	Wiring for light and power socket outlets with following sizes PVC insulated flexible copper conductor single core wires of 1100 V grade in recess or surface PVC medium grade ISI marked conduit (IS : 9537 Part-III) complete with accessories such as bends, junction boxes, pull boxes etc. with anchor Hevells make modular type switches and sockets , 1.6 mm thick metal boxes of suitable size, embedded in wall and concealed and flushed with wall or mounted on trunking including cutting and refilling the chases etc. inclusive of circuit wiring as required, and inclusive of PVC insulated copper earth conductor for socket outlets as per specifications.				
a	6A 5 pin raw power socket outlet with 6A switch mounted side by side with 2x1.5 sq.mm PVC insulated single core flexible copper conductor wires and one No. 1.5 sq. mm insulated green color earth wire.	No.	15		

b	16 A 6 pin raw power socket outlets with 16A switch mounted side by side with 4.0 sq. mm PVC insulated single core flexible copper conductor wires and one No. 2.5sq. Mm insulated green color earth wire.	No.	10		
2	DISTRIBUTION BOARDS				
	1. All DB shall be factory fabricated only.				
	2. The rates shall also include the cost of thimbles and numbering ferrules in all the wires.				
	3. All light MCB shall be of B curve and for power shall be of C curves.				
2.1	Supplying and fixing of 240/415 volts 10KA miniature circuit breaker/isolators of following rating in the existing MCB DBs complete with connections, testing and commissioning etc. as required :				
a	6-32A Single pole MCB	No.	20		
3	POINT AND SUB MAIN WIRING				
1	Providing and Laying FRPVC 2.5Sqmm x1 copper wire with 1.5 Sq.mm earth wire including P.V.C.conduit.	Rmt	75		
2	Providing and Laying FRPVC 4 sq. mm + 1 x 2.5 sq. mm earth wire .	Meter	50		
3	Providing and Laying FRPVC 6 sq. mm + 1 x 2.5 sq. mm earth wire .	Meter	50		
4	LIGHTING FIXTURES AND FANS				
	Necessary down rods, hanging chains etc. shall be part of the fixtures.				
	Samples of all the fixtures shall be submitted to the consultants before supply & approval is taken.				
1	Supplying and fixing of prewired 1200mm (2x36 Walt LED)long with reflector fluorescent fittings complete with all accessories. Make : Hevels/Phillips	No.	10		
2	Providing & fixing of exhaust fan / fresh air fan single phase 380 mm heavy duty in existing openings making good the damages, testing including the connection with Jails outside. Make: Orient/Usha	No.	12		
3	Fixing decorative ceiling lights	No.	24		
5	EARTHING AND MISCELLANEOUS ITEMS				
1	Supply, Installation, Testing, Commissioning of Earthling Station including 40 mm GI Pipe Electrode, G.I. Funnel, Copper plate, Masonry chamber with brick Base, Manhole cover with frame 300x300mm, charcoal salt around the Plate Electrode complete in all respect.	No.	4		
	Total				