

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK :** Name of Work: Fan Testing Station Roof covering in Factory**ESTIMATE REF NO :** CF/CA/01

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY   | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-------|------|-----------------|-------------------|
| 10.2             | 01   | Structural steel work riveted, bolted or welded in builtup sections, trusses and framed work, including cutting, hoisting, fixing in position & applying a priming coat of approved (Zinc Chromate) steel primer all complete.  | 70000 | KGS  | 10.70           | 749000.00         |
| 12.1             | 02   | Providing CORRUGATED G.S SHEET ROOFING fixed with polymer coated J or L hooks, bolts and nuts 8 mm dia. with bitumen & G.I. limpet washers or with G.I.limpet washers filled with white lead and including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (upto a pitch of 60 degrees) excluding the cost of prulins, rafters and trusses: |       |      |                 |                   |
| 12.1.1           | 02A  | 1.00 mm/0.8mm thick with zinc coating not less than 275 gm/m2   | 2750  | SQ.M | 108.38          | 298034.94         |
| 13.62.1          | 03   | Providing and Painting with SYNTHETIC ENAMEL PAINT of approved brand and manufacture to give an even shade two or more coats on new work.   | 70    | M.T. | 1343.03         | 94012.10          |

TOTAL ESTIMATED VALUE 1141047.04

CONTRACTOR TENDER PERCENTAGE @ ABOVE / BELOW / AT PAR \_\_\_\_\_%

(Percentage in words )

TOTAL VALUE OF WORK

=====

=====

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : PART I: PROVIDING FITTERS BAR FOUNDATION IN FAN TESTING STATION IN FACTOR****ESTIMATE REF NO : CF/CA/02**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
| 2.6.1            | 01   | Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas ( exceeding 1.5 m in width or 10 sqm on - plan) including dressing of sides & ramming of bottoms, lift upto 1.5m,including getting out the excavated soil and disposal of surplus excavated soil as directed,with in a lead of 50 m IN ALL KINDS OF SOIL. | 200 | CU.M | 101.85          | 20370.00          |
| 2.25             | 02   | FILLING AVAILABLE EXCAVATED EARTH (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth; consolidating each deposited layer by ramming and watering, lead upto 50 M and lift upto 1.5 M.  | 150 | CU.M | 45.70           | 6855.00           |
| 2.7              | 03   | EXCAVATION WORK IN excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 1.5 m in width or 10 sqm on plan ) including dressing of sides and ramming of bottoms,lift upto 1.5 m,including getting out the excavated soil and disposal of surplus excavated soils as directed within a lead of 50 M, in:             |     |      |                 |                   |
| 2.7.1            | 03A  | Ordinary rock  | 300 | CU.M | 152.60          | 45780.00          |
| 2.7.3            | 03B  | Hard rock requiring blasting prohibited  | 180 | CU.M | 325.25          | 58545.00          |
| 4.1              | 04   | Providing and laying in position CEMENT CONCRETE of specified grade excluding the cost of centring and shuttering for ALL WORKS UPTO PLINTH LEVEL, with:   |     |      |                 |                   |
| 4.1.9            | 04A  | CC 1:4:8 (1 cement: 4 fine sand: 8 graded stone aggregate 40 mm nominal size)  | 10  | CU.M | 1415.55         | 14155.50          |
| 5.33             | 05   | 5.33: Providing & laying in position machine batched, machine mixed and machine vibrated design mix cement   | 100 |      | 2023.60         | 202360.00         |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : PART I: PROVIDING FITTERS BAR FOUNDATION IN FAN TESTING STATION IN FACTOR**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY    | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|--------|------|-----------------|-------------------|
|                  |      | concrete of specified grade for reinforced cement concrete work including pumping of concrete to site of lahying but excluding the cost of centring, shuttering, finishing and reinforcements 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 for M-25 grade reinforced cement concrete by using 410 Kg. of cement per cum of concrete. All work upto floor V level. |        |      |                 |                   |
| 5.9              | 06   | CENTRING and SHUTTERING including strutting, propping etc and removal of form in all floors; for: .  |        |      |                 |                   |
| 5.9.1            | 06A  | Foundations, footings, bases of columns etc. for mass concrete.  | 275    | SQ.M | 119.25          | 32793.75          |
| 5.22             | 07   | REINFORCEMENT FOR RCC WORK including straightening, cutting, bending, placing in position and binding all complete at all levels, with: .  |        |      |                 |                   |
| 5.22.3           | 07A  | Cold twisted bars/ HYSD bars   | 30000  | KG   | 6.19            | 185700.00         |
| 6.1              | 08   | Brick work with FPS BRICKS OF CLASS DESIGNATION 75 IN FOUNDATION AND PLINTH, in:   |        |      |                 |                   |
| 6.1.2            | 08A  | Cement mortar 1:6 (1 cement:6 fine sand).  | 55     | CU.M | 1798.00         | 98890.00          |
| 10.2             | 09   | Structural steel work riveted, bolted or welded in built up sections, (fixing of fitters bar) including cutting, hoisting, fixing in position & applying a priming coat of approved (Zinc Chromate) steel primer all complete.   | 100000 | KG.  | 10.70           | 1070000.00        |
| 15.3             | 10   | DEMOLISHING RCC WORK manually/by mechanical means including stacking of steel bars and disposal of   | 60     | CU.M | 537.55          | 32253.00          |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : PART I: PROVIDING FITTERS BAR FOUNDATION IN FAN TESTING STATION IN FACTOR**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|------|------|-----------------|-------------------|
|                  |      | unserviceable materials within 50 m lead.   |      |      |                 |                   |
| 15.43            | 11   | Dismantling including stacking of serviceable material and disposal of unserviceable material within 50 metres lead:  |      |      |                 |                   |
| 15.43.1          | 11A  | Water bound macaddam road   | 65   | SQ.M | 34.30           | 2229.50           |
| 16.45            | 12   | Providing and fixing in position pre-moulded joint filler in expansion joints, of/ with: .  |      |      |                 |                   |
| 16.45.1          | 12A  | Per cm. width (thickness) of joint and in required depth and length.  | 18   | SQ.M | 200.00          | 3600.00           |
| 1.1.1            | 13   | Carriage of materials by mechanical means including loading, leading, unloading, stacking etc., such as lime, moorum, building rubbish. Up to 2 KM  | 2500 | CU.M | 56.41           | 141025.00         |
| 0293+2206+2      | 14   | Supply and filling of 40mm HBG stone jelly in foundation as directed by the Engineer-in-charge  | 230  | CU.M | 753.53          | 173311.90         |
| MARKET RATE      | 15   | Supply and fixing of 1mm thick Poly ethylene sheet over metal surface to receive concrete bed.  | 300  | SQ.M | 12.00           | 3600.00           |
| 5.37             | 16   | Providing and laying in position ready mixed concrete manufactured in fully automatic batching plant and transported to site of work in transit mixer for a lead up to 10 Kms having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centring, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS:9103 to accelerate / retard setting of concrete, improve | 400  | CU.M | 4356.50         | 1742600.00        |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : PART I: PROVIDING FITTERS BAR FOUNDATION IN FAN TESTING STATION IN FACTOR**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
|                  |      | workability without impairing strength and durability as per direction of the Engineer-in-charge. M-25 grade rreinforced cement concrete by using 410 Kg. of cement per cum of concrete. All works up to floor V level. (The basic cost of cement is considered is Rs. 5175 / M.T. and the variation in cement price excess or less by 10% will be reimbursed / recovered provided the the variation is within the contract period specified). |     |      |                 |                   |
| 5.38             | 17   | Extra for carriage of R.M.C. beyond the initial lead of 10 K.M.  | 400 | CU.M | 20.00           | 8000.00           |

TOTAL ESTIMATED VALUE 3842068.65

CONTRACTOR TENDER PERCENTAGE @ ABOVE / BELOW / AT PAR \_\_\_\_\_%

(Percentage in words )

TOTAL VALUE OF WORK  
=====

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : PART II: PROVIDING TEST TRACK FOUNDATIONS NEAR FAN TESTING STATION IN FAC****ESTIMATE REF NO : CF/CA/03**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-----|------|-----------------|-------------------|
| 2.8.1            | 01   | Earth work in excavation by mechanical means (Hydraulic excavator) / by manual means in FOUNDATION TRENCHES OR DRAINS ( not exceeding 1.5 m in width or 10 sqm on - plan) including dressing of sides & ramming of bottoms, lift upto 1.5m,including getting out the excavated soil and disposal of surplus excavated soil as directed,with in a lead of 50 m IN ALL KINDS OF SOIL. | 100 | CU.M | 103.40          | 10340.00          |
| 2.25             | 02   | FILLING AVAILABLE EXCAVATED EARTH (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth; consolidating each deposited layer by ramming and watering, lead upto 50 M and lift upto 1.5 M.   | 40  | CU.M | 45.70           | 1828.00           |
| 2.9              | 03   | EXCAVATION WORK IN FOUNDATION TRENCHES OR DRAINS ( not exceeding 1.5 m in width or 10 sqm on plan ) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed within a lead of 50 M, in:  |     |      |                 |                   |
| 2.9.1            | 03A  | Ordinary rock   | 100 | CU.M | 162.55          | 16255.00          |
| 2.9.3            | 03B  | Hard rock where blasting prohibited   | 70  | CU.M | 332.45          | 23271.50          |
| 4.1              | 04   | Providing and laying in position CEMENT CONCRETE of specified grade excluding the cost of centring and shuttering for ALL WORKS UPTO PLINTH LEVEL, with:  |     |      |                 |                   |
| 4.1.9            | 04A  | CC 1:4:8 (1 cement: 4 fine sand: 8 graded stone aggregate 40 mm nominal size)   | 20  | CU.M | 1415.55         | 28311.00          |
| 5.33             | 05   | 5.33.1: Providing & laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for  | 65  | CU.M | 2023.60         | 131534.00         |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : PART II: PROVIDING TEST TRACK FOUNDATIONS NEAR FAN TESTING STATION IN FAC**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY   | UNIT | RATE    |   | AMOUNT    |   |
|------------------|------|--|-------|------|---------|---|-----------|---|
|                  |      |  |       |      | RS      | P | RS        | P |
|                  |      | reinforced cement concrete including pumping of concrete to site of laying but excluding the cost of centring, shuttering, finishing and reinforcements including Admixtures in recommended proportions (as per IS 9103) to accelerate, retard setting of concrete improve workability without imparing strength and durability as per direction of Engineer-in-charge for M-25 grade reinforced cement concrete by using 410Kg. of cement per cum of concrete. All work upto floor V level. |       |      |         |   |           |   |
| 5.9              | 06   | CENTRING and SHUTTERING including strutting, propping etc and removal of form in all floors; for: .  |       |      |         |   |           |   |
| 5.9.1            | 06A  | Foundations, footings, bases of columns etc., for mass concrete  | 300   | SQ.M | 119.25  |   | 35775.00  |   |
| 5.22             | 07   | REINFORCEMENT FOR RCC WORK including straightening, cutting, bending, placing in position and binding all complete at all levels, with: .  |       | KG.  |         |   |           |   |
| 5.22.3           | 07A  | Cold twisted bars / HYSD bars  | 26500 | KG.  | 6.19    |   | 164035.00 |   |
| 1.1.1            | 08   | Carriage of materials by mechanical means including loading, leading, unloading, stacking etc., such as lime, moorum, building rubbish. (Upto 2 KM)  | 230   | CU.M | 56.41   |   | 12974.30  |   |
| 10.19            | 09   | Providing and fixing M.S. round holding down bolts with nuts and washer plates complete.   | 2500  | KG.  | 52.05   |   | 130125.00 |   |
| 5.37             | 10   | Providing and laying in position ready mixed concrete manufactured in fully automatic batching plant and transported to site of work in transit mixer for a lead up to 10 Kms having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of  | 200   | CU.M | 4356.50 |   | 871300.00 |   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : PART II: PROVIDING TEST TRACK FOUNDATIONS NEAR FAN TESTING STATION IN FAC**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
|                  |      | laying, excluding the cost of centring, shuttering finishing and reinforcement including cost of 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 the Engineer-in-charge. M-25 grade rreinforced cement concrete by using 410 Kg. of cement per cum of concrete. All works up to floor V level. (The basic cost of cement is considered is Rs. 5175 / M.T. and the variation in cement price excess or less by 10% will be reimbursed / recovered provided the the variation is within the contract period specified). |     |      |                 |                   |
| 5.38             | 11   | Extra for carriage of R.M.C. beyond the intial lead of 10 K.M.   | 200 | CU.M | 20.00           | 4000.00           |

TOTAL ESTIMATED VALUE 1429748.80

CONTRACTOR TENDER PERCENTAGE @ ABOVE / BELOW / AT PAR \_\_\_\_\_%

(Percentage in words )

TOTAL VALUE OF WORK

=====

=====

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY****ESTIMATE REF NO : CF/CA/04**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|------|------|-----------------|-------------------|
| 2.1.1            | 01   | Earth work in SURFACE EXCAVATION not exceeding 30 cm. in depth but exceeding 1.5 m in width as well as 10 sqm. on plan including disposal of excavated earth upto 50 M and lift upto 1.5 m, disposed soil to be levelled and neatly dressed IN ALL KINDS OF SOIL   | 1000 | SQ.M | 20.74           | 20740.00          |
| 2.8.1            | 02   | Earth work in EXCAVATION by mechanical means (Hydraulic excavator) / manual means in foundations, trenches or drains ( not exceeding 1.5 m in width or 10 sqm on - plan) including dressing of sides & ramming of bottoms, lift upto 1.5m,including getting out the excavated soil and disposal of surplus excavated soil as directed,with in a lead of 50 m IN ALL KINDS OF SOIL. | 510  | CU.M | 103.40          | 52734.00          |
| 2.25             | 03   | FILLING AVAILABLE EXCAVATED EARTH (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth; consolidating each deposited layer by ramming and watering, lead upto 50 M and lift upto 1.5 M.  | 480  | CU.M | 45.70           | 21936.00          |
| 2.27             | 04   | Supplying and FILLING IN PLINTH WITH RIVER SAND under floors including watering, ramming, consolidating and dressing complete.   | 106  | CU.M | 301.50          | 31959.00          |
| 2.32             | 05   | CLEARING GRASS AND REMOVAL OF THE RUBBISH upto a distance of 50 M outside periphery of the area cleared.   | 940  | SQ.M | 13.56           | 12746.40          |
| 2.35.2           | 06   | Diluting and injecting chemical emulsion for post-constructional ANTI-TERMITE TREATMENT:- Along external wall below concrete or masonry apron using chemical emulsion @ 2.25 litre per linear metre including drilling and plugging holes etc., with:  |      |      |                 |                   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|--|-----|------|--------------|----------------|
| 2.35.2.1         | 06A  | Chlorpyriphos / Lindane E.C 20% with 1% concentration.   | 620 | SQ.M | 10.45        | 6479.00        |
| 2.35.3           | 07   | Diluting and injecting chemical emulsion for post-constructional ANTI-TERMITE TREATMENT:- of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12mm dia. holes and plugging with cement mortar 1:2 (1 cement: 2 coarse sand) to match the existing floor with:    |     |      |              |                |
| 2.35.3.1         | 07A  | Chlorpyriphos / Lindane E.C 20% with 1% concentration.   | 800 | SQ.M | 48.70        | 38960.00       |
| 2.35.4           | 08   | Diluting and injecting chemical emulsion for post-constructional ANTI-TERMITE TREATMENT: of existing masonry using chemical emulsion @ one litre per hole at 300mm interval including drilling holes at 45 degree and plugging them with cement mortar 1:2 (1 cement: 2 coarse sand) to the full depth of the hole with: |     |      |              |                |
| 2.35.4.1         | 08A  | Chlorpyriphos / Lindane E.C 20% with 1% concentration.   | 192 | SQ.M | 7.60         | 1459.20        |
| 4.10             | 09   | Providing and laying DAMP PROOF COURSE 50MM thick with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)  | 112 | SQ.M | 76.81        | 8602.72        |
| 4.1              | 10   | Providing and laying in position CEMENT CONCRETE of specified grade excluding the cost of centring and shuttering for ALL WORKS UPTO PLINTH LEVEL, with:   |     |      |              |                |
| 4.1.9            | 10A  | CC 1:4:8 (1 cement: 4 fine sand: 8 graded stone aggregate 40 mm nominal size)  | 200 | CU.M | 1415.55      | 283110.00      |
| 5.12             | 11   | Providing hoisting and fixing up to floor five level Precast cement concrete works in STRING OR LACING   | .05 | CU.M | 2913.85      | 145.69         |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
|                  |      | COURSES, COPINGS, BED PLATES, ANCHOR BLOCKS, PLAIN WINDOW SILLS, SHELVES, LOUVERS, STEPS, STAIR CASES, etc. in 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size), including - hoisting and setting in position with cement mortar 1:3 ( 1 cement: 3 coarse sand ), cost of required centring, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement: 3 fine sand) on exposed surface complete but excluding cost of reinforcement steel with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size. |     |      |                 |                   |
| 5.1              | 12   | Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - All works up to plinth level:   |     |      |                 |                   |
| 5.1.2            | 12A  | RCC 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size)   | 50  | CU.M | 1660.00         | 83000.00          |
| 5.2.2            | 13   | REINFORCED CEMENT CONCRETE WORK IN WALLS (ANY THICKNESS), INCLUDING ATTACHED PILASTERS, BUTTRESSES, PLINTH AND STRING COURSES, FILLETS, COLUMNS, PILLARS, PIERS, ABUTMENTS, POSTS AND STRUTS, ETC., excluding cost of centring, shuttering, finishing and reinforcement, with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size), at levels: . (NOTE: Floor one level corresponds to plinth level) .   |     |      |                 |                   |
| 5.2.2            | 13A  | upto floor V level   | 61  | CU.M | 2020.35         | 123241.35         |
| 5.3              | 14   | REINFORCED CEMENT CONCRETE WORK IN BEAMS, suspended floors, roofs having slope up to 15 degree, landings, balconies, shelves, chajjas, lintels,  | 25  | CU.M | 2016.25         | 50406.25          |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY   | UNIT | RATE    |   | AMOUNT    |   |
|------------------|------|---|-------|------|---------|---|-----------|---|
|                  |      |   |       |      | RS      | P | RS        | P |
|                  |      | bands, plain window sills, staircases and spiral stair cases up to floor five level excluding the cost of centring, shuttering finishing & reinforcement with 1:2:4(1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size), at levels: (NOTE: Floor one level corresponds to plinth level) . |       |      |         |   |           |   |
| 5.9              | 15   | CENTRING and SHUTTERING including strutting, propping etc and removal of form in all floors; for: .   |       |      |         |   |           |   |
| 5.9.1            | 15A  | Foundations, footings, bases of columns etc. for mass concrete.   | 57    | SQ.M | 119.25  |   | 6797.25   |   |
| 5.9.6            | 15B  | Columns, pillars, piers, abutments, posts & struts  | 562   | SQ.M | 238.40  |   | 133980.80 |   |
| 5.9.15           | 15C  | Small lintels not exceeding 1.5 M clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like.  | 73    | SQ.M | 119.25  |   | 8705.25   |   |
| 5.9.19           | 15D  | Weather shade , chajjas, corbels, edges etc.  | 48    | SQ.M | 258.60  |   | 12412.80  |   |
| 5.22             | 16   | REINFORCEMENT FOR RCC WORK including straightening, cutting, bending, placing in position and binding all complete at all levels, with: .   |       |      |         |   |           |   |
| 5.22.3           | 16A  | Cold twisted bars / HYSD bars etc.  | 15000 | KG   | 6.19    |   | 92850.00  |   |
| 6.4              | 17   | Brick work with FPS BRICKS OF CLASS DESIGNATION 75 upto floor V level above PLINTH, in:   |       |      |         |   |           |   |
| 6.4.1            | 17A  | Cement mortar 1:4 (1 cement : 4 coarse sand)  | 5     | CU.M | 2036.95 |   | 10184.75  |   |
| 6.4.2            | 17B  | Cement mortar 1:6 (1 cement : 6 coarse sand)  | 344   | CU.M | 2033.65 |   | 699575.60 |   |
| 6.13.2           | 18   | HALF BRICK MASONRY WITH FPS BRICK OF CLASS DESIGNATION 75 in super  | 10    | SQ.M | 247.68  |   | 2476.85   |   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
|                  |      | structure, above plinth level upto floor five level in cement mortar 1:4 (1 cement: 4 coarse sand), .  |     |      |                 |                   |
| 7.1.1            | 19   | RANDOM RUBBLE MASONRY with hard stone in FOUNDATION and PLINTH including levelling up with cement concrete 1:6:12 (1 cement: 6 coarse sand: 12 graded stone aggregate 20 mm nominal size) at plinth level, (with bond/through stones atleast 1 No. per 0.5 sqm of wall area), in Cement mortar 1:6 (1 cement: 6 coarse sand) . | 180 | CU.M | 1411.55         | 254079.00         |
| 9.1              | 20   | Providing WOOD WORK IN FRAMES OF DOORS, WINDOWS, CLERESTORY WINDOWS and other frames, wrought framed and fixed in position, with:  |     |      |                 |                   |
| 9.1.1            | 20A  | Second class teak wood   | .5  | CU.M | 52090.00        | 26045.00          |
| 9.1.3            | 20B  | Kiln seasoned and chemically treated hollock wood  | .45 | CU.M | 31399.40        | 14129.73          |
| 9.9              | 21   | Providing and fixing GLAZED SHUTTERS FOR DOORS, WINDOWS AND CLERESTORY WINDOWS using 10 kg/sqm (4 mm thick) glass panes including necessary cleats and black enamelled ISI marked M.S butt hinges (@ 4 Nos. 100 x 58 x 1.9mm per shutter) with necessary screws etc. of thickness and wood kind:                               |     |      |                 |                   |
| 9.9.1            | 21A  | 35 mm thick, second class teak wood.   | 20  | SQ.M | 1718.30         | 34366.00          |
| 9.12             | 22   | Extra for providing frosted glass panes of 10 kg/sqm (4 mm thick) instead of ordinary glass panes of 10 kg/sqm (4 mm thick) in doors, windows & clerestory window shutters (Area of opening for glass panes excluding protion inside rebate shall be measured) :   | 10  | SQ.M | 10.45           | 104.50            |
| 9.53             | 23   | Providing 40 x 5 mm flat IRON HOLD FAST 40 cm. long including fixing to frame with 10 mm dia. bolts, nuts and  | 148 | EACH | 55.80           | 8258.70           |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-----|------|-----------------|-------------------|
|                  |      | wooden plugs and embedding in cement concrete block 30 x 10 x 15 cms. 1:3:6 mix (1 Cement: 3 coarse sand:6 graded stone aggregate 20mm nominal size)  |     |      |                 |                   |
| 9.76             | 24   | Providing and fixing bright finished BRASS 100 mm MORTICE LATCH and LOCK with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).   | 2   | EACH | 332.65          | 665.30            |
| 21.1             | 25   | Providing and fixing ANODISED ALUMINIUM WORK FOR DOORS, WINDOWS, VENTILATORS AND PARTITIONS with extruded built up standard tubular and other sections of approved make conforming to IS: 733 and IS: 1285, anodised transparent or dyed to require shade according to IS:1868(Minimum anodic coating of grade AC 15),fixed with rawl plugs and screws or with fixing clips,or with expansion hold fastners including necessary filling up of gaps at junctions, at top, bottom and sides with re- quired PVC/neoprene felt etc., Aluminium sections shall be smooth, rust free, straight, mitred & jointed mecha- nically wherever required including cleat angle (38x38x 4.8mm,35/40mm long) aluminium snap beading(Wt 175gms/m) for glazing / panelling, C.P. brass / stainless steel screws, all complete as per drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for seperately), for: |     |      |                 |                   |
| 21.1.1.2         | 25A  | For fixed portion Powder coated aluminium (minimum thickness of powder coating 50 micron).  | 10  | KG   | 306.30          | 3063.00           |
| 21.1.2.2         | 25B  | For shutters of doors, windows and ventilators including providing & fixing pivots/ hinges (4 Nos.100x  | 10  | KG   | 326.60          | 3266.00           |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
|                  |      | 75x4mm per door shut. 3 Nos.75x 63x 3.2mm per wind/vent shut.) & making provision for fixing of fittings wherever required including the cost of PVC/neoprene gasket required (fittings shall be paid for seperately).(minimum thickness of powder coating 50 micron)  |     |      |                 |                   |
| 21.3             | 26   | Providing and fixing GLAZING IN ALUMINIUM DOOR, WINDOW, VENTILATOR SHUTTERS AND PARTITIONS ETC. with PVC/neoprene gasket etc complete as per drawings and the directions of Engineer-in-charge.(Cost of aluminium snap beading shall be paid in basic item), with:   |     |      |                 |                   |
| 21.3.1           | 26A  | Glass panes of 4.0 mm thickness ( weight not less than 10.0 kg / sqm )   | 5   | SQ.M | 554.95          | 2774.75           |
| 9.20             | 27   | Providing & fixing ISI mark FLUSH DOOR SHUTTERS DECORATIVE TYPE, core of block board construction with frame of 1st class hard wood & well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters including ISI marked necessary cleats and Stainless Steel butt hinges with necessary C.P. brass screws etc., of thickness 35 MM | 18  | SQ.M | 1473.50         | 26523.00          |
| 9.40.1.1         | 28   | Providing & fixing wooden moulded beading to door and window frame with iron screws, plugs & priming coat on unexposed surfaces etc. complete, with, 50 x 12 mm, 2nd class teak wood .   | 200 | RMT  | 53.85           | 10770.00          |
| 9.48.2           | 29   | 9.48.2: Providing and fixing M.S GRILLS OF REQUIRED PATTERN IN FRAMES OF WINDOWS etc. with M.S flats, square or round bars etc. including applying a priming coat of approved (zinc chromate) steel primer etc., all   | 460 | KG.  | 64.40           | 29624.00          |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|--|-----|------|--------------|----------------|
|                  |      | complete, and Fixed to openings / wooden frames with rawl plugs screws etc. (no material will be supplied by BHEL for this item)   |     |      |              |                |
| 9.62 TO 9.6      | 30   | Providing & fixing ISI marked OXIDISED MILD STEEL FITTINGS with necessary nuts & screws etc. as required complete, of type and size:   |     |      |              |                |
| 9.62.1           | 30A  | Sliding door bolts 300 mm x 16mm   | 37  | EACH | 79.60        | 2945.20        |
| 9.63.1           | 30B  | Tower bolts black finish (barrel type) 250mm x 10mm  | 74  | EACH | 33.90        | 2508.60        |
| 9.63.3           | 30C  | Tower bolts black finish (barrel type) 150mm x 10mm  | 10  | EACH | 23.40        | 234.00         |
| 9.66.1           | 30D  | Handles (confirming to IS 4992) 125MM  | 37  | EACH | 10.20        | 377.40         |
| 9.66.2           | 30E  | Handles (confirming to IS 4992) 100MM  | 10  | EACH | 7.75         | 77.50          |
| 9.83             | 31   | Providing & fixing IS:3564 marked UNIVERSAL HYDRAULIC DOOR CLOSER with necessary accessories and screws etc. complete of:  |     |      |              |                |
| 9.83.            | 31A  | Aluminium die cast body tubular type.  | 2   | EACH | 610.60       | 1221.20        |
| 9.96 TO 9.10     | 32   | Providing & fixing ISI marked ALUMINIUM FITTINGS anodised (anodic coating not less than grade AC 10 as per IS:1868) transparent or dyed to required colour or shade with nuts and C.P. brass screws as required etc. complete, of type and size: |     |      |              |                |
| 9.96.1           | 32A  | SLIDING DOOR BOLTS: 300 x 16 mm .  | 37  | EACH | 158.50       | 5864.50        |
| 9.97.2           | 32B  | TOWER BOLTS (barrel type) 250x10 mm  | 74  | EACH | 62.20        | 4602.80        |
| 9.97.4           | 32C  | TOWER BOLTS (barrel type) 150 x 10 mm  | 10  | EACH | 42.75        | 427.50         |
| 9.100.1          | 32D  | 9.100.1: HANDLES 125 mm .  | 37  | EACH | 35.30        | 1306.10        |
| 9.100.2          | 32E  | HANDLES 100 mm .   | 10  | EACH | 35.30        | 353.00         |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY   | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|--|-------|------|--------------|----------------|
| 9.101.1          | 33   | HANGING FLOOR DOOR STOPPER: Single rubber stopper, (150 mm long)   | 37    | EACH | 19.05        | 704.85         |
| 10.2             | 34   | STRUCTURAL STEEL WORK RIVETED OR BOLTED IN BUILT UP SECTIONS, TRUSSES AND FRAMED WORK, including cutting, hoisting, fixing in position & applying a priming coat of approved (Zinc Chromate) steel primer all complete.  | 16500 | KG   | 10.70        | 176550.00      |
| 10.11            | 35   | Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators side/top/centre hung beedings and all members such as K11B and K12b etc. complete of standard rolled steel sections, joints mitred and flush butt welded and sash bars tenoned and riveted with 15 x 3 mm lugs 10 cm. long embedded in cement concrete blocks 15 x 10 x 10 cms. of 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including fixing of glass panes with glazing clips and special metal-sash putty of approved make, and a priming coat of approved steel primer excluding the cost of metal beading and other fittings except necessary hinges or pivots complete as per approved design. | 60    | KG   | 178.90       | 10734.00       |
| 10.6             | 36   | Supplying and fixing ROLLING SHUTTERS of approved make, made of required size M.S. Laths inter- locked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides (25x65mm made from 3.15mm thick M.S. sheet) and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary   |       |      |              |                |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|------|------|-----------------|-------------------|
|                  |      | 27.5cm long wire springs grade No.2 & M.S top cover of required thickness for rolling shutters, with:   |      |      |                 |                   |
| 10.6.2           | 36A  | 80x1.20 mm M.S laths with 1.20 mm thk top cover   | 15   | SQ.M | 965.35          | 14480.25          |
| 10.14            | 37   | Providing and fixing Factory made Pressed Steel Door/ Window Frames of specified type and size, manufactured from commercial mild steel sheet of specified thickness, frame edges folded by 12mm, joints metred and welded & filed smooth, fixing MS lugs 20x3mm & 20cm long embedded with cement concrete blocks 25x10x10cm of 1:3:6 (1 cement: 3 coarse sand: 6 graded stone agregate 20 mm nominal size ), filling & compacting hollow frame with cement mortar 1:6 (1 cement: 6 coarse sand), fixing required threshold/ base-tie of MS angle 25x 25x 3mm or M.S. square 12 x 12 mm (for door frame only), providing and fixing/ welding hinges as specified, making required provisions for fittings and holes for fixing grill and applying a coat of approved(zinc chromate) steel primer after pre-treatment of surface, all complete as directed by the Engineer-in-Charge; frame type |      |      |                 |                   |
|                  | 37A  | (NOTE: 1) Barrel hinges (3Nos, 100x19mm per door shutter and 2Nos, 58x16 mm per window shutter) required if steel shutter is provided, or 2) Butt hinges (4Nos, 100x58x1.9mm per door shutter) to be provided with the inside of steel door frame by making a slit in the frame) Size 105 x 60 mm (+/-1mm) made from 1.25 mm thick (18 gauge) MS sheet, with single rebate to suit the thickness of Door Shutters.  | 26   | R.M  | 271.65          | 7062.90           |
| 11.4             | 38   | 11.4: 52mm thick CEMENT CONCRETE FLOORING WITH "HARDCRETE" CONCRETE HARDENER TOPPING, under layer 40mm  | 1100 | SQ.M | 150.32          | 165347.60         |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
|                  |      | thick cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) laid after applying slurry (@ 2 kg cement/sqm) and top layer 12mm thick "HARDCRETE" concrete hardener consisting of mix 1:2 (1 cement hardener mix: 2 stone aggregate 6mm nominal size) by volume with which HARDCRETE hardening compound of Snowcem India Ltd. or equivalent is mixed @ 2 litre HARDCRETE per 50 Kg. of cement including finishing with cement slurry mixed with steel floats, rounding of edges and including providing 40 x 4mm glass strips etc. but excluding the cost of nosing of steps etc. complete. |     |      |                 |                   |
| 11.36            | 39   | Providing and fixing 1st quality ceramic tiles conforming to IS:13753 of minimum thickness 5mm of approved make in all colours, shades except begundy, bottle green, black of any size as approved by Engineer-in-charge in SKIRTING, RISERS OF STEPS, AND DADOS over 12mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete.  | 68  | SQ.M | 492.26          | 33473.98          |
| 11.37            | 40   | Providing and laying ceramic glazed FLOOR tiles 300x300mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS: 13755 of approved make in colours such as white, ivory, grey, fume red-brown, laid on 20mm thick cement mortar 1:4 (1 cement: 4 coarse sand) including pointing the joints with white cement and matching pigment etc. complete.  | 38  | SQ.M | 534.31          | 20303.95          |
| 11.6             | 41   | CEMENT PLASTER SKIRTING (upto 30 cm. height) with cement mortar 1:3 (1 cement: 3 coarse sand) finished with a  | 30  | SQ.M | 95.98           | 2879.40           |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|------|------|-----------------|-------------------|
|                  |      | floating coat of neat cement slurry (@ 2 kg cement/ sqm) including rounding of junction with floor wherever required etc., for 18 mm thick   |      |      |                 |                   |
| 12.50            | 42   | Supply and fixing of Zincolume Trapizoidal TRIMDEK Profile sheet of 1015mm effective cover width & nominal 28.5mm deep ribs with subtle square flutting in the five pan at nominal 203mm centre to centre. The end rib will be designed for anti-capillary action, to avoid any seepage of water through the lateral overlap. The feed material is manufactured out of nominal 0.50mm total coated thickness (TCT), Hi-tensile steel swithin min. 550 MPa yield strength ,metallic hot dip coated with aluminium-zinc alloy (55% aluminium , 45% zinc) as per AS 1397 - Zincolime AZ 150 (Min. 150gms/sq.mt total on both sides).The sheet shall have brand marking of the manufacturer giving product details on the back of the sheet at every 1meter c/c for confirming genuinity of the material |      |      |                 |                   |
|                  | 42A  | Fixing with necessary suitable imported galvanized carbon steel self drilling & self tapping screws if Buildex of required diameter and lenth as approved all complete with EPDM sealing washer, foam fillers wherever necessary.Fasterners & Clip should be of approved material..The measurement shall be based on actual laid area. Length of sheet will be approximately 12 M. Supply and fixing of Ridges, flashings upto 600mm girth   | 1220 | SQ.M | 440.65          | 537593.00         |
| 12.51            | 43   | Providing and fixing pre-coated galvanized steel sheet roofing accessories 0.50mm +/- 5% total coated thickness (TCT) thick zinc coating 120 gsm as per IS 277 in 240 mpa steel grade, 5-7 microns epoxy primer on both sides of the sheet and polyster  |      |      |                 |                   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-----|------|-----------------|-------------------|
|                  |      | top coat 15-18 microns using self drilling / self tapping screws or with polymer coated J or L hooks, bolts and nuts and or G.I. seam bolts and nuts, G.I. plain and bitumen washers complete.  |     |      |                 |                   |
| 12.51.1          | 43A  | Ridges plain (500 - 600mm)  | 30  | R.M. | 458.15          | 13744.50          |
| 12.51.2          | 43B  | Flashings/Aprons (Up to 600mm)  | 30  | R.M. | 448.15          | 13444.50          |
| 12.51.4          | 43C  | Barge board (up to 300 mm)  | 20  | R.M. | 416.90          | 8338.00           |
| 12.37            | 44   | Providing and fixing M.S HOLDER BAT CLAMPS of approved design to CI/ SCI/ PVC rain water pipes embedded in and including cement concrete blocks 10x10x 10 cm. of 1:2:4 (1 cement: 2 coarse sand:4 graded stone aggregate 20 mm nominal size) and cost of cutting holes and making good the walls etc. 100 mm  | 5   | EACH | 65.35           | 326.75            |
| 12.40            | 45   | Providing and fixing on wall face RIGID UNPLASTICISED PVC RAIN WATER PIPES (working pressure 4 kg / sqcm) conforming to IS:13592 including jointing with 'T'shaped seal ring conforming to IS:5382 leaving 10mm gap for thermal expansion. Single socketed pipes, of OUTER DIA.:  |     |      |                 |                   |
| 12.40.2          | 45A  | 110 mm diameter   | 12  | R.M. | 163.40          | 1960.80           |
| 12.42            | 46   | Providing and fixing on wall face RIGID UNPLASTICISED P.V.C. MOULDED FITTINGS / ACCESSORIES ( working preasure 4 kg / sqcm. and wall thickness same as of main pipe) for unplasticised PVC RAIN WATER PIPES conforming to IS:13592 including jointing with seal ring conforming to IS:5382 leaving 10 mm gap for termal exp- ansion, of type and dia:<br>(NOTE:i)concealed pipe joints to be jointed with rubber ring and solvent cement (ii) exposed pipe joints to be jointed with rubber ring and rubber |     |      |                 |                   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|------|------|-----------------|-------------------|
|                  |      | lubricant) .   |      |      |                 |                   |
| 12.42.1.2        | 46A  | Coupler for 110mm dia  | 1    | EACH | 101.65          | 101.65            |
| 12.42.5.2        | 46B  | Bend 87 degree for 110mm dia   | 4    | EACH | 134.20          | 536.80            |
| 12.42.6.2        | 46C  | Plain shoe   | 4    | EACH | 263.10          | 1052.40           |
| 13.37.1          | 47   | Providing WHITE WASHING with LIME to given an even shade on new work (three or more coats) .   | 1000 | SQ.M | 6.75            | 6750.00           |
| 13.41.1          | 48   | Providing DISTEMPERING with OIL BOUND WASHABLE DISTEMPER of approved brand and manufacture to give an even shade on new work (two or more coats) over and including priming coat with cement primer .                                | 100  | SQ.M | 41.55           | 4155.00           |
| 13.62.1          | 49   | Providing and Painting with SYNTHETIC ENAMEL PAINT of approved brand and manufacture to give an even shade two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture. | 200  | SQ.M | 51.30           | 10260.00          |
| 13.69.1          | 50   | POLISHING ON WOOD WORK with ready made wax polish of approved brand and manufacture on new work.   | 46   | SQ.M | 35.80           | 1646.80           |
| 13.1.2           | 51   | Providing 12mm thick CEMENT PLASTER (including providing necessary plaster grooves wherever required), of mix 1:6 (1 cement: 6 fine sand)  | 200  | SQ.M | 49.00           | 9800.40           |
| 13.2             | 52   | Providing 15mm thick CEMENT PLASTER (including providing necessary plaster grooves wherever required and for all exterior height) on rough side of single or half brick wall, of mix:  |      |      |                 |                   |
| 13.2.1           | 52A  | 1:6 (1 cement: 6 fine sand)  | 10   | SQ.M | 56.47           | 564.73            |
| 13.2.2           | 52B  | 1:4 (1 cement: 4 coarse sand)  | 850  | SQ.M | 56.28           | 47834.60          |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|---|-----|------|--------------|----------------|
| 13.3.1           | 53   | Providing 20mm thick CEMENT PLASTER finished with a floating coat of neat cement.<br>1:4 (1 cement: 4 fine sand)  | 50  | SQ.M | 66.37        | 3318.41        |
| 13.33.1          | 54   | POINTING on STONE WORK with cement mortar 1:3 (1 cement: 3 fine sand), type:<br>Ruled pointing  | 48  | SQ.M | 56.44        | 2709.09        |
| 13.46.1          | 55   | Finishing wall with Acrylic Smooth exterior paint of required shade NEW WORK (two or more coats applied @ 1.67 ltr/10 sqm) over and including base coat of water proofing cement applied @ 2.2 kg/10 sqm.   | 700 | SQ.M | 50.40        | 35280.00       |
| 17.31            | 56   | Providing and fixing, 600 x 450 mm, BEVELLED EDGE MIRROR of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with CP brass screws & washers complete. (NOTE: Mirror centre ht.from fl.lvl: 145-150 cm in gen) | 4   | EACH | 493.65       | 1974.60        |
| 17.33            | 57   | Providing & fixing 600x 120x 5 mm GLASS SHELF with edges rounded off supported on anodised aluminium angle frame with CP brass brackets and guard rail fixed with 40 mm long screws, rawl plugs etc. complete .   | 4   | EACH | 218.80       | 875.20         |
| 17.60            | 58   | Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors with Sand cast iron S&S as per IS:3989.                                    | 7   | EACH | 544.30       | 3810.10        |
| 17.1             | 59   | Providing & fixing WATER CLOSET SQUATTING PAN (INDIAN TYPE W.C PAN) with 100mm SCI or UPVC (as required) P or S trap, 10 litre low level white PVC flushing cistern with manually controlled device (handle lever)  | 2   | EACH | 2278.75      | 4557.50        |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-----|------|-----------------|-------------------|
|                  |      | conforming to IS 7231, Parryware / Hindware / Seabird / Orietn (Coral) with all fittings and fixtures complete including cutting and making good the walls and floors wherever required, of type: (NOTE: Ht bet pan top & cistrn underside to be 60-65cm) White Vitreous China Orissa pattern W.C pan of size 580 x 440 mm with integral type foot rests.   |     |      |                 |                   |
| 17.4.1           | 60   | Providing and fixing WHITE VITREOUS CHINA FLAT BACK OR WALL CORNER TYPE LIPPED FRONT URINAL BASIN of 430 x 260 x 350 mm and 340 x 410 x 265 mm sizes, respectively with automatic flushing cistern (of approved make and conforming to IS:7231) with standard flush pipe and C.P. brass spreaders with brass unions & G.I. clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required, with: (NOTE: Ht. of urinal dip top from standing level-65cm) One urinal basin with 5 litre PVC automatic flushing cistern Parryware/ Hindware/ Seabird/ Orient (Coral) | 6   | EACH | 2005.75         | 12034.50          |
| 17.7.2           | 61   | Providing & fixing WASH BASIN with C.I/M.S brackets, 15mm C.P brass pillar taps, Kingston/ Gem/ Techno/ Parko, 32mm C.P brass waste of standard pattern including painting of fittings and brackets, cutting and making good the walls, wherever required, of type: (NOTE: Ht. of basin rim from floor level to be 75-80cm) White Vitreous China wash basin size 630x 450 mm with a SINGLE 15 mm C.P brass pillar taps.   | 4   | EACH | 1188.75         | 4755.00           |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|---|-----|------|--------------|----------------|
| 17.28.2.1        | 62   | Providing & fixing PVC WASTE PIPE (Min.length 70 cm.) for SINK OR WASH BASIN including PVC waste fittings complete, of type Flexible pipe, 32 mm dia.   | 2   | EACH | 46.80        | 93.60          |
| 18.10            | 63   | Providing and fixing GI PIPES complete with GI fittings and clamps, including cutting and making good the walls etc; pipe of nominal bore of: (INTERNAL WORK) (Note: Allowed Variation applicable to indicated wt.) |     |      |              |                |
| 18.10.1          | 63A  | 15mm dia nominal size   | 2   | R.M. | 105.85       | 211.70         |
| 18.10.2          | 63B  | 20mm nominal size   | 2   | R.M. | 133.85       | 267.70         |
| 18.15.1          | 64   | Providing and fixing BRASS BIB COCK of approved quality; of nominal bore of: (NOTE: Outlet to be around 150 mm from wall face) 15 mm dia. (Min wt 400 grms)   | 6   | EACH | 191.70       | 1150.20        |
| 18.16.1          | 65   | Providing & fixing BRASS STOP COCK of approved quality; of nominal bore of: 15 mm dia. nominal bore   | 5   | EACH | 191.70       | 958.50         |
| 18.17.1          | 66   | Providing & fixing BRASS GATE VALVE OR FULL WAY VALVE with CI wheel of approved quality (screwed end); of nominal bore of:25 mm dia. (Wt 1077 gm +/-5%)   | 2   | EACH | 285.50       | 571.00         |
| 18.64            | 67   | Providing and fixing PTMT SWIVELLING SHOWER ROSE with 15 nominal bore weight not less than 40 gms.  | 2   | EACH | 101.95       | 203.90         |
| 19.1             | 68   | Providing, laying & jointing GLAZED STONEWARE PIPES of GRADE "A" with stiff mixture of cement mortar in the proportion of 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete, of: .              |     |      |              |                |
| 19.1.2           | 68A  | 150 mm dia (with gradient 1:100 in general)   | 50  | R.M. | 134.92       | 6745.93        |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-----|------|-----------------|-------------------|
| 19.4             | 69   | Providing and fixing SQUARE MOUTH S.W GULLY TRAP GRADE "A" COMPLETE WITH CI GRATING brick masonry chamber with bricks of specified class designation in cement mortar 1:4 (1 cement: 4 coarse sand) embedded in CC 1:5:10 plastering 12mm thk with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement etc and water tight CI cover with frame of 300 x 300mm size (inside), the weight of cover to be not less than 4.5 kg. and frame to be not less than 2.70 kg as per standard design; with FPS bricks and of size and type :  |     |      |                 |                   |
| 19.4.2.1         | 69A  | 150 x 100 mm size, P type with FPS bricks of class designation 75   | 3   | EACH | 827.27          | 2481.81           |
| 19.30            | 70   | Constructing BRICK MASONRY CHAMBER FOR UNDERGROUND CI INSPECTION CHAMBER AND BENDS with 75 class designation bricks in cement mortar 1:5 (1 cement: 5 fine sand) CI cover with frame (light duty) 455 x 610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) RCC top slab with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate of 20 mm nominal size) foundation concrete 1:5:10 ( 1 cement:5 fine sand:10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc.complete as per standard design, of: |     |      |                 |                   |
| 19.30.2.2.1      | 70A  | Inside dimension 500 x 700 mm & 45 cm. deep for pipe line with one or two inlets: with FPS bricks.  | 2   | EACH | 3062.59         | 6125.18           |
| 1.1.1            | 71   | Carriage of materials by mechanical transport including loading, unloading, spreading, levelling etc.   | 120 | CU.M | 56.00           | 6720.00           |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF NEW FLOW MODEL LAB NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE    |   | AMOUNT   |   |
|------------------|------|--|-----|------|---------|---|----------|---|
|                  |      |  |     |      | RS      | P | RS       | P |
|                  |      | upto a distance of 2 K.M.  |     |      |         |   |          |   |
| 5.37             | 72   | Providing and laying in position readymixed concrete manufactured in fully automatic batching plant and transported to site of work in transit mixer for a lead upto a10 KMs having continuous agitated mixer, manufactured as per mix designs of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centring, shuttering finishing and reinforcement including cost of 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 the Engineer-in-charge, M-25 grade reinforced cement concrete byusing 410 Kg. of cement per cum of concrete. All works upto floor V level. (The basic cost of cement is considered as Rs.5175 per M.T. and the variation in cement price excess / less by 10% will be reimbursed / recovered provided the variation is within the contract period specified). No free issue. | 10  | CU.M | 4356.50 |   | 43565.00 |   |
| 5.38             | 73   | Extra for carriage of R.M.C. beyond the initial lead of 10 K.M.  | 10  | CU.M | 20.00   |   | 200.00   |   |

TOTAL ESTIMATED VALUE 3364345.47

CONTRACTOR TENDER PERCENTAGE @ ABOVE / BELOW / AT PAR \_\_\_\_\_%

(Percentage in words )

TOTAL VALUE OF WORK

=====

=====

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR CONSTRUCTION OF STORE SHED FOR BOUGHT OUT ITEMS IN FACT****ESTIMATE REF NO : CF/CA/12**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
| 2.8.1            | 01   | Earth work in EXCAVATION by mechanical means (Hydraulic excavator) / manual means IN FOUNDATION TRENCHES OR DRAINS ( not exceeding 1.5 m in width or 10 sqm on - plan) including dressing of sides & ramming of bottoms, lift upto 1.5m,including getting out the excavated soil and disposal of surplus excavated soil as directed,with in a lead of 50 m IN ALL KINDS OF SOIL. | 300 | CU.M | 103.40          | 31020.00          |
| 2.25             | 02   | FILLING AVAILABLE EXCAVATED EARTH (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth; consolidating each deposited layer by ramming and watering, lead upto 50 M and lift upto 1.5 M.  | 245 | CU.M | 45.70           | 11196.50          |
| 2.27             | 03   | Supplying and FILLING IN PLINTH WITH RIVER SAND under floors including watering, ramming, consolidating and dressing complete.   | 85  | CU.M | 301.50          | 25627.50          |
| 2.28             | 04   | SURFACE DRESSING OF THE GROUND including removing vegetation and inequalities not exceeding 15cm deep and disposal of rubbish, lead upto 50 M and lift upto 1.5 M IN ALL KINDS OF SOIL.  | 100 | SQ.M | 5.12            | 512.00            |
| 2.9              | 05   | Earth work excavation by mechanical means (Hydraulic excavator) / manual means IN FOUNDATION TRENCHES OR DRAINS ( not exceeding 1.5 m in width or 10 sqm on plan ) including dressing of sides and ramming of bottoms,lift upto 1.5 m,including getting out the excavated soil and disposal of surplus excavated soils as directed within a lead of 50 M, in: ORDINARY ROCK      | 190 | CU.M | 162.65          | 30903.50          |
| 4.10             | 06   | Providing and laying DAMP PROOF COURSE 40mm thick with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 12.5 mm nominal size)  | 85  | SQ.M | 76.81           | 6528.85           |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR CONSTRUCTION OF STORE SHED FOR BOUGHT OUT ITEMS IN FACT**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE    |   | AMOUNT    |   |
|------------------|------|--|-----|------|---------|---|-----------|---|
|                  |      |  |     |      | RS      | P | RS        | P |
| 4.1              | 07   | Providing and laying in position<br>CEMENT CONCRETE of specified grade<br>excluding the cost of centring and<br>shuttering for ALL WORKS UPTO PLINTH<br>LEVEL, with:   |     |      |         |   |           |   |
| 4.1.9            | 07A  | CC 1:4:8 (1 cement: 4 fine sand: 8<br>graded stone aggregate 40 mm nominal<br>size)  | 125 | CU.M | 1415.55 |   | 176943.75 |   |
| 5.33             | 08   | Providing and laying in position<br>machine batched, machine mixed and<br>machine vibrated design mix cement<br>concrete of specified grade for<br>reinforced cement concrete work<br>including pumping of concrete to site<br>of laying but excluding the cost of<br>centring, shuttering, finishing and<br>reinforcements including Admixtures in<br>recommended proportions (as per IS<br>9103) to accelerate, retard setting of<br>concrete improve workability without<br>impairing strength and durability as<br>per direction of Engineer-in-charge<br>for M-25 grade reinforced cement<br>concrete, etc. all work upto floor V<br>level. | 40  | CU.M | 2023.60 |   | 80944.00  |   |
| 5.1              | 09   | Providing and laying in position<br>specified grade of REINFORCED CEMENT<br>CONCRETE excluding the cost of<br>centring, shuttering, finishing and<br>reinforcement:- ALL WORK UPTO PLINTH<br>LEVEL, for grade of: .  |     |      |         |   |           |   |
| 5.1.2            | 09A  | RCC 1:1.5:3 (1 cement: 1.5 coarse<br>sand: 3 graded stone aggregate 20 mm<br>nominal size)   | 10  | CU.M | 1660.00 |   | 16600.00  |   |
| 5.1.3            | 09B  | RCC 1:2:4 (1 cement: 2 coarse sand: 4<br>graded stone aggregate 20 mm nominal<br>size)   | 125 | CU.M | 1702.00 |   | 212750.00 |   |
| 5.9              | 10   | CENTRING and SHUTTERING including<br>strutting, propping etc and removal of<br>form in all floors; for: .  |     |      |         |   |           |   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR CONSTRUCTION OF STORE SHED FOR BOUGHT OUT ITEMS IN FACT**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-----|------|-----------------|-------------------|
| 5.9.1            | 10A  | Foundations, footings, bases of columns etc. for mass concrete.   | 100 | SQ.M | 119.25          | 11925.00          |
| 5.9.3            | 10B  | Suspended floors, roofs, landings, balconies, loft and access platform etc. (Upto 3.5m floor height). (NOTE:- Floor height to be taken from finished floor level to finished slab bottom).  | 145 | SQ.M | 187.35          | 27165.75          |
| 5.9.5            | 10C  | Lintels, beams, plinth beams, girders, bressummers and cantilevers. (Upto 3.5m floor height). (NOTE:- Floor height to be taken from finished floor level to finished beam bottom).  | 665 | SQ.M | 162.65          | 108162.25         |
| 5.9.6            | 10D  | Columns, pillars, piers, abutments, posts & struts  | 375 | SQ.M | 238.40          | 89400.00          |
| 5.11.1           | 11   | Extra for additional height in centring, shutt- ering wherever required with adequate bracing, propping etc. including cost of de- shuttering and decentring at all levels, for suspended floors, roofs, landing, beams and balconies; for: (NOTE: Plan area to be measured) (NOTE:- Floor height to be taken from finished floor level to finished slab/ beam bottom). Suspended floors, roofs, landing, beams and balconies (Plan area to be measured). | 500 | SQ.M | 106.20          | 53100.00          |
| 5.18             | 12   | Providing PRECAST CEMENT CONCRETE JALLI in 1:2:4 (1 cement: 2 coarse sand: 4 stone aggregate 6 mm nominal size) reinforced with 1.6mm dia mild steel wire including centring and shuttering, roughening, cleaning fixing & finishing in cement mortar 1:3(1 cement:3 fine sand) etc. complete excluding plastering of the jambs, sills and soffits ; of:  |     |      |                 |                   |
| 5.18.1           | 12A  | 50 MM thick   | 25  | SQ.M | 350.70          | 8767.62           |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR CONSTRUCTION OF STORE SHED FOR BOUGHT OUT ITEMS IN FACT**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY   | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-------|------|-----------------|-------------------|
| 5.22             | 13   | REINFORCEMENT FOR RCC WORK including straightening, cutting, bending, placing in position and binding all complete at all levels, with: .  |       |      |                 |                   |
| 5.22.3           | 13A  | Cold twisted bars / HYSD bars etc. .   | 21000 | KG.  | 6.19            | 129990.00         |
| 6.1              | 14   | Brick work with FPS BRICKS OF CLASS DESIGNATION 75 IN FOUNDATION AND PLINTH, in:   |       |      |                 |                   |
| 6.1.2            | 14A  | Cement mortar 1:6 (1 cement: 6 fine sand)  | 10    | CU.M | 1798.00         | 17980.00          |
| 6.5              | 15   | Brick work with FPS BRICKS OF CLASS DESIGNATION 75 in super structure above plinth level up to floor V level in all shapes and sizes in:   |       |      |                 |                   |
| 6.4.2            | 15A  | Cement mortar 1:6 (1 cement: 6 fine sand)  | 470   | CU.M | 2033.65         | 955815.50         |
| 7.1              | 16   | RANDOM RUBBLE MASONRY with hard stone in FOUNDATION and PLINTH including levelling up with cement concrete 1:6:12 (1 cement: 6 coarse sand: 12 graded stone aggregate 20 mm nominal size) at plinth level, (with bond/through stones atleast 1 No. per 0.5 sqm of wall area), in :   |       |      |                 |                   |
| 7.1.1            | 16A  | Cement mortar 1:6 (1 cement: 6 coarse sand) .  | 120   | CU.M | 1411.55         | 169386.00         |
| 10.6             | 17   | Supplying and fixing ROLLING SHUTTERS of approved make, made of required size M.S. Laths inter- locked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides (25x65mm made from 3.15mm thick M.S. sheet) and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5cm long wire springs grade No.2 & M.S top cover of required thickness |       |      |                 |                   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR CONSTRUCTION OF STORE SHED FOR BOUGHT OUT ITEMS IN FACT**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
|                  |      | for rolling shutters, with:  |     |      |                 |                   |
| 10.6.1           | 17A  | 80x1.25 mm M.S laths with 1.25 mm thk top cover  | 62  | SQ.M | 1208.45         | 74923.90          |
| 10.8.2           | 17B  | Extra for providing mechanical devise chain and carank operation for operating rolling shutters Exceeding 16.80 Sq.m.  | 62  | SQ.M | 538.40          | 33380.80          |
| 10.11            | 18   | Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators side/ top/ centre hung with beading and all members such as K11 and K12B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and rivted with 15 x 3 mm lugs, 10 cms. long, embedded in cement concrete blocks 15 x 10 x 10 cms. of 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required |     |      |                 |                   |
| 10.11            | 18A  | including providing and fixing of glass panes (4 mm thick) with glazing clips and special metal sash putty of approved make complete including applying a priming coat of approved (Zinc Chromate) steel primer, excluding the cost of metal beading and other fitting except necessary hinges or pivots as required etc. for:   | 35  | KG.  | 178.90          | 6261.50           |
| 11.4             | 19   | 52mm thick CEMENT CONCRETE FLOORING WITH "HARDCRETE" CONCRETE HARDENER TOPPING, under layer 40mm thick cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) and top layer 12mm thick "HARDCRETE" concrete hardener consisting of mix 1:2 (1 cement hardener mix: 2 stone aggregate 6mm nominal size) by volume with which HARDCRETE hardening compound is mixed @ 2 litre HARDCRETE per 50 Kg. of  | 835 | SQ.M | 166.89          | 139354.82         |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR CONSTRUCTION OF STORE SHED FOR BOUGHT OUT ITEMS IN FACT**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|------|------|-----------------|-------------------|
|                  |      | cement or as per manufacturers specifications. This includes cost of cement slurry, but excluding the cost of nosing steps etc.complete.  |      |      |                 |                   |
| 13.37.1          | 20   | Providing WHITE WASHING with LIME to given an even shade on new work (three or more coats) .  | 2820 | SQ.M | 6.75            | 19035.00          |
| 13.62.1          | 21   | Providing and Painting with SYNTHETIC ENAMEL PAINT of approved brand and manufacture to give an even shade two or more coats on new work.   | 300  | SQ.M | 51.30           | 15390.00          |
| 13.1             | 22   | Providing 12mm thick CEMENT PLASTER (including providing necessary plaster grooves wherever required), of mix:  |      |      |                 |                   |
| 13.1.2           | 22A  | 1:6 (1 cement: 6 fine sand)   | 2850 | SQ.M | 49.00           | 139655.70         |
| 13.63.1          | 23   | Providing and Painting with ALUMINIUM PAINT of approved brand and manufacture to give an even shade for two or more coats on new work.  | 1050 | SQ.M | 28.60           | 30030.00          |
| 13.2             | 24   | Providing 15mm thick CEMENT PLASTER (including providing necessary plaster grooves wherever required and for all exterior height) on rough side of single or half brick wall, of mix: 1:6 (1 cement: 6 fine sand) | 2820 | SQ.M | 56.28           | 158698.32         |
| 13.46            | 25   | Finishing wall with Acrylic Smooth exterior paint of required sade for NEW WORK (two or more coats applied @ 1.67 ltr/10 sqm) over and including base coat of water proofing cement applied @ 2.2 kg/10 sqm.      | 2820 | SQ.M | 50.40           | 142128.00         |
| 15.3             | 26   | DEMOLISHING RCC WORK manually/ by mechanical means including stacking of steel bars and disposal of unserviceable materials within 50 m lead.   | 5    | CU.M | 537.55          | 2687.75           |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR CONSTRUCTION OF STORE SHED FOR BOUGHT OUT ITEMS IN FACT**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY  | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|---|------|------|--------------|----------------|
| 15.7.4           | 27   | DEMOLISHING BRICK WORK manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable materials within 50 m lead, in cement mortar .  | 10   | CU.M | 310.75       | 3107.50        |
| 15.2.2           | 28   | DEMOLISHING CEMENT CONCRETE manually/ by mechanical means including disposal of material within 50 meters lead: 1:4:8 or leaner mix.  | 5    | CU.M | 226.90       | 1134.50        |
| 15.17.1          | 29   | Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in: R.S. Joists   | 3000 | KG.  | 0.50         | 1500.00        |
| 15.28            | 30   | Dismantling roofing including ridges, hips valleys and gutters etc. and stacking the material within 50 metre lead of   |      |      |              |                |
| 15.28.2          | 30A  | Asbestos cement sheets  | 50   | SQ.M | 11.75        | 587.50         |
| 1.1.1            | 31   | Carriage of materials by mechanical means including loading, leading, unloading, stacking spreading etc. such as lime, murrum, building rubbish. upto 2.00 K.M.   | 100  | CU.M | 56.41        | 5641.00        |
| 5.37             | 32   | Providing and laying in position of ready mixed concrete manufactured in fully automatic batching plant and transported to site of work in transit mixer for a lead up to 10 KMS having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from tansit mixer to site of laying, excluding the cost of centring, shuttering finishing and reinforcement including cost of admintures in recommended proportions as per IS:9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per direction of the engineer in charge. M25 grade | 100  | CU.M | 4356.50      | 435650.00      |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR CONSTRUCTION OF STORE SHED FOR BOUGHT OUT ITEMS IN FACT**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-----|------|-----------------|-------------------|
|                  |      | reinforced cement concrete by using 410 Kg of cement per CUM of concrete. All works up to floor V level. (The basic cost of cement considered is Rs. 5175 / M.T. and the variation in cement price excess or less by 10% will be reimbursed / recovered, provided the variation is within the contract period specified in the contract). |     |      |                 |                   |
| 5.38             | 33   | Extra for carriage of R.M.C. beyond the initial lead of 10 K.M.   | 100 | CU.M | 20.00           | 2000.00           |

TOTAL ESTIMATED VALUE 3375884.51

CONTRACTOR TENDER PERCENTAGE @ ABOVE / BELOW / AT PAR \_\_\_\_\_%

(Percentage in words )

TOTAL VALUE OF WORK

=====

=====

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : PART I: STRUCTURAL WORKS FOR CONSTRUCTUON OF STORES SHED FOR BOUGHT (****ESTIMATE REF NO : CF/CA/05**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY   | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-------|------|-----------------|-------------------|
| 10.2             | 01   | Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.   | 60000 | KG.  | 10.70           | 642000.00         |
| 12.50            | 02   | Supply & Installation of precoated galvanized iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm +/- 5% total coated thickness (TCT) thick Zinc coating 120 gsm as per IS: 277 in 240 mpa steel grade, 5-7 microns epoxy primer on both sield of the sheet and polyester top coat 15-18 microns Sheet should have protective guard film of 25 microns minimum to avoid scratches while transportation and should be supplied in single length upto 12 metres or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling / self tapping screws of size (5.5 x 55mm) with EPDM seal or with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead complete upto any pitch in horizontal/vertical or curved surfaces excluding the cost of purlins, rafgters and trusses and including cutting to size and shape wherever required. | 1000  | SQ.M | 440.65          | 440650.00         |
| 12.51.1/.2       | 03   | Providing and fixing precoatedgalvanized steel sheet roofing accessories 0.50 mm +/- 5% total coated thickness (TCT) thick Zinc coating 120 gsm as per IS:277 in 240 mpa steel grade, 5-7 microns epoxy coating on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws or with polymer coated J or L hooks, bolts and nuts and or G.I. seam bolts and nuts, G.I. plain and bitumen washers complete Ridges/Flashings upto 600 mm   | 50    | RMT  | 453.15          | 22657.50          |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : PART I: STRUCTURAL WORKS FOR CONSTRUCTION OF STORES SHED FOR BOUGHT (**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY  | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|--|------|------|--------------|----------------|
| 13.63.1          | 04   | Painting with aluminium paint of approved brand and manufacture to give an even shade. TWO OR MORE COATS on new work. (for structural steel of average area of 26.18 sq.m/m.t.)        | 1600 | SQ.M | 28.60        | 45760.00       |
| 13.62.1          | 05   | Painting with Synthetic enamel paint of approved brand and manufacture to give an even shade. TWO OR MORE COATS on new work. (for structural steel of average area of 26.18 sq.m/m.t.) | 300  | SQ.M | 51.30        | 15390.00       |

TOTAL ESTIMATED VALUE 1166457.50

CONTRACTOR TENDER PERCENTAGE @ ABOVE / BELOW / AT PAR \_\_\_\_\_%

(Percentage in words )

TOTAL VALUE OF WORK

=====

=====

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR ROLL FORMING BAY NEAR SHOT BLASTING ROOM IN FACTORY****ESTIMATE REF NO : CF/CA/09**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|------|------|-----------------|-------------------|
| 2.6.1            | 01   | Earth work in EXCAVATION by mechanical means (Hydraulic excavator) / manual means OVER AREAS (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5 m, disposed earth to be levelled & neatly dressed IN ALL KINDS OF SOIL.  | 2025 | CU.M | 101.85          | 206246.25         |
| 2.8.1            | 02   | Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains ( not exceeding 1.5 m in width or 10 sqm on - plan) including dressing of sides & ramming of bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, with in a lead of 50 m IN ALL KINDS OF SOIL. | 210  | CU.M | 103.40          | 21714.00          |
| 2.25             | 03   | FILLING AVAILABLE EXCAVATED EARTH (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth; consolidating each deposited layer by ramming and watering, lead upto 50 M and lift upto 1.5 M.  | 2250 | CU.M | 45.70           | 102825.00         |
| 2.27             | 04   | Supplying and FILLING IN PLINTH WITH RIVER SAND under floors including watering, ramming, consolidating and dressing complete.   | 1020 | CU.M | 301.50          | 307530.00         |
| 2.7.1            | 05   | Earth work in excavation over areas (exceeding 30 cm in depth, 1.50m in width as well as 10 sq.m on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed (IN ORDINARY ROCK):  | 800  | CU.M | 152.60          | 122080.00         |
| 2.11             | 06   | Extra for excavating trenches for pipes, cables etc. in all kinds of soil for depth exceeding 1.50m, but not exceeding 3.00m. (Rate is over corresponding basic item for depth   | 1925 | CU.M | 135.46          | 260760.50         |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR ROLL FORMING BAY NEAR SHOT BLASTING ROOM IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY  | UNIT | RATE    |   | AMOUNT     |   |
|------------------|------|--|------|------|---------|---|------------|---|
|                  |      |  |      |      | RS      | P | RS         | P |
|                  |      | upto 1.50m).   |      |      |         |   |            |   |
| 2.12             | 07   | Extra for excavating trenches for pipes, cables, etc., in all kinds of soil for a depth exceeding 3m in depth, but not exceeding 4.5m. (Rate is over corresponding basic item for depth upto 1.50 metre).  | 1390 | CU.M | 346.29  |   | 481343.10  |   |
| 2.14             | 08   | Extra for excavating trenches for pipes, cables etc. in ordinary/hard rock exceeding 1.50m in depth but not exceeding 3.00m. (Rate is over corresponding basic item for depth upto 1.50 metre).  | 800  | CU.M | 167.86  |   | 134288.00  |   |
| 4.11             | 09   | Providing and laying DAMP PROOF COURSE 50MM thick with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)  | 225  | SQ.M | 95.17   |   | 21413.25   |   |
| 4.1              | 10   | Providing and laying in position CEMENT CONCRETE of specified grade excluding the cost of centring and shuttering for ALL WORKS UPTO PLINTH LEVEL, with:   |      |      |         |   |            |   |
| 4.1.9            | 10A  | CC 1:4:8 (1 cement: 4 coarse sand: 8 graded stone aggregate 40 mm nominal size)  | 2430 | CU.M | 1415.55 |   | 3439786.50 |   |
| 5.37             | 11   | Providing & laying in position ready mixed concrete manufactured in fully automatic batching plant and transported to site of work in transit mixer for a lead up to 20 Kms. having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixture for laying but excluding the cost of centring, shuttering, finishing and reinforcements including Admixtures in recommended proportions (as per IS 9103) to accelerate, retard setting of concrete improve workability without imparing strength and durability as per direction of Engineer-in-charge | 50   | CU.M | 4356.50 |   | 217825.00  |   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR ROLL FORMING BAY NEAR SHOT BLASTING ROOM IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY  | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|--|------|------|--------------|----------------|
|                  |      | for M-25 grade reinforced cement concrete by using 410 Kg. of cement per CUM of concrete. All work upto plinth level. No cement will be issued free of cost for this item. (The basic cost of cement is considered is Rs. 245 per bag and price variation beyond 10% shall be reimbursed at actuals).  |      |      |              |                |
| 5.1              | 12   | Providing and laying in position specified grade of REINFORCED CEMENT CONCRETE excluding the cost of centring, shuttering, finishing and reinforcement:- ALL WORK UPTO PLINTH LEVEL, for grade of: .   |      |      |              |                |
| 5.1              | 12A  | RCC 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)   | 1020 | CU.M | 1702.00      | 1736040.00     |
| 5.9              | 13   | CENTRING and SHUTTERING including strutting, propping etc and removal of form in all floors; for: .  |      |      |              |                |
| 5.9.1            | 13A  | Foundations, footings, bases of columns Pockets etc. for mass concrete.  | 1300 | SQ.M | 119.25       | 155025.00      |
| AGT. 19/200'     | 13B  | for pockets  | 40   | SQ.M | 547.00       | 21880.00       |
| 5.12             | 14   | Providing, hoisting & fixing PRECAST REINFORCED CEMENT CONCRETE WORK IN STRING COURSES, BANDS, COPINGS, BED PLATES, ANCHOR BLOCKS, PLAIN WINDOW SILLS AND THE LIKE including the cost of required centring, shuttering, finishing smooth with 6 mm thick cement plaster 1:3 (1 cement:3 fine sand) on exposed surfaces complete but excluding cost of reinforcement with 1:2:4 (1 cement: 2 coarse sand:4 graded stone aggregate 20mm nominal size) ; at levels: (NOTE: Floor one level corresponds to plinth level) . | 24   | CU.M | 2913.85      | 69932.40       |
| 5.22             | 15   | REINFORCEMENT FOR RCC WORK including straightening, cutting, bending,  |      |      |              |                |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR ROLL FORMING BAY NEAR SHOT BLASTING ROOM IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY   | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-------|------|-----------------|-------------------|
|                  |      | placing in position and binding all complete at all levels, with: .   |       |      |                 |                   |
| 5.22.3           | 15A  | Cold twisted bars / HYSD bars etc. .  | 75200 | KG.  | 6.19            | 465488.00         |
| 6.1.2            | 16   | Brick work with FPS BRICKS OF CLASS DESIGNATION 75 IN FOUNDATION AND PLINTH, in Cement mortar 1:6 (1 cement: 6 fine sand).  | 450   | CU.M | 1798.00         | 809100.00         |
| 6.5              | 17   | Extra for brick work in superstructure above floor V level for each four floors or part thereof by mechanical means by lifting material using mobile crane.   | 450   | CU.M | 190.00          | 85500.00          |
| 7.1              | 18   | RANDOM RUBBLE MASONRY with hard stone in FOUNDATION and PLINTH including levelling up with cement concrete 1:6:12 (1 cement: 6 coarse sand: 12 graded stone aggregate 20 mm nominal size) at plinth level, (with bond/through stones atleast 1 No. per 0.5 sqm of wall area), in :  | 310   | CU.M | 1411.55         | 437580.50         |
| 11.4             | 19   | 52mm thick CEMENT CONCRETE FLOORING WITH "HARDCRETE" CONCRETE HARDENER TOPPING, under layer 40mm thick cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) laid after applying slurry (@ 2 kg cement/sqm) and top layer 12mm thick "HARDCRETE" concrete hardener consisting of mix 1:2 (1 cement hardener mix: 2 stone aggregate 6mm nominal size) by volume with which HARDCRETE hardening compound of Snowcem India Ltd. or equivalent is mixed @ 2 litre HARDCRETE per 50 Kg. of cement including finishing with cement slurry mixed with steel floats, rounding of edges and including providing 40 x 4mm glass strips etc. but excluding the cost of nosing of steps etc. complete. | 6800  | SQ.M | 166.89          | 1134865.60        |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR ROLL FORMING BAY NEAR SHOT BLASTING ROOM IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY  | UNIT | RATE<br>RS | AMOUNT<br>RS |
|------------------|------|---|------|------|------------|--------------|
| 13.37.1          | 20   | Providing WHITE WASHING with LIME to given an even shade on new work (three or more coats) .  | 2250 | SQ.M | 6.75       | 15187.50     |
| 13.1.2           | 21   | Providing 12mm thick CEMENT PLASTER (including providing necessary plaster grooves wherever required), of mix 1:6 (1 cement: 6 fine sand)   | 3800 | SQ.M | 49.00      | 186207.60    |
| 13.46            | 22   | Finishing wall with Acrylic Smooth exterior paint of required sade for NEW WORK (two or more coats applied @ 1.67 ltr/10 sqm) over and including base coat of water proofing cement "Snowcem Plus" or equivalent applied @ 2.2 kg/10 sqm.   | 2250 | SQ.M | 50.40      | 113400.00    |
| 15.2             | 23   | DEMOLISHING CEMENT CONCRETE including disposal of material within 50 meters lead:   |      |      |            |              |
| 15.2.1           | 23A  | 1:3:6 or richer mix.  | 40   | CU.M | 368.45     | 14738.00     |
| 15.2.2           | 23B  | 1:4:8 or leaner mix.  | 50   | CU.M | 226.90     | 11345.00     |
| 16.1             | 24   | PREPARATION OF SUBGRADE with power road roller of 8 to 12 tonne capacity after excvavating earth to an average of 22.5 cm. depth, dressing to camber and consolidating with road roller including making good the undulations etc. and disposal of surplus earth lead upto 50 mtrs. | 6500 | SQ.M | 33.90      | 220350.00    |
| 19.6             | 25   | Providing and laying NON-PRESSURE NP2 CLASS (LIGHT DUTY) RCC PIPES with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc . complete:  |      |      |            |              |
| 19.6.5           | 25A  | 450mm dia R.C.C pipe  | 500  | RMT  | 487.12     | 243565.00    |
| 19.30            | 26   | Constructing BRICK MASONRY CHAMBER FOR UNDERGROUND CI INSPECTION CHAMBER AND  | 64   | EACH | 2680.20    | 171532.80    |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR ROLL FORMING BAY NEAR SHOT BLASTING ROOM IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|------|------|-----------------|-------------------|
|                  |      | BENDS with 75 class designation bricks in cement mortar 1:5 (1 cement: 5 fine sand) CI cover with frame (light duty) 455 x 610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) RCC top slab with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate of 20 mm nominal size) foundation concrete 1:5:10 ( 1 cement:5 fine sand:10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished smooth with a foating coat of neat cement on walls and bed concrete etc.complete as per standard design, of UPTO 45 CM DEEP FOR SINGLE PIPE LINE: |      |      |                 |                   |
| 19.31            | 27   | Extra for depth beyond 45 cm of brick masonry chamber for 455 x 610mm size.  | 64   | EACH | 1394.99         | 89279.36          |
| 10.19            | 28   | Providing and fixing M.S. round holding down bolts with nuts and washer plates complete  | 6000 | KG.  | 16.98           | 101850.00         |
| DATA             | 29   | Grouting the holding down bolts and underneath the base plates etc., after alignment with non-shrink free flow grout mix of SHRINKOMP 30 (ACC's make) or equivalent as per standard specifications and instructions of Engineer-in-charge. Rate to include charges for cleaning the sleeves or pockets and other incidental charges, tools and plants etc., complete.  | 5    | CU.M | 40422.55        | 202112.75         |
| 5.37             | 30   | Providing and laying in position ready mixed concrete manufactured in fully automatic batching plant and transported to site of work in transit mixer for a lead up to 10 Kms having continuous agitated mixer, manufactured aas per mix desiggn of specified grade for reinforced cement concrete work including pumping of R.M.C. from tansit mxer to site of laying, excluding the cost of  | 750  | CU.M | 4356.50         | 3267375.00        |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR ROLL FORMING BAY NEAR SHOT BLASTING ROOM IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
|                  |      | centring, shuttering finishing and reinforcement including cost of 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 the Engineer-in-charge. M-25 grade rreinforced cement concrete by using 410 Kg. of cement per cum of concrete. All works up to floor V level. (The basic cost of cement is considered is Rs. 5175 / M.T. and the variation in cement price excess or less by 10% will be reimbursed / recovered provided the the variation is within the contract period specified). |     |      |                 |                   |
| 5.38             | 31   | Extra for carriage of R.M.C. beyond the initial lead of 10 K.M.  | 750 | CU.M | 20.00           | 15000.00          |

TOTAL ESTIMATED VALUE 14883166.11

CONTRACTOR TENDER PERCENTAGE @ ABOVE / BELOW / AT PAR \_\_\_\_\_%

(Percentage in words )

TOTAL VALUE OF WORK

=====

=====

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR FABRICATION BAY NEAR MATERIAL PREPARATION SHOP IN FACTC****ESTIMATE REF NO : CF/CA/10**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|------|------|-----------------|-------------------|
| 2.6.1            | 01   | Earth work in EXCAVATION by mechanical means (Hydraulic excavator) / manual means OVER AREAS (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5 m, disposed earth to be levelled & neatly dressed IN ALL KINDS OF SOIL.  | 2025 | CU.M | 101.85          | 206246.25         |
| 2.8.1            | 02   | Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains ( not exceeding 1.5 m in width or 10 sqm on - plan) including dressing of sides & ramming of bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, with in a lead of 50 m IN ALL KINDS OF SOIL. | 210  | CU.M | 103.40          | 21714.00          |
| 2.25             | 03   | FILLING AVAILABLE EXCAVATED EARTH (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth; consolidating each deposited layer by ramming and watering, lead upto 50 M and lift upto 1.5 M.  | 2250 | CU.M | 45.70           | 102825.00         |
| 2.27             | 04   | Supplying and FILLING IN PLINTH WITH RIVER SAND under floors including watering, ramming, consolidating and dressing complete.   | 1020 | CU.M | 301.50          | 307530.00         |
| 2.7.1            | 05   | Earth work in excavation over areas (exceeding 30 cm in depth, 1.50m in width as well as 10 sq.m on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed (IN ORDINARY ROCK):  | 800  | CU.M | 152.60          | 122080.00         |
| 2.11             | 06   | Extra for excavating trenches for pipes, cables etc. in all kinds of soil for depth exceeding 1.50m, but not exceeding 3.00m. (Rate is over corresponding basic item for depth   | 1925 | CU.M | 135.46          | 260760.50         |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR FABRICATION BAY NEAR MATERIAL PREPARATION SHOP IN FACTC**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY  | UNIT | RATE    |   | AMOUNT     |   |
|------------------|------|---|------|------|---------|---|------------|---|
|                  |      |   |      |      | RS      | P | RS         | P |
|                  |      | upto 1.50m).  |      |      |         |   |            |   |
| 2.12             | 07   | Extra for excavating trenches for pipes, cables, etc., in all kinds of soil for a depth exceeding 3m in depth, but not exceeding 4.5m. (Rate is over corresponding basic item for depth upto 1.50 metre).   | 1390 | CU.M | 346.29  |   | 481343.10  |   |
| 2.14             | 08   | Extra for excavating trenches for pipes, cables etc. in ordinary/hard rock exceeding 1.50m in depth but not exceeding 3.00m. (Rate is over corresponding basic item for depth upto 1.50 metre).   | 800  | CU.M | 167.86  |   | 134288.00  |   |
| 4.11             | 09   | Providing and laying DAMP PROOF COURSE 50MM thick with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)   | 225  | SQ.M | 95.17   |   | 21413.25   |   |
| 4.1              | 10   | Providing and laying in position CEMENT CONCRETE of specified grade excluding the cost of centring and shuttering for ALL WORKS UPTO PLINTH LEVEL, with:  |      |      |         |   |            |   |
| 4.1.9            | 10A  | CC 1:4:8 (1 cement: 4 coarse sand: 8 graded stone aggregate 40 mm nominal size)   | 1400 | CU.M | 1415.55 |   | 1981770.00 |   |
| 5.33             | 11   | Providing & laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete work including pumping concrete to site of laying but excluding the cost of centring, shuttering, finishing and reinforcements including Admixtures in recommended proportions (as per IS 9103) to accelerate, retard setting of concrete improve workability without imparing strength and durability as per direction of Engineer-in-charge for M-25 grade reinforced cement concrete by using 410 Kg. of cement per CUM of concrete. All work upto plinth level. | 100  | CU.M | 2023.60 |   | 202360.00  |   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR FABRICATION BAY NEAR MATERIAL PREPARATION SHOP IN FACTC**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY   | UNIT | RATE    |   | AMOUNT     |   |
|------------------|------|--|-------|------|---------|---|------------|---|
|                  |      |  |       |      | RS      | P | RS         | P |
| 5.1              | 12   | Providing and laying in position specified grade of REINFORCED CEMENT CONCRETE excluding the cost of centring, shuttering, finishing and reinforcement:- ALL WORK UPTO PLINTH LEVEL, for grade of: .   |       |      |         |   |            |   |
| 5.1              | 12A  | RCC 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)   | 1400  | CU.M | 1702.00 |   | 2382800.00 |   |
| 5.9              | 13   | CENTRING and SHUTTERING including strutting, propping etc and removal of form in all floors; for: .  |       |      |         |   |            |   |
| 5.9.1            | 13A  | Foundations, footings, bases of columns Pockets etc. for mass concrete.  | 1800  | SQ.M | 119.25  |   | 214650.00  |   |
| AGT 19/2007      | 13B  | for pockets  | 20    | SQ.M | 547.00  |   | 10940.00   |   |
| 5.12             | 14   | Providing, hoisting & fixing PRECAST REINFORCED CEMENT CONCRETE WORK IN STRING COURSES, BANDS, COPINGS, BED PLATES, ANCHOR BLOCKS, PLAIN WINDOW SILLS AND THE LIKE including the cost of required centring, shuttering, finishing smooth with 6 mm thick cement plaster 1:3 (1 cement:3 fine sand) on exposed surfaces complete but excluding cost of reinforcement with 1:2:4 (1 cement: 2 coarse sand:4 graded stone aggregate 20mm nominal size) ; at levels: (NOTE: Floor one level corresponds to plinth level) . | 24    | CU.M | 2913.85 |   | 69932.40   |   |
| 5.22             | 15   | REINFORCEMENT FOR RCC WORK including straightening, cutting, bending, placing in position and binding all complete at all levels, with: .  |       |      |         |   |            |   |
| 5.22.3           | 15A  | Cold twisted bars / HYSD bars etc. .   | 87200 | KG.  | 6.19    |   | 539768.00  |   |
| 6.1.2            | 16   | Brick work with FPS BRICKS OF CLASS DESIGNATION 75 IN FOUNDATION AND PLINTH, in Cement mortar 1:6 (1 cement: 6 fine sand).   | 450   | CU.M | 1798.00 |   | 809100.00  |   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR FABRICATION BAY NEAR MATERIAL PREPARATION SHOP IN FACTC**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|------|------|-----------------|-------------------|
| 6.5              | 17   | Extra for brick work in superstructure above floor V level for each four floors or part thereof by mechanical means by lifting material using mobile crane.   | 450  | CU.M | 190.00          | 85500.00          |
| 7.1              | 18   | RANDOM RUBBLE MASONRY with hard stone in FOUNDATION and PLINTH including levelling up with cement concrete 1:6:12 (1 cement: 6 coarse sand: 12 graded stone aggregate 20 mm nominal size) at plinth level, (with bond/through stones atleast 1 No. per 0.5 sqm of wall area), in :  | 310  | CU.M | 1411.55         | 437580.50         |
| 11.4             | 19   | 52mm thick CEMENT CONCRETE FLOORING WITH "HARDCRETE" CONCRETE HARDENER TOPPING, under layer 40mm thick cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) laid after applying slurry (@ 2 kg cement/sqm) and top layer 12mm thick "HARDCRETE" concrete hardener consisting of mix 1:2 (1 cement hardener mix: 2 stone aggregate 6mm nominal size) by volume with which HARDCRETE hardening compound of Snowcem India Ltd. or equivalent is mixed @ 2 litre HARDCRETE per 50 Kg. of cement includ- ing finishing with cement slurry mixed with steel floats, rounding of edges and including providing 40 x 4mm glass strips etc. but excluding the cost of nosing of steps etc. complete. | 6800 | SQ.M | 166.89          | 1134865.60        |
| 13.37.1          | 20   | Providing WHITE WASHING with LIME to given an even shade on new work (three or more coats) .  | 2250 | SQ.M | 6.75            | 15187.50          |
| 13.1.2           | 21   | Providing 12mm thick CEMENT PLASTER (including providing necessary plaster grooves wherever required), of mix 1:6 (1 cement: 6 fine sand)   | 3800 | SQ.M | 49.00           | 186207.60         |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR FABRICATION BAY NEAR MATERIAL PREPARATION SHOP IN FACTC**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY  | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|---|------|------|--------------|----------------|
| 13.46            | 22   | Finishing wall with Acrylic Smooth exterior paint of required sade for NEW WORK (two or more coats applied @ 1.67 ltr/10 sqm) over and including base coat of water proofing cement "Snowcem Plus" or equivalent applied @ 2.2 kg/10 sqm.   | 2250 | SQ.M | 50.40        | 113400.00      |
| 15.2             | 23   | DEMOLISHING CEMENT CONCRETE including disposal of material within 50 meters lead:   |      |      |              |                |
| 15.2.1           | 23A  | 1:3:6 or richer mix.  | 40   | CU.M | 368.45       | 14738.00       |
| 15.2.2           | 23B  | 1:4:8 or leaner mix.  | 50   | CU.M | 226.90       | 11345.00       |
| 16.1             | 24   | PREPARATION OF SUBGRADE with power road roller of 8 to 12 tonne capacity after excvavating earth to an average of 22.5 cm. depth, dressing to camber and consolidating with road roller including making good the undulations etc. and disposal of surplus earth lead upto 50 mtrs.   | 6500 | SQ.M | 33.90        | 220350.00      |
| 19.6             | 25   | Providing and laying NON-PRESSURE NP2 CLASS (LIGHT DUTY) RCC PIPES with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc . complete:  |      |      |              |                |
| 19.6.5           | 25A  | 450mm dia R.C.C pipe  | 500  | RMT  | 487.12       | 243559.00      |
| 19.30            | 26   | Constructing BRICK MASONRY CHAMBER FOR UNDERGROUND CI INSPECTION CHAMBER AND BENDS with 75 class designation bricks in cement mortar 1:5 (1 cement: 5 fine sand) CI cover with frame (light duty) 455 x 610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) RCC top slab with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate of 20 mm nominal size) foundation | 64   | EACH | 2680.20      | 171532.80      |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR FABRICATION BAY NEAR MATERIAL PREPARATION SHOP IN FACTC**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|------|------|-----------------|-------------------|
|                  |      | concrete 1:5:10 ( 1 cement:5 fine sand:10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished smooth with a foating coat of neat cement on walls and bed concrete etc.complete as per standard design, of UPTO 45 CM DEEP FOR SINGLE PIPE LINE:   |      |      |                 |                   |
| 19.31            | 27   | Extra for depth beyond 45 cm of brick masonry chamber for 455 x 610mm size.   | 64   | EACH | 1394.99         | 89279.36          |
| 10.19            | 28   | Providing and fixing M.S. round holding down bolts with nuts and washer plates complete   | 6000 | KG.  | 16.98           | 101850.00         |
| DATA             | 29   | Grouting the holding down bolts and underneath the base plates etc., after alignment with non-shrink free flow grout mix of SHRINKOMP 30 (ACC's make) or equivalent as per standard specifications and instructions of Engineer-in-charge. Rate to include charges for cleaning the sleeves or pockets and other incidental charges, tools and plants etc., complete.   | 5    | CU.M | 40422.55        | 202112.75         |
| 5.37             | 30   | Providing and laying in position ready mixed concrete manufactured in fully automatic batching plant and transported to site of work in transit mixer for a lead up to 10 Kms having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centring, shuttering finishing and reinforcement including cost of 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 the Engineer-in-charge. M-25 grade reinforced cement concrete by using 410 Kg. of cement per cum of concrete. | 600  | CU.M | 4356.50         | 2613900.00        |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CIVIL WORKS FOR FABRICATION BAY NEAR MATERIAL PREPARATION SHOP IN FACTC**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-----|------|-----------------|-------------------|
|                  |      | All works up to floor V level. (The basic cost of cement is considered is Rs. 5175 / M.T. and the variation in cement price excess or less by 10% will be reimbursed / recovered provided the the variation is within the contract period specified). |     |      |                 |                   |
| 5.38             | 31   | Extra for carriage of R.M.C. beyond the initial lead of 10 K.M.   | 600 | CU.M | 20.00           | 12000.00          |

TOTAL ESTIMATED VALUE 13522928.61

CONTRACTOR TENDER PERCENTAGE @ ABOVE / BELOW / AT PAR \_\_\_\_\_%

(Percentage in words )

TOTAL VALUE OF WORK

=====

=====

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY****ESTIMATE REF NO : CF/CA/13**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|------|------|-----------------|-------------------|
| 2.31             | 01   | Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30cm measured at a height of 1m above ground level and removal of rubbish upto a distance of 50m outside the periphery of the area cleared.                                      | 50   | SQ.M | 2.64            | 132.00            |
| 2.32             | 02   | Clearing grass and removal of rubbish upto a distance of 50m outside the periphery of the area cleared.  | 2000 | SQM  | 1.36            | 2720.00           |
| 2.28.1           | 03   | Surface dressing of the ground including removing vegetation and inequalities not exceeding 15cm deep and disposal of rubbish, lead upto 50m and lift upto 1.5m in all kinds of soil.  | 10   | SQ.M | 5.12            | 51.20             |
| 2.1.1            | 04   | Earthwork in surface excavation not exceeding 30cm in depth but exceeding 1.5m in width as well as 10sqm on plan including disposal of excavated earth upto 50m and lift upto 1.5m, disposed soil to be levelled and neatly dressed in all kinds of soil.                                    | 10   | SQ.M | 20.74           | 207.40            |
| 2.6.1            | 05   | Earthwork in excavation over areas (exceeding 30cm in depth 1.5m in width as well as 10sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed in all kinds of soil.  | 10   | CUM  | 101.85          | 1018.50           |
| 2.9.1            | 06   | Earthwork in excavation over areas not exceeding 1.5m in width or 10sqm on plan including dressing of sides and ramming of booms lift up to 1.5m including getting out of the excavated soil and disposal of surplus excavated earth as directed with in a lead of 50m - For Ordinary rock.. | 25   | CUM  | 162.65          | 4066.25           |
| 2.8.1            | 07   | Earthwork in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.m in width or 10 sqm  | 180  | CUM  | 103.40          | 18612.00          |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
|                  |      | on plan) including dressing of sides and ramming of bottoms. lift up to 1.5m including getting out the excavated soil and disposal of surplus excavated soil as directed with in a lead of 10m - For all kinds of soil.  |     |      |                 |                   |
| 2.26             | 08   | Extra for every additional lift of 1.5m or part thereof in   |     |      |                 |                   |
| 2.26.1           | 08A  | All kinds of soil  | 10  | CUM  | 18.90           | 189.00            |
| 2.26.2           | 08B  | Ordinary or hard rock  | 5   | CUM  | 33.85           | 169.25            |
| 2.34.1           | 09   | Supplying chemical emulsion in sealed containers including delivery as specified - Chlorpyriphos / Lindane emulsifiable concentrate of 20% with 1% concentration   | 50  | LIT  | 174.30          | 8715.00           |
| 2.35.2.1         | 10   | Diluting and injecting chemical emulsion for POST CONSTRUCTIONAL ANTI TERMITE TREATMENT (excluding the cost of chemical emulsion)- Along external wall below concrete or masonry apron using chemical emulsion @ 2.25 litre per linear metre including drilling and plugging holes etc., with Chlorpyriphos / Lindane E.C 20% with 1% concentration. | 300 | SQ.M | 10.45           | 3135.00           |
| 4.1              | 11   | Providing and laying in position CEMENT CONCRETE of specified grade excluding the cost of centring and shuttering for ALL WORKS UPTO PLINTH LEVEL,   |     |      |                 |                   |
| 4.1.8            | 11A  | with CC 1:4:8 (1 cement: 4 coarse sand: 8 graded stone aggregate 40 mm nominal size)   | 50  | CUM  | 1568.40         | 78420.00          |
| 4.1.5            | 11B  | with CC 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)   | 125 | CUM  | 1651.50         | 206437.50         |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
| 4.10             | 12   | Providing and laying DAMP PROOF COURSE 40MM thick with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)  | 130 | SQ.M | 76.81           | 9985.30           |
| 6.1.2            | 13   | Brick work with FPS BRICKS OF CLASS DESIGNATION 75 IN FOUNDATION AND PLINTH, in Cement mortar 1:6 (1 cement: 6 fine sand)  | 60  | CUM  | 1798.00         | 107880.00         |
| 6.4.2            | 14   | Providing brick work with locally available best bricks from approved source in cement mortar 1:6 (1 cement : 6 fine sand). Rate to include cost of labour, scaffolding charges, material and curing etc., complete. Bricks shall be of approved quality and grade as approved by the Engineer in charge. in super structure above plinth level up to floor V level in all shapes and sizes. | 295 | CUM  | 2033.65         | 599926.75         |
| 6.13.2           | 15   | Extra for half brick masonry in superstructure above plinth level upto floor V level   | 30  | SQ.M | 247.68          | 7430.54           |
| 6.12.2           | 16   | HALF BRICK MASONRY WITH FPS BRICK OF CLASS DESIGNATION 75 in cement mortar 1:4 (1 cement: 4 coarse sand), at levels: (NOTE: Floor one level corresponds to plinth level) - Foundation and plinth   | 10  | SQ.M | 215.23          | 2152.35           |
| 2.27             | 17   | Supplying and filling in plinth with good river sand under floors including watering, ramming, consolidating and dressing complete.  | 160 | CUM  | 301.50          | 48240.00          |
| 2.25             | 18   | 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 upto 50m and lift upto 1.5m.  | 70  | CUM  | 45.70           | 3199.00           |
| 5.1              | 19   | Providing and laying in position specified grade of reinforced cement  |     |      |                 |                   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY  | UNIT | RATE    |   | AMOUNT   |   |
|------------------|------|---|------|------|---------|---|----------|---|
|                  |      |   |      |      | RS      | P | RS       | P |
|                  |      | concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) excluding the cost of centring, shuttering, finishing and reinforcement .  |      |      |         |   |          |   |
| 5.1.3            | 19A  | All works upto plinth level   | 5    | CUM  | 1702.00 |   | 8510.00  |   |
| 5.2.3            | 19B  | All works from plinth level upto floorVlevel  | 15   | CUM  | 2062.40 |   | 30936.00 |   |
| 5.9              | 20   | CENTRING and SHUTTERING inlcuding strutting, propping etc and removal of form in all floors; for: .   |      |      |         |   |          |   |
| 5.9.1            | 20A  | Foundations,footings, bases of columns etc. for mass concrete   | 520  | SQ.M | 119.25  |   | 62010.00 |   |
| 5.9.3            | 20B  | Suspended floors, roofs, landings, balconies, loft and access platform etc. (Upto 3.5m floor height). (NOTE:- Floor height to be taken from finished floor level to finished slab bottom).                        | 250  | SQ.M | 187.35  |   | 46837.50 |   |
| 5.9.5            | 20C  | Lintels, beams, plinth beams, girders, cantilevers etc.,  | 70   | SQ.M | 162.65  |   | 11385.50 |   |
| 5.9.19           | 20D  | Weather shade , chajjas, corbels, edges etc.  | 25   | SQ.M | 258.60  |   | 6465.00  |   |
| 5.9.14           | 20E  | Extra for shuttering in circular work (20% of respective centering and shuttering items)  | 500  | SQ.M | 35.40   |   | 17700.00 |   |
| 5.9.13           | 20F  | Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards.   | 20   | SQ.M | 285.55  |   | 5711.00  |   |
| 13.2.2           | 21   | Providing 15mm thick CEMENT PLASTER (including providing necessary plaster grooves wherever required and for all exterior height) on rough side of single or half brick wall, of mix: 1:6 (1 cement: 6 fine sand) | 1570 | SQ.M | 56.28   |   | 88353.32 |   |
| 13.1.2           | 22   | Providing 12mm thick CEMENT PLASTER (including providing necessary plaster grooves wherever required) of mix:   | 470  | SQ.M | 48.90   |   | 22983.94 |   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-----|------|-----------------|-------------------|
|                  |      | 1:6 (1 cement: 6 fine sand)   |     |      |                 |                   |
| 13.16.1          | 23   | Providing smooth finishing to the exposed surfaces of RCC/ CC works and ceilings with 6 mm thick CEMENT PLASTER of mix 1:3 (1 cement: 3 fine sand) .  | 450 | SQ.M | 43.14           | 19412.73          |
| 5.42/84/200:     | 24   | Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centring, shuttering, finishing and reinforcement, including admixtures in recommended proportions (as per IS9103) to accelerate, retard setting of concrete improve workability without impairing strength and durability as per direction of Engineer-in-charge - M20 grade reinforced cement concrete.  |     |      |                 |                   |
| 5.42.1/84/20     | 24A  | All works upto plinth level   | 10  | CUM  | 2497.38         | 24973.80          |
| 5.42.2/84/20     | 24B  | All works from plinth level upto floorVlevel  | 105 | CUM  | 2696.84         | 283168.20         |
| 5.33             | 25   | Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete work including pumping of concrete to site of laying but excluding the cost of centring, 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 - M25 grade reinforced cement concrete by using 410 Kg of cement per cum of concrete. All work up to floor V level. | 10  | CUM  | 2023.60         | 20236.00          |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
| 5.37             | 26   | Providing and laying in position READY MIXED CONCRETE manufactured in fully automatic batching plant and transported to site of work in transit mixer for a lead up to 10 Kms having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of RMC from transit mixer to site of laying excluding the cost of centring, 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 - M25 grade reinforced cement concrete by using 410 Kg of cement per cum of concrete. All work up to floor V level. | 10  | CUM  | 2232.70         | 22327.00          |
| 5.3              | 27   | REINFORCED CEMENT CONCRETE WORK IN SUSPENDED FLOORS, ROOFS HAVING SLOPE UPTO 15 DEGREE, LANDINGS, BALCONIES, LOFTS, ACCESS PLATFORM ETC., excluding the cost of centring, shuttering, finishing & reinforcement with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone - aggregate 20 mm nominal size), at levels: . (NOTE: Floor one level corresponds to plinth level) - Upto floor five level.   | 5   | CUM  | 2016.25         | 10081.25          |
| 4.5.1            | 28   | Providing and fixing up to floor five level Precast cement concrete works in STRING OR LACING COURSES, COPINGS, BED PLATES, ANCHOR BLOCKS, PLAIN WINDOW SILLS, SHELVES, LOUVERS, STEPS, STAIR CASES, etc. including - hoisting and setting in position with cement mortar 1:3 ( 1 cement: 3 coarse sand ), cost of required centring, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement: 3 fine sand) on exposed surface complete but   | 5   | CUM  | 2845.95         | 14229.75          |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY   | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|--|-------|------|--------------|----------------|
|                  |      | excluding cost of reinforcement steel with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size.   |       |      |              |                |
| 5.1              | 29   | Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - All works up to plinth level:   |       |      |              |                |
| 5.1.2            | 29A  | RCC 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size)   | 7     | CUM  | 1660.00      | 11620.00       |
| 5.2              | 30   | REINFORCED CEMENT CONCRETE WORK IN WALLS (ANY THICKNESS), INCLUDING ATTACHED PILASTERS, BUTTRESSES, PLINTH AND STRING COURSES, FILLETS, COLUMNS, PILLARS, PIERS, ABUTMENTS, POSTS AND STRUTS, ETC., excluding cost of centring, shuttering, finishing and reinforcement, with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size), at levels: . (NOTE: Floor one level corresponds to plinth level) . |       |      |              |                |
| 5.2.2            | 30A  | Upto floor five level  | 5     | CUM  | 2020.40      | 10102.00       |
| 5.22.3           | 31   | REINFORCEMENT FOR RCC WORK including straightening, cutting, bending, placing in position and binding all complete at all levels, with: Cold twisted bars / HYSD bars .  | 11800 | KGS  | 6.19         | 73042.00       |
| 12.34/139/21     | 32   | Lime concrete terracing on roofs average thickness 10cm laid to fall with 25mm nominal size brick aggregate and 50% lime mortar 1:2 (1 lime putty : 2 surkhi) rammed and finished with gur and belgiri treatment complete including rounding of junctions with parapet wall complete   | 52    | CUM  | 272.85       | 14188.20       |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-----|------|-----------------|-------------------|
| 12.20            | 33   | Providing and laying pressed clay tiles (as per approved pattern 20mm nominal thickness and of approved size) on roofs jointed with cement mortar 1:4 ( 1 cement : 4 coarse sand) mixed with 2% of integral water proofing compound laid over a bed of 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and finished neat complete.  | 520 | SQ.M | 288.24          | 149886.46         |
| 8.2.2.2          | 34   | Providing and fixing 18 mm thick mirror polished, machine cut for kitchen platforms ,vanity counters facias and similar locations of required size of approved shade ,colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement :4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing etc. complete at all levels - For granite black of slabs over 0.50 sqm.                                  | 5   | SQ.M | 2543.65         | 12718.25          |
| 8.3.2            | 35   | Extra for providing edge moulding to 18 mm thick marble stone counters,Vanities etc., over the above item including machine polishing to edge to give hogh gloss finish etc., complete as per design approved by Engineer-in-Chage. Granite work .  | 15  | RM   | 97.60           | 1464.00           |
| 11.36            | 36   | Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS:15622 of minimum thickness 5mm of approved make in all colours, shades except begundy, bottle green, black of any size as approved by Engineer-in-charge in SKIRTING, RISERS OF STEPS, AND DADOS over 12mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete. | 90  | SQ.M | 492.26          | 44303.80          |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY  | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|--|------|------|--------------|----------------|
| 11.39            | 37   | Providing and laying rectified glazed ceramic floor tiles 300x300mm or more (thickness to be specified by the manufacturer) of 1st quality conforming to IS: 15622 of approved make in colours white, ivory, grey, fume red brown, laid on 20mm thick cement mortar 1:4 (1 cement: 4 coarse sand) including grouting the joints with white cement and matching pigments etc. complete. | 10   | SQ.M | 695.56       | 6955.64        |
|                  | 38   | Providing and fixing on wall face unplasticised- Rigid PVC rain water pipes conforming to IS 13592 Type A including jointing with seal ring conforming to IS 5382 leaving 10mm gap for thermal expansion   |      |      |              |                |
| 12.40.1          | 38A  | 75 mm diameter Single socketed pipes   | 5    | RM   | 95.00        | 475.00         |
| 12.40.2          | 38B  | 110 mm diameter Single socketed pipes  | 15   | RM   | 163.40       | 2451.00        |
| 12.42.1          | 38C  | 75mm coupler   | 8    | EACH | 81.40        | 651.20         |
| 12.42.1.2        | 38D  | 110 mm coupler   | 30   | EACH | 101.65       | 3049.50        |
| 12.42.3.1        | 38E  | I) 75mx75x75mm Tee with door   | 4    | EACH | 177.45       | 709.80         |
| 12.42.3.2        | 38F  | I)110mx110x110mm Tee with door   | 10   | EACH | 260.70       | 2607.00        |
| 12.42.4.1        | 38G  | I) 75mx75x75mm Tee without door  | 3    | EACH | 157.70       | 473.10         |
| 12.42.4.2        | 38H  | Single tee without door 110x110x110 mm   | 5    | EACH | 208.45       | 1042.25        |
| 12.42.5.1        | 38I  | I) 75mm bend   | 5    | EACH | 88.40        | 442.00         |
| 12.42.5.2        | 38J  | ii)110 mm bend   | 16   | EACH | 134.20       | 2147.20        |
| 12.42.6.2        | 38K  | 110 mm shoe  | 16   | EACH | 263.10       | 4209.60        |
| 13.37.1          | 39   | Providing WHITE WASHING with LIME to given an even shade on new work (three or more coats) .   | 500  | SQ.M | 6.75         | 3375.00        |
| 13.47.1          | 40   | Finishing walls with Premium Acrylic Smooth exterior paint with Silicone   | 1200 | SQ.M | 60.10        | 72120.00       |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY  | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|------|------|-----------------|-------------------|
|                  |      | additives of required shade - For NEW work (Two or more coats applied @1.43 Ltr / 10 Sqm) over existing cement paint surface.   |      |      |                 |                   |
| 13.41.1          | 41   | Distemping with oil bound washable distemper of approved brand and manufacture to give an even shade - For New work (two or more coats) over and including priming coat with cement primer  | 1050 | SQ.M | 41.55           | 43627.50          |
| 16.24/175/21     | 42   | Providing and fixing factory made P.V.C. door frame manufactured by M/s Rajshri or equivalent of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet mitred at corners and joined with 2 nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door profiles to be reinforced with 19x19mm M.S. square tube of 19 gauge, PEDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. scfrews of 65/100 mm size complete as per manufaacturers specification and direction of Engineer-in-charge.                 | 55   | RM   | 385.20          | 21186.00          |
| 16.25/176/21     | 43   | Providing and fixing 30mm thick factory made PVC rigid foam panelled door shutters manufactured by M/s Rajshri or equivalent made from M.S. tube of 19 gauge thickness, size 19x19mm for styles and 15x15mm for top and bottom rails, covered with heat moulded PVC "C" channel of 5mm thick sheet and 30x50mm wide to form styles and 5mm thick and 75mm wide PVC sheets for top rail, lock rail and bottom rail on either side and 5mm thick, 20mm wide cross PVC sheet as gap insert for top rail and bottom rail, panelling of 5mm thick PVC sheet fitted in the M.S. frame welded/sealed to the styles and rails with 5x30mm | 17   | SQ.M | 2745.70         | 46676.90          |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE   |   | AMOUNT   |   |
|------------------|------|--|-----|------|--------|---|----------|---|
|                  |      |  |     |      | RS     | P | RS       | P |
|                  |      | PVC sheet beeding on either side and joined together with solvent cement adhesive etc., complete as per manufacturers specification and direction of Engineer-in-charge fixed to frames with 4 Nos. M.S. Powder coated but hinges (for W.C. and bath room shutters).   |     |      |        |   |          |   |
| 21.1             | 44   | Providing and fixing ANODISED ALUMINIUM WORK FOR DOORS, WINDOWS, VENTILATORS AND PARTITIONS with extruded built up standard tubular and other sections of approved make conforming to IS: 733 and IS: 1285, anodised transparent or dyed to require shade according to IS:1868(Minimum anodic coating of grade AC 15),fixed with rawl plugs and screws or with fixing clips,or with expansion hold fastners including necessary filling up of gaps at junctions, at top, bottom and sides with re- quired PVC/neoprene felt etc., Aluminium sections shall be smooth, rust free, straight, mitred & jointed mecha- nically wherever required including cleat angle (38x38x 4.8mm,35/40mm long) aluminium snap beading(Wt 175gms/m) for glazing / panelling, C.P. brass / strainless steel screws, all complete as per drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for seperately), for: |     |      |        |   |          |   |
| 21.1.1.2         | 44A  | For fixed portion Powder coated aluminium (minimum thickness of powder coating 50 micron).   | 40  | KG   | 306.30 |   | 12252.00 |   |
| 21.1.2.2         | 44B  | For shutters of doors, windows and ventilators including providing & fixing pivots/ hinges (4 Nos.100x 75x4mm per door shut. 3 Nos.75x 63x 3.2mm per wind/vent shut.) & making provision for fixing of fittings wher-  | 46  | KG   | 326.60 |   | 15023.60 |   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|---|-----|------|-----------------|-------------------|
|                  |      | ever required including the cost of PVC/neoprene gasket required (fittings shall be paid for seperately) - Powder coated aluminium (minimum thickness of powder coating of grade AC 1).   |     |      |                 |                   |
| 9.96/.97/.11     | 45   | Providing & fixing ISI marked Aluminium FITTINGS with necessary nuts & screws etc. as required complete, of type and size:  |     |      |                 |                   |
| 9.96.1           | 45A  | Tower bolts 300 x 16 mm   | 22  | EACH | 158.50          | 3487.00           |
| 9.97.2           | 45B  | TOWER BOLTS 250x10 mm   | 20  | EACH | 62.20           | 1244.00           |
| 9.97.4           | 45C  | TOWER BOLTS 150 x 10 mm   | 24  | EACH | 42.75           | 1026.00           |
| 9.100.1          | 45D  | HANDLES : 125 mm .  | 40  | EACH | 48.80           | 1952.00           |
| 9.100.2          | 45E  | HANDLES : 100 mm .  | 24  | EACH | 35.30           | 847.20            |
| 9.101.1          | 46   | Providing & fixing ISI marked ALUMINIUM FITTINGS anodised (anodic coating not less than grade AC 10 as per IS:1868) transparent or dyed to required colour or shade with nuts and C.P. brass screws as required etc. complete, of type and size:9.223.1: HANGING FLOOR DOOR STOPPER: Single rubber stopper, (150 mm long)       | 11  | EACH | 19.05           | 209.55            |
| 21.3.1           | 47   | Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc., with PVC / Neoprene gasket etc, complete as per the architectural drawings and the directions of Engineer in charge (Cost of aluminium snap beading shall be paid in basic item) - With float glass panes of 4.0 mm thickness. | 46  | SQ.M | 554.95          | 25527.70          |
| 17.1.1           | 48   | Providing and fixing water closet squatting pan (Indian type W.C.Pan) with 100mm sand cast iron P or S trap, 10 litre low level with PVC flushing cistern with manually controlled device (handle lever), conforming to   | 4   | EACH | 2304.65         | 9218.60           |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE    |   | AMOUNT  |   |
|------------------|------|---|-----|------|---------|---|---------|---|
|                  |      |   |     |      | RS      | P | RS      | P |
|                  |      | IS :7231 with all fittings and fixtures complete including cutting and making good the walls and floors wherever required. - W.C.Pan with ISI marked white solid plastic seat and lid.  |     |      |         |   |         |   |
| 17.2.1           | 49   | Providing and fixing white vitreous china pedestal type water closet (European type W.C.Pan) with seat and lid,10 litre low level with PVC flushing cistern with manually controlled device (handle lever), conforming to IS :7231, Parryware / Hindware / Seabird / Orient (coral) with all fittings and fixtures complete including cutting and making good the walls and floors wherever required. W.C.Pan with ISI marked black solid plastic seat and lid. | 4   | EACH | 2152.50 |   | 8610.00 |   |
| 17.31            | 50   | Providing and fixing 600x450mm bevelled edge mirror of superior glass (of approved quality) complete with 6mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.   | 2   | EACH | 493.65  |   | 987.30  |   |
| 18.15.1          | 51   | Providing and fixing BRASS BIB COCK of approved quality; of nominal bore of: (NOTE: Outlet to be around 150 mm from wall face) - 15 mm dia. (Min wt 400 grms)   | 5   | EACH | 191.70  |   | 958.50  |   |
| 18.52.1          | 52   | Providing and fixing CP brass stop cock (concealed) of standard design and of approved make confirming to IS : 8931 - for 15mm nominal bore.  | 3   | EACH | 262.55  |   | 787.65  |   |
| 18.16.2          | 53   | Providing and fixing CP brass stop cock of approved quality 20mm nominal bore.  | 3   | EACH | 235.20  |   | 705.60  |   |
| 18.17.1          | 54   | Providing and fixing gun metal gate valve of 25mm nominal bore with CI wheel of approved quality (screwed end)  | 2   | EACH | 285.50  |   | 571.00  |   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|---|-----|------|--------------|----------------|
| 18.74.2          | 55   | Supplying and fixing flexible hose connector of 15mm nominal bore with 45cm length  | 10  | EACH | 52.90        | 529.00         |
| 18.10            | 56   | Providing and fixing GI pipes complete with GI fittings and clamps, including cutting and making good the walls etc., (internal work)   |     |      |              |                |
| 18.10.1          | 56A  | 15mm dia nominal bore   | 3   | RM   | 105.85       | 317.55         |
| 18.10.2          | 56B  | 20mm dia nominal bore   | 60  | RM   | 133.85       | 8031.00        |
| 18.10.3          | 56C  | 25mm dia nominal bore   | 10  | RM   | 179.65       | 1796.50        |
| 18.16            | 57   | Providing and fixing C.P.brass stop cock/Push cock of approved quality  |     |      |              |                |
| 18.16.2          | 57A  | 15mm dia nominal bore   | 4   | EACH | 191.70       | 766.80         |
| 17.71            | 58   | Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality colour and make, weighing not less than 105 gms (Prayag or equivalent)  | 2   | EACH | 164.65       | 329.30         |
| 17.33            | 59   | Providing and fixing 600 X 120 x 5mm glass shelf with edges round of supported on anodised aluminium angle frame with CP brass brackets and guard rail complete fixed with 40mm long screws, rawl plugs, etc complete.  | 2   | EACH | 218.80       | 437.60         |
| 19.4.1.1         | 60   | Providing and fixing SQUARE MOUTH S.W GULLY TRAP GRADE "A" COMPLETE WITH CI GRATING brick masonry chamber with water tight C.I. cover with frame of 300x300 mm size (inside) the weight of cover to be not less than 4.50 Kg. and frame to be not less than 2.70 Kg. as per standarad design., bricks of specified class designation in cement mortar 1:4 (1 cement: 4 coarse sand) embedded in CC 1:5:10 plastering 12mm | 2   | EACH | 935.15       | 1870.30        |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE    |   | AMOUNT   |   |
|------------------|------|---|-----|------|---------|---|----------|---|
|                  |      |   |     |      | RS      | P | RS       | P |
|                  |      | thk with cement mortar - 150 x 100 mm size, P type with FPS bricks of class designation 75  |     |      |         |   |          |   |
| 17.7.2           | 61   | Providing & fixing WASH BASIN with C.I/M.S brackets, 15mm C.P brass pillar taps, Kingston/ Gem/ Techno/ Parko, 32mm C.P brass waste of standard pattern including painting of fittings and brackets, cutting and making good the walls, wherever required, of type: (NOTE: Ht. of basin rim from floor level to be 75-80cm) - White Vitreous China wash basin size 630x 450 mm with a SINGLE 15 mm C.P brass pillar taps. | 2   | EACH | 1201.70 |   | 2403.40  |   |
| 18.22.2          | 62   | Providing and fixing CP BRASS SHOWER ROSE with 15 or 20 mm inlet, of size: (NOTE: Shower center to be around 50 cm from wall face - 150 mm diameter   | 2   | EACH | 55.80   |   | 111.60   |   |
| 12.37.1          | 63   | Providing and fixing M.S HOLDER BAT CLAMPS of approved design to CI/ SCI/ PVC rain water pipes embedded in and including cement concrete blocks 10x10x 10 cm. of 1:2:4 (1 cement: 2 coarse sand:4 graded stone aggregate 20 mm nominal size) and cost of cutting holes and making good the walls etc. - 100 mm diameter   | 60  | EACH | 62.76   |   | 3765.60  |   |
| 12.40.2          | 64   | Providing and fixing on wall face RIGID UNPLASTICISED PVC RAIN WATER PIPES (working pressure 4 kg / sqcm) conforming to IS:13592 including jointing with 'T'shaped seal ring conforming to IS:5382 leaving 10mm gap for thermal expansion. Single socketed pipes, of OUTER DIA.: - 110 mm (+0.4mm) (wall thk 2.5-3.0 mm) .  | 130 | RM   | 163.40  |   | 21242.00 |   |
| 13.61.1          | 65   | Providing and Painting with SYNTHETIC ENAMEL PAINT of approved brand and manufacture to give an even shade two or more coats on new work.   | 10  | SQ.M | 33.25   |   | 332.50   |   |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION   | QTY | UNIT | RATE<br>RS P | AMOUNT<br>RS P |
|------------------|------|---|-----|------|--------------|----------------|
| 17.29            | 66   | Providing and fixing SAND CAST IRON GRATING FOR GULLY TRAP of size 100 mm dia.  | 2   | EACH | 16.45        | 32.90          |
| 17.4.1           | 67   | Providing and fixing WHITE VITREOUS CHINA FLAT BACK OR WALL CORNER TYPE LIPPED FRONT URINAL BASIN of 430 x 260 x 350 mm and 340 x 410 x 265 mm sizes, respectively with automatic flushing cistern (of approved make and conforming to IS:7231) with standard flush pipe and C.P. barass spreaders with brass unions and G.I. clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required: - One urinal basin with 5 litre PVC automatic flushing cistern Parryware/ Hindware/ Seabird/ Orient (Coral) | 6   | EACH | 2018.70      | 12112.20       |
| 19.1.2           | 68   | Providing, laying & jointing GLAZED STONEWARE PIPES of GRADE "A" with stiff mixture of cement mortar in the proportion of 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete - 150 mm dia. (with Gradient 1:100 in general)  | 10  | RM   | 134.92       | 1349.19        |
| 1.1.2 - 5        | 69   | Carriage of materials including loading, leading unloading & stacking of surplus earth, debris etc.- upto 2 K.M. lead   | 150 | CUM  | 56.41        | 8461.50        |
| 9.127.1          | 70   | Providing and fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS 2046 Type S including cost of adhesive of approved quality.   | 300 | SQ.M | 608.15       | 182445.00      |
| 10.6             | 71   | Supplying and fixing ROLLING SHUTTERS of approved make, made of required size M.S. laths inter- locked together through their entire length and   |     |      |              |                |

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : CONSTRUCTION OF ELECTRONIC SHOP NEAR R & D IN FACTORY**

| CPWD 2007<br>REF | SLNO | DESCRIPTION  | QTY | UNIT | RATE<br>RS<br>P | AMOUNT<br>RS<br>P |
|------------------|------|--|-----|------|-----------------|-------------------|
|                  |      | jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides (25x65mm made from 3.15mm thick M.S. sheet) and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5cm long wire springs grade No.2 & M.S top cover of required thickness for rolling shutters, with:                 |     |      |                 |                   |
| 10.6.2           | 71A  | 80x1.20 mm M.S laths with 1.20 mm thk top cover  | 25  | SQ.M | 965.35          | 24133.75          |
| 24/2006-07[      | 72   | Providing and fixing 15 mm thick EXCEL-TONE MR VENUS III pattern reveled edge type Manufactured by M/s DAIKEN Corporation ,Mineral Fibre False Ceiling Tiles or equivalent of size 600x600 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanised @170 gsm/sqm.) consisting of main "T" runner suitably spaced at joints to get required length and of size | 300 | SQ.M | 800.00          | 240000.00         |

TOTAL ESTIMATED VALUE 2921406.82

CONTRACTOR TENDER PERCENTAGE @ ABOVE / BELOW / AT PAR \_\_\_\_\_%

(Percentage in words )

TOTAL VALUE OF WORK

=====

=====

CONTRACTOR/ TENDERER

ACCEPTING OFFICER