

**UNIVERSITY OF KERALA
ENGINEERING UNIT, KARIAVATTOM**

Tender schedule for maintenance works of ruined RCC columns and beams in the exterior side of the Botany block building at Kariavattom Campus.

Sl.No.	Quantity	Specification	Unit	Rate	Rate in words	Amount
1	16.00	26.28.2 Chipping of unsound/weak concrete material from slabs, beams, columns etc.with manual Chisel and/ or by standard power driven percussion type or of approved make including tapering of all edges, making square shoulders of cavities including cleaning the exposed concrete surface and reinforcement with wire brushes etc. and disposal of debris for all lead and lifts all complete as per direction of Engineer-In-Charge. 50mm average thickness	m ²	153.10	Rupees One hundred and Fifty Three and paisa Ten only	2,449.60
2	50.00	26.29.2 Cleaning of reinforcement from rust from the reinforcing bars to give it a total rust free steel surface by using alkaline chemical rust remover of approved make with paint brush and removing loose particles after 24 hours of its application with wire brush and thoroughly washing with water and allowing it to dry, all complete as per direction of Engineer-In-Charge. Bars above 12 mm diameter	m	11.45	Rupees Eleven and paisa Forty Five only	572.50

3	22.00	26.30.1 Drilling suitable holes in reinforced or plain cement concrete with power drivendrill machine to a minimum depth of 100mm upto 200mm in RCC beams, lintels,columns and slabs to introduce steel bars for sunshades/balconies includingfixing the steel bars in position using epoxy resin anchor grout of approvedmake but excluding the cost of reinforcement, all complete as per direction ofEngineer-In-Charge.Upto and including 12mm dia	E	98.14	Rupees Ninety Eight and paisa Fourteen only	2,159.08
4	375.00	14.72 Providing and fixing double scaffolding system (cup lock type) on the exterior side, upto seven story hight made with 40 mm dia. M.S. tube 1.5 m centre to centre, horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challies, M.S. clamps and M.S. staricase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it there after. The scaffolding system shall be stiffened with bracings, runners, connection with the building etc wherever required for inspection of work at required location with essential safety features for the workmen etc. complete as per directions and approval of Engineer- in Charge. The elevational area of the scaffolding shall be measured for payment purpose. The payment will be made once irrespective of duration of scaffolding.	m2	220.89	Rupees Two Hundred and Twenty and paisa Eighty Nine only	82,833.75
5	4.00	od35646/2020_2021 Labour engaged for checking the structural elements such as column, beam etc by light tamping using manual means or mechanical means to find cracks and breaks if any inside and to mark the periphery as per departmental directions	Day	589.56	Rupees Five hundred and Eighty Nine and paisa Fifty Six only	2,358.24

6	30.00	5.22.6 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth level Thermo - Mechanically Treated bars of grade Fe-500D or more	Kg	78.07	Rupees Seventy Eight and paisa Seven only	2,342.10
7	50.00	26.31.1 Providing, mixing and applying bonding coat of approved adhesive on chipped portion of RCC as per specifications and direction of Engineer-In-charge complete in all respect. SBR Polymer (@10% of cement weight) modified cementitious bond coat @2.2kg cement per sqm of surface area mixed with specified proportion of approved polymer	m2	120.76	Rupees One hundred and Twenty and paisa Seventy Six only	6,038.00
8	100.000	26.29.1 Cleaning of reinforcement from rust from the reinforcing bars to give it a total rust free steel surface by using alkaline chemical rust remover of approved make with paint brush and removing loose particles after 24 hours of its application with wire brush and thoroughly washing with water and allowing it to dry, all complete as per direction of Engineer-In-Charge. Bars upto 12 mm diameter	m	5.72	Rupees Five and paisa Seventy Two only	572.00
9	75.00	od35648/2020_2021 Finishing with epoxy paint (two or more coats) at all locations prepared and applied as per manufactures specifications including appropriate priming coat, preparation of surface , etc complete on steel work	m	8.28	Rupees Eight Hundred and Fifteen and paisa One only	621.00

10	50.00	26.31.2 Providing, mixing and applying bonding coat of approved adhesive on chipped portion of RCC as per specifications and direction of Engineer-In-charge complete in all respect. Epoxy bonding adhesive having coverage 2.20 sqm/kg of approved make	m2	434.41	Rupees Four Hundred and Thirty Four and paisa Forty One only	21,720.50
11	16.00	26.32.2 Providing, mixing and applying SBR polymer (of approved make) modified Cement mortar in proportion of 1:4 (1 cement: 4 graded coarse sand with polymer minimum 2% by wt. of cement used) as per specifications and directions of Engineer-in-charge. Note: Measurement and payment: The pre-measurement of thickness shall be done just after the surface preparation is completed and Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding / tapping with a blunt metal instrument and/or the 75mm size cube crushing strength at the end of 28 days to be not less than 30 N/Sqmm ²). 25 mm average thickness in 2 layers	m2	456.41	Rupees Four Hundred and Fifty Six and paisa Forty One only	7,302.56

12	20.00	<p>26.32.3 Providing, mixing and applying SBR polymer (of approved make) modified Cement mortar in proportion of 1:4 (1 cement: 4 graded coarse sand with polymer minimum 2% by wt. of cement used) as per specifications and directions of Engineer-in-charge. Note: Measurement and payment: The pre-measurement of thickness shall be done just after the surface preparation is completed and Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding / tapping with a blunt metal instrument and/or the 75mm size cube crushing strength at the end of 28 days to be not less than 30 N/Sqmm²). 50 mm average thickness in 3 layers.</p>	m ²	912.75	Rupees Nine hundred and Twelve and paisa Seventy Five only	18,255.00
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13	20.00	<p>26.33.1 Providing, mixing and applying SBR polymer (of approved make @ minimum 2% by wt. of cement used) modified plain/reinforced cement concrete for structural members having minimum characteristic compressive strength [with ordinary portland cement, coarse sand and graded stone aggregate of 10mm maximum size in proportion as per design criteria] with specified average thickness. Note: Rates shall be for finished surface area of concrete and shall include the cost of labour, concrete and appropriate approved Super-Plasticiser for rendering concrete as flowable and SBR polymer but shall exclude cost of reinforcement, bond coat, Shear Keys, centering and shuttering, strutting, propping etc (Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding/tapping with a blunt metal instrument) 50mm thick in Grade M 25 with cement content not less than 330 kg per cum</p>	m2	579.17	Rupees Five hundred and Seventy Nine and paise Seventeen only	11,583.40
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14	50.000	<p>26.32.1 Providing, mixing and applying SBR polymer (of approved make) modified Cement mortar in proportion of 1:4 (1 cement: 4 graded coarse sand with polymer minimum 2% by wt. of cement used) as per specifications and directions of Engineer-in-charge. Note: Measurement and payment: The pre-measurement of thickness shall be done just after the surface preparation is completed and Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding / tapping with a blunt metal instrument and/or the 75mm size cube crushing strength at the end of 28 days to be not less than 30 N/Sqmm). 12 mm average thickness.</p>	m2	281.17	Rupees Two hundred and Eighty One and paise Seventeen only	14,058.50
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15	10.00	<p>26.33.2 Providing, mixing and applying SBR polymer (of approved make @ minimum 2% by wt. of cement used) modified plain/reinforced cement concrete for structural members having minimum characteristic compressive strength [with ordinary portland cement, coarse sand and graded stone aggregate of 10mm maximum size in proportion as per design criteria] with specified average thickness. Note: Rates shall be for finished surface area of concrete and shall include the cost of labour, concrete and appropriate approved Super-Plasticiser for rendering concrete as flowable and SBR polymer but shall exclude cost of reinforcement, bond coat, Shear Keys, centering and shuttering, strutting, propping etc (Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding/tapping with a blunt metal instrument) 75mm thick in Grade M 25 with cement content not less than 330 kg per cum</p>	m2	868.68	Rupees Eight Hundred and Sixty Eight and paise Sixty Eight only	8,686.80
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16	100.00	13.4.1 12 mm cement plaster of mix:1:4 (1 cement : 4 coarse sand)	m2	249.45	Rupees Two Hundred and Fory Nine and paisa Forty Five only	24,945.00
17	100.00	13.46.1 Finishing walls with Acrylic Smooth exterior paint of required shade:New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	m2	132.48	Rupees One hundred and Thirty Two and paisa Forty Eight only	13,248.00
TOTAL						219,746
PAC						219,746.03

PAC Rs.2,19,746/- (Rs. Two Lakh Nineteen thousand Seven Hundred and forty Six only)

I/We agreed to execute the work.

1.% above the estimate rate.

2.% below the estimate rate.

3. At the estimate rate.

CONTRACTOR

sd/-
UNIVERSITY ENGINEER