NAME OF WORK:- Special maintenance and repairs works to Zoology, Botany, Geology, Psychology, Commerce and Computer Science Blocks, cable trench and other works in Presidency College Chennai

SCHEDULE A

EMD: Rs. 281000/-						**Date:19.04.2022**	
Sl. No	**Qty**	**Description of Work**	**TN BP NO.**	**NBC NO.**	**Rate in figure and Words**	**Unit**	**Amount**
1	5360 M^2 (Five thousand three hundred and sixty square metres)	Dismantling, clearing away and carefully stacking materials useful for re-use for any thickness of weathering course and pressed tiles and roughening the surface etc., complete complying with standard specification and as directed by the departmental officer.				1 M^2 (One square metre)	
2	38 M^3 (Thirty eight cubic metres)	Dismantling of Reinforced cement concrete and clearing away from site etc., complete complying with standard specification and as directed by the departmental officer.				1 M^3 (One cubic metre)	
3	76 M^3 (Seventy six cubic metres)	Dismantling Clearing away and carefully stacking of brick / stone masonary in cement mortar walls under 3m high etc., complete complying with standard specification and as directed by the departmental officer.				1 M^3 (One cubic metre)	

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Contractor

Chief Engineer

4	161 M^2 (One hundred and sixty one square metres)	Dismantling the damaged floor finish and dadooing walls in cement mortar with Flat tiles Mosaic tiles and clearing away etc., complete complying with std specification and as directed by the Departmental Officer.				1 M^2 (One square metre)	
5	5360 M^2 (Five thousand three hundred and sixty square metres)	Finishing the top of roof with one course of **Machine pressed tiles of size 23×23×2cm** of approved quality laid in cement mortar 1:3 (One cement and three M-sand) 12mm thick mixed with water proofing compound (confirming to Indian standard specification) **2% by weight** of cement used and pointed with the same mortar including mixing of red oxide and water proofing compound etc., complete complying with standard specification and as directed by the departmental officers.				1 M^2 (One square metre)	
6		Supplying and erecting centering for sides and soffits including necessary supports and strutting upto 3.29 M height for plane surfaces as detailed below in all floors with all cross bracings using Mild Steel sheets of size 90 x 60 cm and 10 BG stiffened with welded Mild Steel angle of size 25mm x 25mm x 3 mm for boarding laid over silver oak joists of size 10cm x 6.50 cm spaced at abote 90 cm centre to centre and supported by casurina props of 10cm to 13 cm dia spaced at not more than 75 cm centre to centre etc. complete complying with the standard specificaiton. (Payment for centering shall be given after the concrete is laid)					
a	505 M^2 (Five hundred and five square metres)	For plain surfaces such as RCC floor slab, roof slab, beams, lintels, bed blocks, landing slab, waist slab, portico slabs and beams, etc.				1 M^2 (One square metre)	

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Contractor

Chief Engineer

b	45 M^2 (Forty five square metres)	For plain surfaces such as rectangular or square RCC columns, sunshades, top and bottom slab of RCC boxing, etc.				1 M^2 (One square metre)	
c	200 M^2 (Two hundred square metres)	For plain surfaces such as vertical slab, side slabs of boxing, vertical drops, facia, vertical wall, etc.				1 M^2 (One square metre)	
7		Providing two legged scaffolding using 15cm dia blue gum post or casurina poles or best quality bamboo post of 4m over all length (3m height +0.50m into the ground + 0.50m projection) the distance between two rows being 1.25m and the spacing of post being 2m in the both the rows with two horizontal post with 0.50m over lap on either side and braces at 2m c/c incluyding longitudinal and tranverse middle braces to step and providing a platform with country wood planks of 40mm thick and 1m width etc. in a complete form using coire and nails - 1 RM etc; comp-lete complying with standard specification and as directed by the departmental officers.					
a	295 RM (Two hundred and ninety five running metre)	Initial height of 3 m				1 Rm (One running metre)	

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Contractor

Chief Engineer

b	115 RM (Ninety running metre)	Additional height of 2.5 M				1 Rm (One running metre)	
8	110 Qtl (One hundred and ten quintals)	Supplying, fabricating and placing in position of steel reinforcement using MS (or) RTS rods for all RCC item of works including cost of steel and binding wire in all floors etc., complete complying with standard specification and as directed and as per design given by the departmental officers.	97	VI (8.6) VII.3		1 Qtl (One quintal)	
9		Providing and laying in position, **Standardised Concrete Mix M-30 Grade** in accardance with IS 456-2000 using 20mm and down graded Hard broken Granite stone jelly for all RCC items of works with minimum cement content of 400 Kg/m3 and maximum water cement ratio of 0.45, including admixture (plastciser/ super plasticiser) in recommanded proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability withiut impairing strength and durability with about (5.0 cu.m) 7730 Kg. of 20mm machine crushed stone jelly and with about (3.30 cu.m) 5156 Kg. of 10-12mm machine crushed stone jelly with about (4.79 cu. m) 7670 Kg. of M sand, but cxcluding cost of reinforcement grill and fabricating charges, centering and shuttering and also including laying, vibrating with machanical vibrators, finishing,curing etc; and providing fixures like fan clamps in RCC floor/roof slab wher ever necessary without claiming extra, etc., complete complying with standard specifications and as directed by the Departmental officers. The coarse and fine aggregates to be used should comply with the requirements of IS standards. (No separate payment will be made by the Department for the excess usage of materials)	28	VI.8.2 .8.3. VI (S5A) 4.2.1. 3			

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Contractor

Chief Engineer

a	80 M^3 (Eighty cubic metres)	For foundation and basement				1 M^3 (One cubic metre)	
b	30 M^3 (Thirty seven cubic metres)	For superstructure in second floor				1 M^3 (One cubic metre)	
10	115 RM (Ninety running metre)	Providing expansion joint in RCC floor slab for 12.5mm width using polysulphide as sealent on the top and bottom for a depth of 7.5mm each and packing the inner space using compressible non-absorbent filler materials including cost of labour for cutting and fixing filler materials and laying polysulphide sealent with necessary spatula etc., complete complying with standard specifications and as directed				1 RM (One running metre)	

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Contractor

Chief Engineer

11	95 M^3 (Ninety five cubic metres)	Redoing of Madras terrace roof in all floors with one layer of brick on edge course laid as first layer over the existing teakwood joist, beams, I section etc., which are place at roof level in all floors using specially manufactured terrace bricks for heritage works of size 6"x3"x1" in lime mortar 1:1.5 (one lime and one point five sand). The second layer is laid with floors using specially manufactured terrace bricks for heritage works of size 6"x3"x1" in lime mortar 1:2 (one lime and two sand), 20mm thick as base layer laid over the top of brick on edge course. Brick jelly lime concrete using broken brick jelly of size 20mm uniform gauge in pure slaked lime (no sand to be added) to the proportion of brick jelly to lime being 32:12:50 by volume laid over the second layer of terrace bricks for an average consolidated thickness of 100mm in a single layer of required slope/level as directed and finished by beating the concrete with wooden beaters of approved pattern, keeping the surface constantly wet by sprinkling lime jaggery (PALM JAGGERY) water(Galnut of 10kg and jaggery of 10kg per one Sq.m).The beating of the concrete done continuously until the brick jelly lime concrete is well hardened. After ensuring the harden surface f brick jelly lime concrete, flat tiles of 150mm x 150mm x 25mm of specially manufactured superior quality to suit the heritage works laid in two consecutive layers in lime mortar 1:2(one lime and two sand 15mm thick for each layer of flat tiles. The base mortar provided for the top course of flat tiles is mixed with SBR (Synthetic Butadiene Rubber) Polymer at the rate of 0.5 litres for 1 sq.m is applied for water proofing chemical treatment including neat finishing.				1 M^3 (One cubic metre)	

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Contractor

Chief Engineer

		The materials like terrace bricks for the heritage work as from Thirukkattupalli and pollachi lime should be used. The period of interval between laying of I layer and II layer of terrace bricks, brick jelly lime concrete and flat tiles in two consecutive layers as directed by the departmental officers etc., complete complying with standard specifications. The Madras Terrace roof laid over the roof joist, beam, etc is well embedded in the wall to the required distance as directed by the Engineer-in charge. (The rate includes the cost of all materials like terrace brick of heritage works, brick jelly 20mm, pollachi lime, flat tiles and SBR chemicals and labour charges for laying all items of works). Pollachi lime should only be used for the preparation of mortar, brick jelly lime concrete etc., The Terrace brick flat tiles should got approved by the Executive Engineer before use on works. The overall thickness of madras terrace roof laid is laid is to be of 300mm as detailed below. Brick on edge course (I layer) = 75mm. Base mortar for laying terrace bricks = 20mm. Laying of terrace bricks (II layer) = 25mm. Brick Jelly lime concrete = 100mm. Base mortar for flat tiles =15mm. Laying flat tiles (I course) =25mm. Base mortar for flat tiles (II layer) = 15mm. Flat tiles (II course) = 25mm Total Thickness = 300mm					

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Contractor

Chief Engineer

12	410 M^3 (Four hundred and ten cubic metres)	Relaying Weathering course using best quality of broken brick jelly of 20mm gauge in pure slaked pollachi lime (no sand to be added) over roof slab the proportion of brick jelly to lime being 32:12.5 Cft. by volume and laid over the existing roof in layer and consolidated to the required design and finished thickness by beating the concrete with wooden beater to the size required slope of approved pattern and keeping the surface constantly wet by sprinkling lime jaggery water etc.. Lime mortor should be fermented for ten days and requiring galnut and jaggery should be added as per I S I Standard and same mortar should be well grind by using grinder before use on works as directed by the departmental officers.. complete complying with standard specification .				1 M^3 (One cubic metre)	
13		Brick work in cement mortar 1:5 (one cement and five m sand) using Ground Moulded second class chamber burnt bricks of size 9"×4 3/8 ×2 3/4" including curing etc., complete complying with standard specification and as directed by the department officers. (Masonry projections wherever necessary for obtaining required elevation shall be done without extra cost).	31C	V, VI S(5) VII			
a	210 M^3 (Two hundred and ten cubic metres)	For Foundation and basement				1 M^3 (One cubic metre)	
b	2 M^3 (Two cubic metres)	For Superstructure in ground Floor				1 M^3 (One cubic metre)	

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Contractor

Chief Engineer

c	125 M^3 (One hundred and twenty five cubic metres)	For super structure in second Floor				1 M^3 (One cubic metre)	
14	3270 M^2 (Three thousand two hundred and seventy square metres)	**Plastering with cement mortar 1:5** (one cement and five P- sand) 12mm thick in all floors using fine river sand including neat finishing, curing, etc., complete complying with standard specification and as directed by the department officers.	61	V (S4) (3)		1 M^2 (One square metre)	
15	1210 M^2 (One thousand two hundred and ten square metres)	**Special ceiling plastering** in all floors and finishing the exposed surface of RCC items of work such as slab, beam, sunshade, facia, canopy slab, staircase waist slab, landing slab etc., with cement mortar 1:3 (One cement and three p sand) 10mm thick including hacking the surfaces and providing cement mortar nosing, beading for sunshade, staircase, step, landing slab etc., including neat finishing and curing etc., complete complying with standard specification and as directed by the departmental officers.	56 & 57	V (S4) 3		1 M^2 (One square metre)	
16	725 M^3 (Seven hundred and twenty five cubic metres)	Earthwork excavation for foundation (for narrow excavation) in all soils and sub soils to full depth as may be directed except in hard rock requiring blasting inclusive of shoring shuttering, baling out water wherever necessary, refilling the foundation with excavated earth and depositing the surplus earth within compound in places shown by the departmental officers with an initial lead of 10 metre and initial lift of 2 metre and clearing and leveling the site etc., complete complying with standard specification and as directed by the departmental officers.	23 & 24	V, VI (S2)		1 M^3 (One cubic metre)	

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Contractor

Chief Engineer

17	90 M^3 (Ninety cubic metres)	Supplying and Filling in foundation and basement with **filling M sand** in layers of not more than 15cm thick well rammed watered and consolidated etc., complete complying with standard specification and as directed by the departmental officers.	24 & 25	V, VI (S2)		1 M^3 (One cubic metre)	
18	110 M^3 (One hundred and ten cubic metres)	Cement concrete 1:5:10 (one cement, five M sand and ten aggregate) using 40mm gauge hard broken blue granite stone jelly for foundation and including dewatering if found necessary and laid in layers of not more than 15cm thick and compacted etc., complete complying with standard specification and as directed by the departmental officers.	23 & 28	VI (8.2) 8.3 VI (S5A) 4.2.1. 3		1 M^3 (One cubic metre)	
19		Reconstruction of brick Skilled Masonry wall with similar type of bricks in lime mortar 1:2 using wire cut bricks of size 9”x4”x3” and using Pollachi lime in all floors as per traditional preparation and documented type construction such as arches and lintels, walls, etc., c.The lime mortor should be fermented for ten days and requiring galnut and jaggery should be added as per I S I Standard and same mortar should be well grind by using grinder before use on works as directed by the departmental officers.. complete complying with standard specifications .The rate includes labour charges for imported specially skilled labours.					
a	20 M^3 (Twenty cubic metres)	In super structure second Floor				1 M^3 (One cubic metre)	

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Contractor

Chief Engineer

20	2957 M^2 (Two thousand nine hundred and fifty seven square metres)	Replastering (base plastering) the brick wall, pillar and arches etc., with lime mortar 1 : 2 (one of lime and two of sand) to a thickness of 30 mm laid in two layers of 15mm thick using pollachi lime in all floors etc., complete complying with standard specifications and as directed by the departmental officers.				1 M^2 (One square metre)	
21	220 M^2 (Two hundred and twenty square metres)	Paving the floor with pre-polished concrete anti-skid step tiles (Required shape and design) of 20mm thick of approved quality and colour laid in Cement Mortar 1:3 (One Cement and Three sand) 20mm thick and pointed with white cement mixed with colouring pigment at the rate of 0.40 Kg. / sq.m., curing, etc., complete complying with standard specification and as directed by the departmental officers. (The make and brand of the tiles should be got approved by Executive Engineer before use on works)				1 M^2 (One square metre)	
22		Supplying, fabricating and fixing in position **Aluminium Anodised natural colour mat finish sliding window in all floors with Aluminium** sections of Outer Frame bottom 92.34x46.00x1.50@1.637 kg/m,Top & vertical 92.34x29.70x1.50 at 1.066 kg/m, Shutter vertical 39x20x1.50 at 0.493 kg/m,Top & Bottom 39x20x1.50mm at 0.439 kg/m,Vertical locking arrangement 40x28x1.50 at 0.632 kg/m, the follwing sizes with necessary accessories such as rubber beadings, special hinges, lock, handle including supplying and fixing 4mm thick plain glass including cost of all materials , labours, power consumption required for fabrication , drilling holes in RCC colunm, slab, masonry walls wherever necessary with power drills to the required extent and make good to the original condition after fixing and also as directed.The aluminium sections are to be anodised with matt finish under electrically controlled in accordance with IS 1868 / 1962 for an average anodic film thickness 15 microns etc., complete.					

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Contractor

Chief Engineer

a	80 M^2 (Eighty square metres)	Three track				1 M^2 (One square metre)	
b	127 M^2 (One hundred and twenty seven square metres)	Two track				1 M^2 (One square metre)	
23	182 M^2 (One hundred and eighty two square metres)	Supply and fixing inposition of anodized aluminium fixed glazing using 63.50 x 38.10mm x 1.41 mm @ 0.818 kg/m, thick extruded box section as vertical and horizontal spaced member and fixing 4.00mm thick plain frosted / Pin headed glass with necessary glazing, clips rubber beading L angle, screw, conveyance, scaffolding if any and including dismantling making holes in RCC Columns, beams, masonary wherever necessary with power drill to the extent required and made good to the original conditions after fixing as directed by departmental officers. The aluminium surface is to be anodized with matt finish under electrically controlled condition in accordance with ISI 1868/ 1962 specifications for an average anodic film thickness. All materials should be got approved by the Executive Engineer before fixing inposition.				1 M^2 (One square metre)	
24		Supplying and fixing in position of PPGI Sheet Sunshade with M,S Square Tubes for frame and fixing on the wall over Doors,Windows and Ventilators and fixing properly including Scaffolding Charges etc complete Complying with Standard Specifications					

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Contractor

Chief Engineer

a	60 M^2 (Sixty square metres)	In Ground Floor				1 M^2 (One square metre)	
b	60 M^2 (Sixty square metres)	In First Floor				1 M^2 (One square metre)	
c	40 M^2 (Forty square metres)	In SecondFloor				1 M^2 (One square metre)	
25	250M^2 (Two hundred and fifty square metre)	Painting the **new iron work** with two coats of best approved first quality and colour of synthetic enamel paint over the existing red oxide priming coat in all floors excluding cost of priming coat and including cost of painting materials, brushes, putty, preparation of surfaces and scaffolding charges etc., complete complying with standard specification and as directed by the departmental officer. (The quality and colour of paint should be got approved by the departmental officer before use on work).	66A	V.VII. 3 & 15		1 M^2 (One square metre)	

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Contractor

Chief Engineer

26	1230 M^3 (One thousand two hundred and thirty cubic metres)	Easening the existing hanging doors and windows including renewing from its position and refixing the same after attending the petty repair works including labour charges for preparing and fixing the necessary furniture fittings including cost of of such furniture fittings and glass panes wherever necessary if any and fixing it in position etc. complete complying with standard specifications and as directed by the departmental officers.				1 M^3 (One cubic metre)	
27	5660 M^2 (Five thousand six hundred and sixty square metres)	Paving the flooring with Double Charged Vitrified tiles of approved quality and colour size 600 x 600 x 8 mm for flooring in all floors overa base layer of cement mortar 1:3 (one cement and three M-Sand), 20mm thick and pointing with white cement using 0.30 kg/m2of white cement including adding suitable colour pigments to suit the colour of tiles finishing perfectly and curing as directed by the departmental officers including cost of tiles, all materials and incidental charges, transportation charges and labour charges for laying tiles etc., complete complying with standard specification and as directed by departmental officers. (The tiles should be got approved by the Executive Engineer before use on works)				1 M^2 (One square metre)	
28	235 M^2 (Two hundred and thirty five square metres)	Paving the floor with pre-polished concrete anti-skid tiles (Required shape and design) of 20mm thick of approved quality and colour laid in Cement Mortar 1:3 (One Cement and Three sand) 20mm thick and pointed with white cement mixed with colouring pigment at the rate of 0.40 Kg. / sq.m., curing, etc., complete complying with standard specification and as directed by the departmental officers. (The make and brand of the tiles should be got approved by Executive Engineer before use on works)				1 M^2 (One square metre)	

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Contractor

Chief Engineer

29	4 Nos (Four numbers)	Supplying and fixing in position best quality of approved make white glazed earthernware wash hand basin (with pedestal/without pedestal) of size 550x400mm with a pair of cast iron brackets , including cost of 15mm diametre brass chromium plated pillar tap, 32mm diametre C.P.waste, 32mm diametre PVC waste pipe with rubber plug and chain, 15mm diametre gun metal wheel valve, 15mm dia brass nipple, 15mm dia nylon connection etc. including fixing the wash hand basin in the wall in position with pair of C.I.brackets with teak wood plugs and screws and giving necessary water supply connection and painting the brackets with two coats of paint over a priming coat of anti-corrosive paint including testing for leakage etc., complete complying with standard specification and as directed by the departmental officers.(The wash hand basin and specials should be got approved by the departmental officers before use on work)	Spl			1 No (Each)	
30	14 Nos (Fourteen numbers)	Supplying and fixing in position Indian water closet oriya type of size 580x440mm white glazed earthernware of approved quality with 'P" trap or 'S' trap conforming to IS 2556-Part XII with sand cushion and forming flooring alround the closet using 40mm broken brick jelly in lime concrete 1:2:5 (One part of lime, two parts of sand and five parts of brick jelly) 100mm thick and finishing the top to required slope and including giving necessary connection to PVC. pipes by dismantling brick masonry, reinforced cement concrete roof/floor slab and making good the disturbed portion to original condition without leakage etc., complete complying with standard specification and as directed by the departmental officers.(The Oriya type Water Closet and all accessories should be got approved by the departmental officers before use on work)	Spl			1 No (Each)	

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Contractor

Chief Engineer

31	3 Nos (Three numbers)	Supplying and fixing in position White/colour Glazed European water closet of best quality and approved make with 100mm P or S trap with double flapped rigid PVC.seat cover with chromium plate brass hinges, including supplying and fixing PVC. Low level flushing tank 10 litre capacity of approved quality on wall with teak wood plugs, brass screws and 2 numbers 15mm dia gun metal wheel valve, 15mm dia nylon connection and giving necessary water supply connection as directed by the departmental officers. The rate includes cost of 100mm dia PVC.Pipe 60cm long including cost of 3 Kg.of white cement 6Kg.of cement, spunyarn, shellac, thread ball, teak wood plugs, brass screws 75mmx10mm etc., complete complying with standard specification and as directed by the departmental officers. (The European Water Closet and flushing tank should be got approved by the Departmental Officers before use on work.)	Spl			1 No (Each)	
32	6 Nos (Six numbers)	Supply and fixing in position of best Indian make white / colour glazed earthernware lipped mouth flat back urinal of best quality and approved make of size 430mm x 260mm x 350mm with GI pipe, 32mm dia bell mouth PVC connection and waste pipe, 15mm dia GI pipe of required length, 15mm dia GM wheel valve, 15mm dia brass nipple 2 Nos., and fixing the urinals in position with necessary TW plugs, clamps, screws, etc., including dismantling masnory and re-doing the same to the original condition, etc., including painting the pipe with two coats of best quality approved synthetic enamel paint over one coat of red oxide primer and checked without any leakage etc. complete complying with standard specifications and as directed by the departmental officers. (The urinal should be got approved by the Executive Engineer before use on works.)				1 No (Each)	

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Contractor

Chief Engineer

33	195 M^2 (One hundred and ninety five square metres)	Dadooing the walls with colour designed glazed tiles of size 300mmx 200mmx 6mm of approved quality in all floors set in cement mortar 1:2 mix (one cement & two M sand) 10mm thick and pointing with white cement using 0.4 kg/m2 including adding suitablee colour pigments to suit the colour of tiles including finishing the joints neatly and curing etc.,complete complaying with standard specifications. (The quality of tiles should be got approved by departmental officers before use on the work).	Spl			1 M^2 (One square metre)	
34	56 M^2 (Fifty six square metres)	Paving the floor with design colour ceramic tiles of approved quality and colour of size 305 x 305 x 6mm in all floors over a base layer of cement mortar 1:3 (one cement and three M sand) 20mm thick using M. sand and pointing with white cement using 0.30kg/m2 including adding suitable colour pigments to suit the colour of tiles finishing perfectly and curing etc., including cost of tiles, all materials and incidential charges, transportation charges and labour charges for laying tiles etc., complete complying with standard specification and as directed by the departmental officers . (The quality of tiles should be got approved by the departmental officers before use on works).	39F			1 M^2 (One square metre)	
35	37.50 RM (Thirty seven point five zero running metre)	Supplying and fixing 50mm dia GI pipe for Purlin including labour charges for cutting, welding and fixing with MS flats (excluding cost of flat), etc., as directed by the departmental officers				1 RM (One running metre)	

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Chief Engineer

36	21 M^2 (Twenty one square metres)	Supplying and painting the walls with two coats of oil bound distemper over one coat of water based cement primer including cost for distemper, primer, cleaning and scrapping the walls, rendering the walls smooth with necessary putty, brushes, scaffolding arrangements, labour charges, etc., as per standard specification. (The colour and shade of the distemper shall be got approved by the Executive Engineer before use of work).				1 M^2 (One square metre)	
37	19 M^2 (Nineteen square metres)	Solid PVC door shutters using 19 gauge 19mm MS square tubes for styles and outer frames 15mm M"S square tubes for top, lock and bottom rails. The steel tubes shall be covered with 5mm thick solid PVC sheets. Shutter using 5mm thick solid PVC sheets for panelling shall rigidly fixed in position including necessary furniture and fittings. The over all size of styles shall be 50mmx30mm. The over all size of top rail, lock rail and bottom rail shall be 75mmx30mm. The over all size of frames shall be 50mmx45mm with suitable rebate for housing the shutter with frame.				1 M^2 (One square metre)	
38	12 M^2 (Twelve square metres)	Providing and fixing of teak wood panelled door shutter with double leaves of fully panelled using teak wood style 0.075 x 0.038 m 2 nos of top and bottom rail of size 0.075 x0.038 m ,lock rails of size 0.15x0.038m fixing teak wood planks for panelled portion of the shutter.The rate includes labour for wrought and put up for the shutter,cost of all materials such as Teak wood ornamental beeding, 3 nos of I O butt hinges 5",1 no of aldrop bolt 10",1 no of door stopper,1 no of door handle ornamental 150 mm long , 1 no of tower bolt 8"long,screws and nails , fevicol etc., and fixing the door shutter in position with necessary furniture fittings etc complete compaying with standard specifications and as directed by the departmental officers				1 M^2 (One square metre)	

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Chief Engineer

39	182 M^2 (one hundred and eighty two square metres)	Pre-Painted Galvanized Iron Windows (Air Tight Model) with Grill and Glass: Providing and fixing Ajanta Cave Model Window fabricated from roll formed sections made of galvanized steel colour coated / powder coated (Base steel as per IS 513 'D' quality, galavanized as per IS 277 with zinc of 120 grams / sqm.) with total coated thickness of 0.60mm. Paint specification: Coated sections should be with primer coat of epoxy primer of 5-7 microns thick, finish painted with a polyester paint of 12-16 microns thick and back coated with alkyd backer of 5-7 microns. Dimensions of sections: Section for shutter should be of 46mm x 46mm and external frame should be of 46mm x 52mm. Section for glass beading should be of 18mm x 25mm and Center mullion should be 46mm x 70mm. Fixing details: The frame and shutter sections should be cut to length, joined with corner brackets made of CRCA electro plated. Mullion section should be joined with frame / mullion using nylon mullion cap. Ethyl Propylene Diamine Monomer (EPDM) Gasket should be used all around glass in shutter between frame and glazed shutter and both sides of fixed glass. Accessories: Handle made of high grade aluminium powder coated and with nylon reciever. Gaskets made of Ethyl Propylene Diamine Monomer (EPDM). Corner brackets made of CRCA with zinc phosphating. Mullion caps made of glass filled nylon. Glass: Glass shutter and fixed glass portion should be provided with a glass of 5mm plain float glass. Grill: Windows should be provided with grill made of 10mm square MS bars welded to 12mm x 5mm flat at 4" intevals. total grill unit should be power coated and fixed to window frame with screws. The above frame should be fixed to brick/concrete masonry by using nylon self-expanding caps and driving MS electro plated 80mm long screwa into the caps through frames.				1 M^2 (One square metre)	

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Contractor

Chief Engineer

40	39 M^2 (Thirty nine square metres)	Supplying and fixing in position of aluminium anodised colout matt finish louvered ventilator. The out frame will be 62x38x2mm @ 1.174kg/m and the louver with moving arrangement will be made with aluminium channeln of size 60x30x4mm @ 1.27 kg/m with necessry glass panes for louvers 4mm thick and aluminium clips, including all materials, labour and power consump-tion charges required for fabrication if necessary chipping, dismantling, making holes in RCC columns beams or masonry wherever necessary with power drill to be extent reuired and make good to the original conditions after fixing etc. complete. The aluminium surface is to be anodised with matt finish under electrically controlled condition in accordanced with ISI specification 1868/1962 of anodic film thickness of not less than 15 microns for all section. (All materials should be got approved by the Executive Engineer befre fixing in position as directed)				1 M^2 (One square metre)	
41	12 M^2 (Twelve square metres)	Renewing and refixing the damaged window with new teak wood panelled window shutter using new one one of teak wood styles of 0.075 m x .038 m for both vertical and horizontal and fixing teak wood planks using Class A Teak wood timber for window panel portion 25 mm thick including labour for wrought and put up for the shutter , fixing the shutter in position with necessary furniture fittings etc., complete complying with standard specification and as directed by the departmental officer.				1 M^2 (One square metre)	
42	16 M^3 (Sixteen cubic metres)	Re placement of existing damaged planks and scantling with new one of seasoned teak wood scantling and planks for Heritage work of required size and thickness for staircase steps , rafters ,purlins , hand rails , doors and window shutters etc., complete complying with standard specification and as directed by the departmental officers . TW SCANTLING, PLANKS				1 M^3 (One cubic metre)	

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Contractor

Chief Engineer

43		Supplying and fixing in position best quality PVC soil / waste pipes of various dia having 6 kg / sq.cm. pressure BIS mark and providing leak proof joints using PVC adhesives including fixing to the wall with special PVC / MS clamp, teak wood plugs, brass screws, etc., and making connection to all sanitary fittings, dismantling masonry / RCC works wherever found necessary and making the good dismantled portion to the original condition, including testing for any leakages, etc., complete complying with standard specifications. (The PVC pipes should be got approved by the Executive Engineer before use on works). The rate for earth work excavation will be measured and paid separately in the cases where the pipe lines are proposed to laid **below ground level**					
a	28 RM (Twenty eight running metre)	110 mm dia				1 RM (One running metre)	
b	62 RM (Sixty two running metre)	160 mm dia				1 RM (One running metre)	

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Contractor

Chief Engineer

44	1651 RM (One thousand six hundred and fifty one running metre)	Supplying and fixing in position best approved of BIS quality PVC rain water down fall pipes of **size 160mm** having a working pressure of 4 kg / sq.cm including cost of necessary PVC shoe, PVC bend, C.I. gratings of required dia. and special clamps, brass screws, nails etc., and fixing of cast iron gratings at juction of parapet and the RCC roof slab including finishing neatly etc., complete. The rate shall be inclusive of cost of removable iron grating. The PVC pipe shall be fixed on wall with special type of clamps. Special type "U" clamp at the centre of the pipe line shall be fixed in addition to those for more than 3.0M pipe length complying with standard specification.	97	VI (S6) VII.3		1 RM (One running metre)	
45		Supplying and fixing in position PVC specials of the following dia and types of approved quality confirming to BIS and providing leak proof joints including fixing to the walls and giving connection to the PVC soil stacks, dismantling the masonry or RCC works and re-doing the dismantled portion to original condition etc., complete complying with standard specifications. (The PVC specials should be got approved by the Executive Engineer before use on works).					
a	5 Nos (Five numbers)	110 mm Dia Elbow				1 No (Each)	
b	5 Nos (Five numbers)	110 mm Dia Tee				1 No (Each)	

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Contractor

Chief Engineer

c	4 Nos (Four numbers)	90 mm Dia elbow				1 No (Each)	
d	2 Nos (Two numbers)	90 MM Dia Tee				1 No (Each)	
46	1330 M^2 (One thousand three hundred and thirty square metres)	Supplying and laying of 63 mm thick high strength type of **interlocking rubber moulded hydraulic pressed paver block** of approved colour made up of designed concrete mix 1:1:2 using 10 to 12mm size HBG stone jelly in required shapes and sizes having minimum compressive strength of 40 N/mm2 to be laid in flurrying bone pattern with approved non sticking surface at top. The rate is inclusive of levelling the site, compacting with power compactor and sweeping the sand grouting and also inclusive of transportation charges, loading, unloading and labour charges for laying the paver block, etc. complete and as directed by the departmental officers				1 M^2 (One square metre)	
47	150 M^2 (One hundred and fifty square metres)	**Plastering with cement mortar 1:3** (one cement and three P.sand) 20mm thick with WPC 2% by weight of cement used in all floors using P sand including neat finishing, curing, etc., complete complying with standard specification and as directed by the department officers.	61	V (S4) (3)		1 M^2 (One square metre)	

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Contractor

Chief Engineer

48	118 M^3 (One hundred and eighteen cubic metres)	Supplying and Filling in foundation and basement and trenches with Conveyed Gravel in layers of not more than 15cm thick well rammed watered and consolidated etc., complete complying with standard specification and as directed by the departmental officers.				1 M^3 (One cubic metre)	
49	11 Nos (Eleven numbers)	Reconstruction of Manhole chamber for the following sizes 600mmx600mmx900mm (200mm above ground level and the remaining depth of manhole below ground level) with earth work excavation in all soils and sub soils and to full depth as may be directed except hard rock requiring blasting, but inclusive of shoring, strutting and bailing out water wherever necessary and refilling the sides with excavated earth and laying with base cement concrete of 1:5:10 using 40mm HBGS jelly 100mm thick over a sand cushion of 100mm thick. The chamber shall be constructed with brick masonry of 230mm thick in CM 1:5 using ground moulded chamber burnt second class bricks of size 9"x43/8"x23/4". The inner bottom side of the chamber shall be plastered with CM 1:3, 20mm thick. The outer side and top of the chamber of wall to a depth of 300mm shall be plastered with CM 1:5, 12mm thick supply and fixing of manhole cover of size 0.60m x 0.60m heavy duty with frame and fixing of the top of the manhole chamber with cement slurry packingsket should be used all around glass in shutter between frame and glazed shutter and both sides of				1 No (Each)	

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Contractor

Chief Engineer

50		Supplying, laying and jointing UPVC pipes (having working pressure 10 kg. / sq.cm) of approved quality and best variety conforming to BIS of the following dia including cutting, threading and fixing PVC specials using PVC adhesives (but excluding cost of such specials) and fixing into wall with teak wood plugs, PVC clamps and screws making holes on the wall (or) drilling holes in the roof and making good the dismantled portion to original condition with necessary brick work / cement concrete and plastering neatly wherever necessary with necessary scaffolding charges, etc., complete complying with standard specifications. The PVC pipes shall be got approved by Executive Engineer before use on works.					
a	268 RM (Two hundred and sixty eight running metre)	40 mm dia				1 RM (One running metre)	
b	162 RM (One hundred and sixty two running metre)	25 mm dia				1 RM (One running metre)	
c	25 RM (Twenty five running metre)	20 mm dia				1 RM (One running metre)	

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Contractor

Chief Engineer

51		Supplying and fixing in position the following UPVC specials of heavy type and approved quality and good variety excluding fixing charges but including necessary cutting and threading of UPVC pipes, jointing the UPVC specials and painting with two coats with good variety and best quality synthetic enamel paint over a coat of red oxide primer and jointing the specials with pipe line using shellac etc. complete complying with standard specification (The UPVC specials should be got approved by the Executive Engineer concerned before use on works)					
a	10 Nos (Ten numbers)	40 mm dia Tee				1 No (Each)	
b	27 Nos (Twenty seven numbers)	40 mm dia Union				1 No (Each)	
c	3 Nos (Three numbers)	40 mm dia Nipple				1 No (Each)	

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Contractor

Chief Engineer

d	30 Nos (Thirty numbers)	25 mm dia Elbow				1 No (Each)	
e	22 Nos (Twenty two numbers)	25 mm dia Tee				1 No (Each)	
f	15 Nos (Fifteen numbers)	25 mm dia Bend				1 No (Each)	
g	5 Nos (Five numbers)	20 mm dia Tee				1 No (Each)	
h	10 Nos (Ten numbers)	20 mm dia Elbow				1 No (Each)	

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Contractor

Chief Engineer

i	5 Nos (Five numbers)	20 mm x 15 mm dia Reducer					
52	24 Nos (Twenty four numbers)	Supplying and fixing in position 15mm dia brass CP screw down tap / Pillar tap (heavy duty) of approved make conforming to BIS specifications and quality including cost of shellac, thread, etc., complete complying with standard specification and including cutting and threading wherever necessary. (Taps should be got approved by the Executive Engineer before use on the works)				1 No (Each)	
53	22 Nos (Twenty two numbers)	Supplying and fixing in position **PVC Nahini trap/Floor trap** of size 110x75mm with best pvc gratings of approved brand and quality with fixed over a bed of brick jelly lime concrete 1:2:5(one part of lime,two parts of sand and five parts of 40mm size brick jelly)and finished with cement Mortar 1:3(one cement and three sand)including dismantling masonry works wherever found necessary and making good the damaged portions to the original condition giving connections to the pipe etc., complete complying with standard specification and as directed by the departmental officers. (The PVC Nahini trap with grating should be got approved by the departmental officer before use on works).	Spl			1 No (Each)	
54	230 M^2 (Two hundred and thirty square metre)	Painting the **new wood work** two coats with best approved first quality and colour of synthetic enamel paint over a priming coat of approved quality in all floors including cost of paint, labour and other materials like brushes, putty and scaffolding charges etc., complete complying with standard specification and as directed by the departmental officers. (The make quality and colour of paint should be got approved by the departmental officer before use on work).	66A	V.VII. 3 & 15		1 M^2 (One square metre)	

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Contractor

Chief Engineer

55		Supplying and fixing in position best quality and approved variety of new Gun Metal Gate Valve / Wheel Valve heavy type excluding the fixing charges but including necessary cutting & threading of GI pipes for jointing the GI specials and providing two coats of painting with good quality and approved variety of anti-corrosive paint over a coat of red oxid primer coat in the case of pipe line above ground level and one coat of tarring in the case of pipe line below ground level etc., complete	Spl				
a	1 No (One number)	32mm dia Gate valve				1 No. (Each)	
b	2 Nos (Two numbers)	25mm dia Gate valve				1 No. (Each)	
c	3 Nos (Three numbers)	40mm dia Gate valve				1 No. (Each)	

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Contractor

Chief Engineer

56	800 kg (Eight hundred kilogram)	Renewing and and fixing MS grills to doors, windows and ventilators etc. using necessary MS flats (or) square rods for inner members and outer members which should be fixed to window frames as directed and design given by the departmental officers inclusive of cost of providing one coat of best quality red oxide primer etc., complete complying with standard specification and as directed by the departmental officers .	Spl			1 kg (One kilogram)	
57	17350 M^2 (Seventeen thousand three hundred and fifty square metre)	Painting two coats of newly plastered wall surface with ready mixed Interior plastic emulsion paint of first class quality and of approved colour over a priming coat including thorough scrapping, clean removal of dirt, and including necessary plaster of paris putty, wherever required etc., complete complying with standard specification.				1 M^2 (One square metre)	
58	3790 M^2 (Three thousand seven hundred and ninety square metre)	Painting two coats of newly plastered wall surface with ready mixed Exterior plastic emulsion paint of first class quality and of approved colour over a priming coat including thorough scrapping, clean removal of dirt, and including necessary plaster of paris putty, wherever required etc., complete complying with standard specification.				1 M^2 (One square metre)	
59	4478 M^2 (Four thousand four hundred and seventy eight square metre)	Painting two coats of newly plastered wall surface with Texture paint of first class quality and of approved colour over a priming coat including thorough scrapping, clean removal of dirt, and including necessary plaster of paris putty, wherever required etc., complete complying with standard specification.				1 M^2 (One square metre)	

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Contractor

Chief Engineer

60	840 M^2 (Eight hundred and forty square metre)	Lime washing the walls and ceiling with three coats using Pollachi lime including cost of blue, sodium chloride, fevical type gum and adding colouring pigments if found necessary and other materials like brushes scaffolding charges, cleaning the surface by manual labour etc. The lime mortor should be fermented for ten days and requiring galnut and jaggery should be added as per I S I Standard and same mortar should be well grind by using grinder before use on works as directed by the departmental officers.. complete complying with standard specification .				1 M^2 (One square metre)	
61	36 Nos (Thirty six numbers)	Supplying and fixing in position of **Cast Iron Man hole cover** with CI frames of size 600x600mm (Heavy Duty) of best approved quality and as per Indian standard specification make etc., complete complying with standard specification and as directed by the departmental officers. (The Cast Iron Man hole cover should be got approved by the departmental officers before use on work).	Spl			1 No. (Each)	
62	200 Nos (Two hundred numbers)	Grouting and Stitching the cracked walls and arches by toothing method including required Special bricks 8" x 4" x 2"wherever is necessary and finishing the surface with lime mortar 1:2 as per orginal etc complete with standard specification and as directed by the departmental officers.				1 No. (Each)	
63	617.50 M^2 (Six hundred and seventeen point five zero square metre)	Pointing, grouting and filleting the brick joint of wall and arches with lime mortar 1:2 using pollachi lime in all floors etc., complete complying with standard specification and as directed by the departmental officers.				1 M^2 (One square metre)	

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Contractor

Chief Engineer

64	7 Nos (Seven numbers)	Supplying and Fixing of **PVC ready made water tank 2000 Litres capacity** of approved quality with standard specification and best brand including testing for leakages after making installations and connections. The cost inclusive of lid and lock with bolt and nuts for PVC tank, transportation, loading, unloading, lifting, installation and necessary connections etc., complete complying with standard specifications and as directed by the departmental officers.(The PVC Water Tank should be got approved by the Executive Engineer before use on works).	Spl			1 No (Each)	
65	1 No (One number)	Supplying and fixing in position of 1.00 HP Jet motor etc complete				1 No (Each)	
66	60 RM (Sixty running metre)	Supplying and fixing in position of 300 mm Dia RCC Hume pipe etc complete				1 RM (One running metre)	
67	384.62 M^3 (Three hundred and eighty four point six two cubic metres)	Collecting the scattered debries from the campus and conveying away the same to outside by lorry to a lead of 3Km including loading and unloading charges and dumping in low places and leveling the site etc., complete complying with standard specification and as directed by the departmental officer.				1 M^3 (One cubic metre)	
					TOTAL		
				12%	**GST**		
					GRAND TOTAL		
		67 items (Sixty seven items)					

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Contractor

Chief Engineer