# Office of the Chief Engineer LSGD

## construction of a Bio gas plant (50 kg/day) MODEL ESTIMATE

Detailed Estimate



(Cost Index Applied for this estimate is 35.59%)

| Sl No | Description | No | L | B | D | CF | Quantity | Remark |
|---|---|---|---|---|---|---|---|---|
| | **1 1 (A) INLET TANK ( circular size 60 cm dio )** | | | | | | | |
| 1 | 2.8.1<br>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 and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil | | | | | | | |
| | 1. IN LET TANK | | | | | | | |
| | circular pit for foundation (3.14/4*D*D*h ) | 0.785 | 1.250 | 1.25*.4 | | | 0.491 | |
| | Total Quantity | | | | | | 0.491 cum | |
| | Total Deducted Quantity | | | | | | 0.000 cum | |
| | Net Total Quantity | | | | | | 0.491 cum | |
| | Say0.491 cum @ Rs 277.58 / cum | | | | | | **Rs 136.29** | |
| 2 | 4.1.8<br>Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 nominal size) | | | | | | | |
| | 1. IN LET TANK | | | | | | | |
| | circular pit for foundation (3.14/4*D*D*h ) | 0.785 | 1.250 | 1.250 | 0.100 | | 0.123 | |
| | Total Quantity | | | | | | 0.123 cum | |
| | Total Deducted Quantity | | | | | | 0.000 cum | |
| | Net Total Quantity | | | | | | 0.123 cum | |
| | Say0.123 cum @ Rs 6370.44 / cum | | | | | | **Rs 783.56** | |
| 3 | 60.7.4<br>DR PACKING FOR APRONS - Rough stone dry packing for apron with good quality blasted rubble including packing to compactness to lines levels, cost and conveyance of all materials labour charges etc. complete as per direction of Departmental officers at site | | | | | | | |
| | Foundation ( 3.14/4*D*D*h ) | 0.785 | 1.150 | 1.150 | 0.300 | | 0.312 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Total Quantity | 0.312 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 0.312 cum | |
| | | | | | | Say0.312 cum @ Rs 3388.97 / cum | **Rs 1057.36** | |
| 4 | 7.1.1<br>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) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand) | | | | | | | |
| | Basement (3.14/4*D*D*h | 0.785 | 1.150 | 1.150 | 0.450 | | 0.468 | |
| | | | | | | Total Quantity | 0.468 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 0.468 cum | |
| | | | | | | Say0.468 cum @ Rs 6734.90 / cum | **Rs 3151.93** | |
| 5 | 6.2.1<br>Brick work with common burnt clay modular bricks of class designation 7.5 in foundation and plinth in:Cement mortar 1:4 (1 cement : 4 coarse sand) | | | | | | | |
| | 3.14*R*R*h - 3.14*r*r*h | 3.14 | 0.375 | 0.375 | 0.300 | | 0.133 | |
| | Deduction | | | | | | | |
| | 3.14*r*r*h | 3.14 | 0.300 | 0.300 | 0.300 | | -0.084 | |
| | | | | | | Total Quantity | 0.133 cum | |
| | | | | | | Total Deducted Quantity | -0.084 cum | |
| | | | | | | Net Total Quantity | 0.049 cum | |
| | | | | | | Say0.049 cum @ Rs 6046.47 / cum | **Rs 296.28** | |
| 6 | 13.1.1<br>12 mm cement plaster of mix:1:4 ( 1 cement : 4 fine sand) | | | | | | | |
| | Inner floor portion (3.14*r*r ) | 3.14 | 0.300 | 0.300 | | | 0.283 | |
| | Inner wall (2*3.14*r*h | 2*3.14 | 0.300 | 0.300 | | | 0.566 | |
| | Outer wall (2*3.14*R*h ) | 2*3.14 | 0.400 | 0.300 | | | 0.754 | |
| | Top face 3.14/4 ( D*D - d*d ) | 0.785 | 0.280 | 0.300 | | | 0.066 | |
| | | | | | | Total Quantity | 1.669 sqm | |
| | | | | | | Total Deducted Quantity | 0.000 sqm | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Net Total Quantity | 1.669 sqm | |
| | | | | | | Say1.669 sqm @ Rs 293.61 / sqm | **Rs 490.04** | |
| 7 | 13.33.1<br>Pointing on stone work with cement mortar 1:3 ( 1 cement : 3 fine sand):Flush/ Ruled pointing | | | | | | | |
| | ( 2 * 3 . 1 4 * r * h = 2*3.14*0.575*0.40 | 2*3.14 | 0.575 | 0.400 | | | 1.445 | |
| | | | | | | Total Quantity | 1.445 sqm | |
| | | | | | | Total Deducted Quantity | 0.000 sqm | |
| | | | | | | Net Total Quantity | 1.445 sqm | |
| | | | | | | Say1.445 sqm @ Rs 314.08 / sqm | **Rs 453.85** | |
| Sl No | Description | No | L | B | D | CF | Quantity | Remark |
| | **2 2 Lid with Locking facility** | | | | | | | |
| | | | | | | Lump-Sum Total | **Rs 500.00** | |
| | Sl No | Description | No | L | B | D | CF | Quantity |
| Remark | **3 3 ( B ) DIGSTER ( inner dia 2.90 mm)** | | | | | | | |
| 1 | 2.8.1<br>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 and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil | | | | | | | |
| | Above dome = 3.14/4*d*d*h | 0.875 | 3.900 | 3.900 | 2.050 | | 27.283 | |
| | bellow dome = 3.14*h*h(3*R-h) | 3.14 | 0.650 | 0.650 | 5.350 | | 7.098 | |
| | projection all round = 3.14*h(R*R - r*r )=3.14*0.20(2.30*2.30 - 2.00*2.00 )-r | 1 | 3.140 | 0.200 | 1.290 | | 0.811 | |
| | | | | | | Total Quantity | 35.192 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 35.192 cum | |
| | | | | | | Say35.192 cum @ Rs 277.58 / cum | **Rs 9768.60** | |
| 2 | 2.26.1<br>Extra for every additional lift 1.5 m or part there of in excavation / banking excavated or stacked materials.All kinds of soil | | | | | | | |
| | Above dome = 3.14/4*d*d*h | 0.875 | 3.900 | 3.900 | 0.550 | | 7.320 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | bellow dome = 3.14*h*h(3*R-h) | 3.14 | 0.650 | 0.650 | 5.350 | | 7.098 | |
| | | | | | | Total Quantity | 14.418 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 14.418 cum | |
| | | | | | | Say14.418 cum @ Rs 99.43 / cum | **Rs 1433.58** | |
| 3 | 4.1.6<br>Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 ( 1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) | | | | | | | |
| | dome outer v = 3.14*h*h(3R | 3.14 | 0.650 | 0.650 | 5.350 | | 7.098 | |
| | projection | 1 | 3.140 | 0.200 | 1.290 | | 0.811 | |
| | Deduction | | | | | | | |
| | dome inner V= 3.14*h*h(3*R - h )=3.14*0.55*0.55(3*1.9-0.65) - | 3.14 | 0.550 | 0.550 | 5.150 | | -4.891 | |
| | opening | 1 | 0.750 | 0.100 | 0.100 | | -0.007 | |
| | | | | | | Total Quantity | 7.909 cum | |
| | | | | | | Total Deducted Quantity | -4.898 cum | |
| | | | | | | Net Total Quantity | 3.011 cum | |
| | | | | | | Say3.011 cum @ Rs 6740.86 / cum | **Rs 20296.73** | |
| 4 | 5.1.2<br>Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size | | | | | | | |
| | dome outer v = 3.14*h*h(3R | 3.14 | 0.550 | 0.550 | 5.150 | | 4.892 | |
| | tank lintel opening portion | 1 | 1.000 | 0.100 | 0.200 | | 0.020 | |
| | projection | 1 | 3.140 | 0.200 | 1.290 | | 0.811 | |
| | Deduction | | | | | | | |
| | dome inner V= 3.14*h*h(3*R - h )=3.14*0.55*0.55(3*1.9-0.65) - | 3.14 | 0.450 | 0.450 | 4.950 | | -3.147 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | opening | 1 | 0.750 | 0.100 | 0.100 | | -0.007 | |
| | | | | | | Total Quantity | 5.723 cum | |
| | | | | | | Total Deducted Quantity | -3.154 cum | |
| | | | | | | Net Total Quantity | 2.569 cum | |
| | | | | | | Say2.569 cum @ Rs 8492.63 / cum | **Rs 21817.57** | |
| 5 | 5.22.6<br>Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more | | | | | | | |
| | As per item No.4 = 2.580 cu.m | 2.580 | | | | 70.0 | 180.600 | |
| | As per item No.9 = 21.871 cu.m | 21.871 | | | | 5.0 | 109.355 | |
| | | | | | | Total Quantity | 289.955 kilogram | |
| | | | | | | Total Deducted Quantity | 0.000 kilogram | |
| | | | | | | Net Total Quantity | 289.955 kilogram | |
| | | | | | | Say289.955 kilogram @ Rs 91.89 / kilogram | **Rs 26643.96** | |
| 6 | 5.9.5<br>Centering and shuttering including strutting, etc. and removal of form for:Lintels, beams, plinth beams, girders bressumers and cantilevers | | | | | | | |
| | Surface Area of projection sides (2*3.14*r*h ) | 2*3.14 | 1.150 | 0.200 | | | 1.445 | |
| | | | | | | Total Quantity | 1.445 sqm | |
| | | | | | | Total Deducted Quantity | 0.000 sqm | |
| | | | | | | Net Total Quantity | 1.445 sqm | |
| | | | | | | Say1.445 sqm @ Rs 607.44 / sqm | **Rs 877.75** | |
| 7 | 6.9<br>Brick work in plain arches in superstructure above plinth level and upto floor five level including centering and shuttering complete for span up to 6 metres with common burnt clay F.P.S. (non modular)bricks of class designation 7.5 in cement mortar 1:3 (1 cement: 3 coarse sand). | | | | | | | |
| | Hemi spear outer volume = 2/3*3.14*r*r*r=2/3*3.14*1.90*1.90*1.90 | 0.67*3.14 | 1.550 | 1.550 | 1.550 | | 7.835 | |
| | Deduction | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Hemi spear inner volume = 2/3*3.14*1.80*1.80*1.80 | 0.67*3.14 | 1.450 | 1.450 | 1.450 | | -6.413 | |
| | Opening | 1 | 0.750 | 0.100 | 1.000 | | -0.075 | |
| | | | | | | Total Quantity | 7.835 cum | |
| | | | | | | Total Deducted Quantity | -6.488 cum | |
| | | | | | | Net Total Quantity | 1.347 cum | |
| | | | | | | Say1.347 cum @ Rs 13592.24 / cum | **Rs 18308.75** | |
| 8 | 13.6.1<br>20 mm cement plaster of mix:1:4 ( 1 cement : 4 coarse sand) | | | | | | | |
| | ferro cement lining over brick work/ Area of hemi speare cuved surface Area = 2*3014*r*r | 2*3.14 | 1.550 | 1.550 | | | 15.088 | |
| | Deduction | | | | | | | |
| | Opening portion | 1 | 0.750 | 1.000 | | | -0.750 | |
| | | | | | | Total Quantity | 15.088 sqm | |
| | | | | | | Total Deducted Quantity | -0.750 sqm | |
| | | | | | | Net Total Quantity | 14.338 sqm | |
| | | | | | | Say14.338 sqm @ Rs 417.76 / sqm | **Rs 5989.84** | |
| 9 | 13.1.1<br>12 mm cement plaster of mix:1:4 ( 1 cement : 4 fine sand) | | | | | | | |
| | ferro cement lining over brick work/ Area of hemi speare cuved surface Area = 2*3014*r*r | 2*3.14 | 1.550 | 1.550 | | | 15.088 | |
| | Deduction | | | | | | | |
| | Opening portion | 1 | 0.750 | 1.000 | | | -0.750 | |
| | | | | | | Total Quantity | 15.088 sqm | |
| | | | | | | Total Deducted Quantity | -0.750 sqm | |
| | | | | | | Net Total Quantity | 14.338 sqm | |
| | | | | | | Say14.338 sqm @ Rs 293.61 / sqm | **Rs 4209.78** | |
| 10 | 13.7.1<br>12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 ( 1 cement : 3 fine sand) | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | spiracle surface Area floor base (3.14*1.80*1.80+0.45*0.45) | 1 | 3.140 | 3.443 | | | 10.812 | |
| | Inside of dome (2*3.14*r*r ) | 2*3.14 | 1.450 | 1.450 | | | 13.204 | |
| | Deduction | | | | | | | |
| | Opening | 1 | 0.750 | 1.000 | | | -0.750 | |
| | | | | | | Total Quantity | 24.016 sqm | |
| | | | | | | Total Deducted Quantity | -0.750 sqm | |
| | | | | | | Net Total Quantity | 23.266 sqm | |
| | | | | | | Say23.266 sqm @ Rs 375.04 / sqm | **Rs 8725.68** | |
| 11 | 50.18.9.10.1<br>Providing and fixing PVC pipes includings jointing of pipes with one step pvc solvent cement, trenching , refilling & testing of joints complete as per direction of Engineer in Charge. 150 mm dia 6 Kgf/cm2 | | | | | | | |
| | In let pipe | 1 | 3.250 | | | | 3.250 | |
| | | | | | | Total Quantity | 3.250 metre | |
| | | | | | | Total Deducted Quantity | 0.000 metre | |
| | | | | | | Net Total Quantity | 3.250 metre | |
| | | | | | | Say3.250 metre @ Rs 844.12 / metre | **Rs 2743.39** | |
| Sl No | Description | No | L | B | D | CF | Quantity | Remark |
| **4 4 ( c ) OUT LET POCKET & TANK (inner dimension 2.60x1.4 mts )** | | | | | | | | |
| 1 | 2.6.1<br>Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed.All kinds of soil | | | | | | | |
| | Out let Tank | 1 | 3.000 | 1.800 | 0.550 | | 2.970 | |
| | Out let pocket | 1 | 0.800 | 0.800 | 1.150 | | 0.736 | |
| | | | | | | Total Quantity | 3.706 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 3.706 cum | |
| | | | | | | Say3.706 cum @ Rs 200.07 / cum | **Rs 741.46** | |
| 2 | 5.1.3<br>Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Cover slab | 1 | 3.000 | 1.800 | 0.075 | | 0.405 | |
| | | | | | | Total Quantity | 0.405 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 0.405 cum | |
| | | | | | | Say0.405 cum @ Rs 8028.36 / cum | **Rs 3251.49** | |
| 3 | 5.2.2<br>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. up tot floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size) | | | | | | | |
| | Out let pocket - floor | 1 | 1.300 | 0.800 | 0.100 | | 0.104 | |
| | Out let Tank - floor | 1 | 2.600 | 1.400 | 0.100 | | 0.364 | |
| | Deduction | | | | | | | |
| | pocket | 1 | 1.200 | 1.000 | 0.100 | | -0.120 | |
| | | | | | | Total Quantity | 0.468 cum | |
| | | | | | | Total Deducted Quantity | -0.120 cum | |
| | | | | | | Net Total Quantity | 0.348 cum | |
| | | | | | | Say0.348 cum @ Rs 10239.65 / cum | **Rs 3563.40** | |
| 4 | 5.9.1<br>Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete | | | | | | | |
| | Covering slab Length wise side | 2 | 3.000 | 0.100 | | | 0.600 | |
| | Covering slab width wise side | 2 | 1.800 | 0.100 | | | 0.360 | |
| | | | | | | Total Quantity | 0.960 sqm | |
| | | | | | | Total Deducted Quantity | 0.000 sqm | |
| | | | | | | Net Total Quantity | 0.960 sqm | |
| | | | | | | Say0.960 sqm @ Rs 313.45 / sqm | **Rs 300.91** | |
| 5 | 60.7.4<br>DR PACKING FOR APRONS - Rough stone dry packing for apron with good quality blasted rubble including packing to compactness to lines levels, cost and conveyance of all materials labour charges etc. complete as per direction of Departmental officers at site | | | | | | | |
| | whole Area | 1 | 4.000 | 1.350 | 0.950 | | 5.130 | |
| | Deduction | | | | | | | |
| | Pocket | 1 | 1.200 | 1.000 | 0.950 | | -1.140 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Total Quantity | 5.130 cum | |
| | | | | | | Total Deducted Quantity | -1.140 cum | |
| | | | | | | Net Total Quantity | 3.990 cum | |
| | | | | | | Say3.990 cum @ Rs 3388.97 / cum | **Rs 13521.99** | |
| 6 | 6.2.1<br>Brick work with common burnt clay modular bricks of class designation 7.5 in foundation and plinth in:Cement mortar 1:4 (1 cement : 4 coarse sand) | | | | | | | |
| | Out let pocket | 1 | 2.800 | 0.200 | 0.950 | | 0.532 | |
| | Out let taNK | 1 | 8.800 | 0.200 | 0.650 | | 1.144 | |
| | | | | | | Total Quantity | 1.676 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 1.676 cum | |
| | | | | | | Say1.676 cum @ Rs 6046.47 / cum | **Rs 10133.88** | |
| 7 | 13.7.1<br>12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 ( 1 cement : 3 fine sand) | | | | | | | |
| | Floor inner | 1 | 2.600 | 1.400 | | | 3.640 | |
| | Inside of out let pocket wall | 1 | 2.400 | 0.950 | | | 2.280 | |
| | Inside of out let tank wall | 1 | 8.000 | 0.650 | | | 5.200 | |
| | | | | | | Total Quantity | 11.120 sqm | |
| | | | | | | Total Deducted Quantity | 0.000 sqm | |
| | | | | | | Net Total Quantity | 11.120 sqm | |
| | | | | | | Say11.120 sqm @ Rs 375.04 / sqm | **Rs 4170.44** | |
| 8 | 13.1.1<br>12 mm cement plaster of mix:1:4 ( 1 cement : 4 fine sand) | | | | | | | |
| | Inside of outlet wall - Tank top 1 | 8 | 0.650 | | | | 5.200 | |
| | | | | | | Total Quantity | 5.200 sqm | |
| | | | | | | Total Deducted Quantity | 0.000 sqm | |
| | | | | | | Net Total Quantity | 5.200 sqm | |
| | | | | | | Say5.200 sqm @ Rs 293.61 / sqm | **Rs 1526.77** | |
| 9 | 50.2.25.1<br>Filling with contractor's own 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 up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Top of dome | 0.875 | 3.300 | 3.300 | 2.050 | | 19.534 | |
| | Dome bottom | 3.14 | 0.650 | 0.650 | 5.350 | | 7.098 | |
| | Deduction | | | | | | | |
| | Dome bellow | 3.14 | 0.650 | 0.650 | 5.350 | | -7.097 | |
| | Tope brick portion | 0.67 | 3.140 | 1.900 | 1.900 | | -7.594 | |
| | | | | | | Total Quantity | 26.632 cum | |
| | | | | | | Total Deducted Quantity | -14.691 cum | |
| | | | | | | Net Total Quantity | 11.941 cum | |
| | | | | | | Say11.941 cum @ Rs 491.53 / cum | **Rs 5869.36** | |
| Sl No | Description | No | L | B | D | CF | Quantity | Remark |
| **5 5.D.PREFILTER ( inner dimension 2.00x1.00 mts)** | | | | | | | | |
| 1 | 2.8.1<br>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 and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil | | | | | | | |
| | | 1 | 1.400 | 2.400 | 1.200 | | 4.032 | |
| | | | | | | Total Quantity | 4.032 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 4.032 cum | |
| | | | | | | Say4.032 cum @ Rs 277.58 / cum | **Rs 1119.20** | |
| 2 | 4.1.8<br>Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 nominal size) | | | | | | | |
| | leveling ( cement concrete ) | 1 | 1.400 | 2.400 | 0.100 | | 0.336 | |
| | | | | | | Total Quantity | 0.336 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 0.336 cum | |
| | | | | | | Say0.336 cum @ Rs 6370.44 / cum | **Rs 2140.47** | |
| 3 | 5.1.2<br>Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size | | | | | | | |
| | R.C.C. for foundation | 1 | 1.400 | 2.400 | 0.100 | | 0.336 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Total Quantity | 0.336 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 0.336 cum | |
| | | | | | | Say0.336 cum @ Rs 8492.63 / cum | **Rs 2853.52** | |
| 4 | 5.1.3<br>Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) | | | | | | | |
| | Cover slab | 1 | 1.400 | 2.400 | 0.075 | | 0.252 | |
| | partition wall | 3 | 0.600 | 0.050 | 0.500 | | 0.045 | |
| | | | | | | Total Quantity | 0.297 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 0.297 cum | |
| | | | | | | Say0.297 cum @ Rs 8028.36 / cum | **Rs 2384.42** | |
| 5 | 5.22.6<br>Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more | | | | | | | |
| | As per item Nos.3 & 4 = 0.336 + 0.297 | 1 | 0.633 | | | 70.0 | 44.310 | |
| | | | | | | Total Quantity | 44.310 kilogram | |
| | | | | | | Total Deducted Quantity | 0.000 kilogram | |
| | | | | | | Net Total Quantity | 44.310 kilogram | |
| | | | | | | Say44.310 kilogram @ Rs 91.89 / kilogram | **Rs 4071.65** | |
| 6 | 6.2.1<br>Brick work with common burnt clay modular bricks of class designation 7.5 in foundation and plinth in:Cement mortar 1:4 (1 cement : 4 coarse sand) | | | | | | | |
| | Allround | 1 | 7.600 | 0.200 | 1.000 | | 1.520 | |
| | | | | | | Total Quantity | 1.520 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 1.520 cum | |
| | | | | | | Say1.520 cum @ Rs 6046.47 / cum | **Rs 9190.63** | |
| 7 | 13.7.1<br>12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 ( 1 cement : 3 fine sand) | | | | | | | |
| | floor | 1 | 1.000 | 2.000 | | | 2.000 | |
| | inner walls | 1 | 6.000 | 1.000 | | | 6.000 | |
| | | | | | | Total Quantity | 8.000 sqm | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Total Deducted Quantity | 0.000 sqm | |
| | | | | | | Net Total Quantity | 8.000 sqm | |
| | | | | | | Say8.000 sqm @ Rs 375.04 / sqm | **Rs 3000.32** | |
| 8 | 13.1.1<br>12 mm cement plaster of mix:1:4 ( 1 cement : 4 fine sand) | | | | | | | |
| | Out let walls | 1 | 7.600 | 1.000 | | | 7.600 | |
| | Top of cover slab | 1 | 1.400 | 2.400 | | | 3.360 | |
| | | | | | | Total Quantity | 10.960 sqm | |
| | | | | | | Total Deducted Quantity | 0.000 sqm | |
| | | | | | | Net Total Quantity | 10.960 sqm | |
| | | | | | | Say10.960 sqm @ Rs 293.61 / sqm | **Rs 3217.97** | |
| Sl No | Description | No | L | B | D | CF | Quantity | Remark |
| **6 6.E.SEPTICK TANK & SOAK PIT( inner dimension 1.80x0.60mts & 75 mm dia)** | | | | | | | | |
| 1 | 2.6.1<br>Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed.All kinds of soil | | | | | | | |
| | Septic Tank | 1 | 2.200 | 1.000 | 1.100 | | 2.420 | |
| | Soak pit (circular shape ) | 0.785 | 0.750 | 0.750 | 1.150 | | 0.508 | |
| | | | | | | Total Quantity | 2.928 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 2.928 cum | |
| | | | | | | Say2.928 cum @ Rs 200.07 / cum | **Rs 585.80** | |
| 2 | 4.1.8<br>Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 nominal size) | | | | | | | |
| | Septic Tank bed leveling | 1 | 2.200 | 1.000 | 0.100 | | 0.220 | |
| | Soak pit - do - | 0.785 | 0.750 | 0.750 | 0.100 | | 0.045 | |
| | | | | | | Total Quantity | 0.265 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 0.265 cum | |
| | | | | | | Say0.265 cum @ Rs 6370.44 / cum | **Rs 1688.17** | |

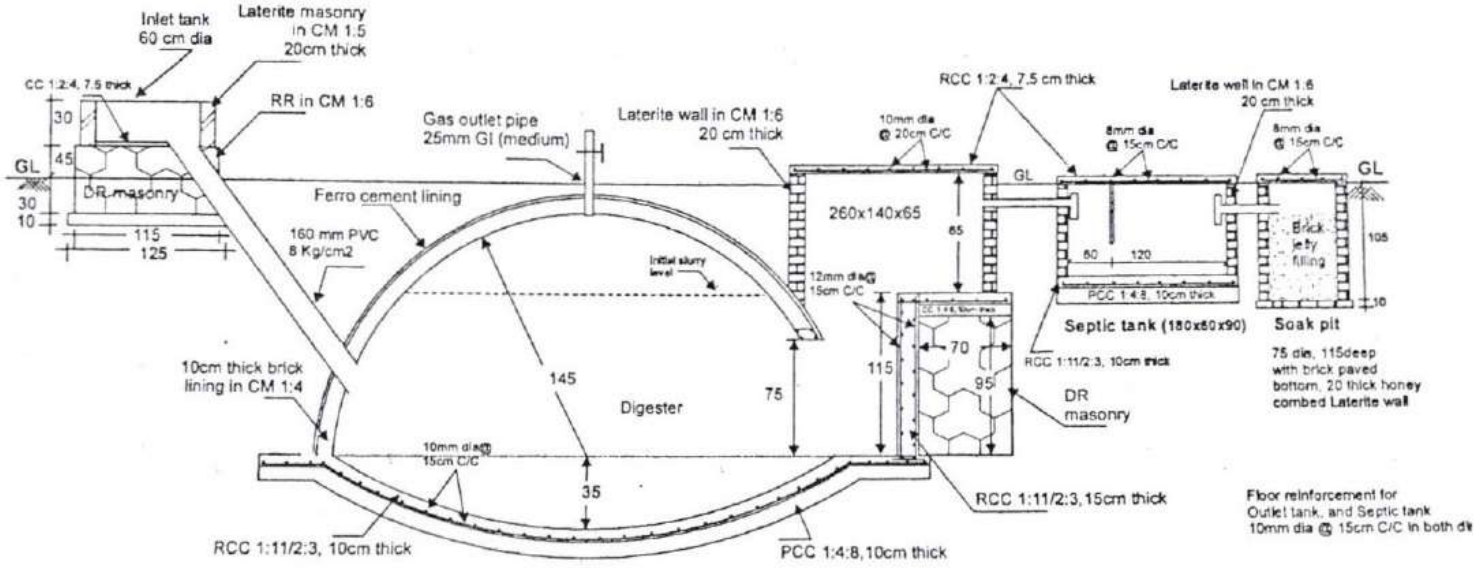
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 5.1.2<br>Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size | | | | | | | |
| | Septic tank top covering slab | 1 | 2.200 | 1.000 | 0.100 | | 0.220 | |
| | | | | | | Total Quantity | 0.220 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 0.220 cum | |
| | | | | | | Say0.220 cum @ Rs 8492.63 / cum | **Rs 1868.38** | |
| 4 | 5.1.3<br>Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) | | | | | | | |
| | wearing coat on the top of the floor | 1 | 1.800 | 0.600 | 0.050 | | 0.054 | |
| | | | | | | Total Quantity | 0.054 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 0.054 cum | |
| | | | | | | Say0.054 cum @ Rs 8028.36 / cum | **Rs 433.53** | |
| 5 | 5.9.21<br>Centering and shuttering including strutting, etc. and removal of form for:Lintels, beams, plinth beams, girders, bressumers and cantilevers with water proofply 12 mm thick. | | | | | | | |
| | foundation sides | 1 | 6.400 | 0.100 | | | 0.640 | |
| | | | | | | Total Quantity | 0.640 sqm | |
| | | | | | | Total Deducted Quantity | 0.000 sqm | |
| | | | | | | Net Total Quantity | 0.640 sqm | |
| | | | | | | Say0.640 sqm @ Rs 705.98 / sqm | **Rs 451.83** | |
| 6 | 5.15<br>Providing, hoisting and fixing up to floor five level precast reinforced cement concrete in lintels, beams and bressumers including setting in cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centering and shuttering but excluding the cost of reinforcement with, 1:1.5:3 (1 cement : 1.5 coarse sand (Zone - III) : 3 graded stone aggregate 20 mm nominal size) | | | | | | | |
| | partition wall1 | 1 | 0.500 | 0.050 | 0.500 | | 0.013 | |
| | covering slab for septic tank | 1 | 2.200 | 1.000 | 0.100 | | 0.220 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | covering slab for soak pit | 0.785 | 0.750 | 0.750 | 0.100 | | 0.045 | |
| | | | | | | Total Quantity | 0.278 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 0.278 cum | |
| | | | | | | Say0.278 cum @ Rs 12490.30 / cum | **Rs 3472.30** | |
| 7 | 5.22.6<br>Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more | | | | | | | |
| | As per item No. 3 & 4 = 0.22 +.0.054 = 0.274 cu.m | 1 | 0.274 | | | 80.0 | 21.920 | |
| | | | | | | Total Quantity | 21.920 kilogram | |
| | | | | | | Total Deducted Quantity | 0.000 kilogram | |
| | | | | | | Net Total Quantity | 21.920 kilogram | |
| | | | | | | Say21.920 kilogram @ Rs 91.89 / kilogram | **Rs 2014.23** | |
| 8 | 6.1.2<br>Brick work with common burnt clay F.P.S (non modular) bricks of class designation 7.5 in foundation and plinth in:Cement mortar 1:6 (1 cement : 6 coarse sand) | | | | | | | |
| | Septic tank | 1 | 5.600 | 0.200 | 0.900 | | 1.008 | |
| | Soak pit = 3.14*h ( R*R - r*r )= 3.14*0.90(0.80*0.80-0.60*0.60 | 1 | 2.826 | 0.280 | | | 0.792 | |
| | | | | | | Total Quantity | 1.800 cum | |
| | | | | | | Total Deducted Quantity | 0.000 cum | |
| | | | | | | Net Total Quantity | 1.800 cum | |
| | | | | | | Say1.800 cum @ Rs 6775.21 / cum | **Rs 12195.38** | |
| 9 | 13.9.1<br>Cement plaster 1:3 ( 1 cement : 3 coarse sand) finished with a floating coat of neat cement.12 mm cement plaster | | | | | | | |
| | Septic tank floor | 1 | 1.800 | 0.600 | | | 1.080 | |
| | Side wall inner | 1 | 4.800 | 0.900 | | | 4.320 | |
| | | | | | | Total Quantity | 5.400 sqm | |
| | | | | | | Total Deducted Quantity | 0.000 sqm | |
| | | | | | | Net Total Quantity | 5.400 sqm | |
| | | | | | | | | |

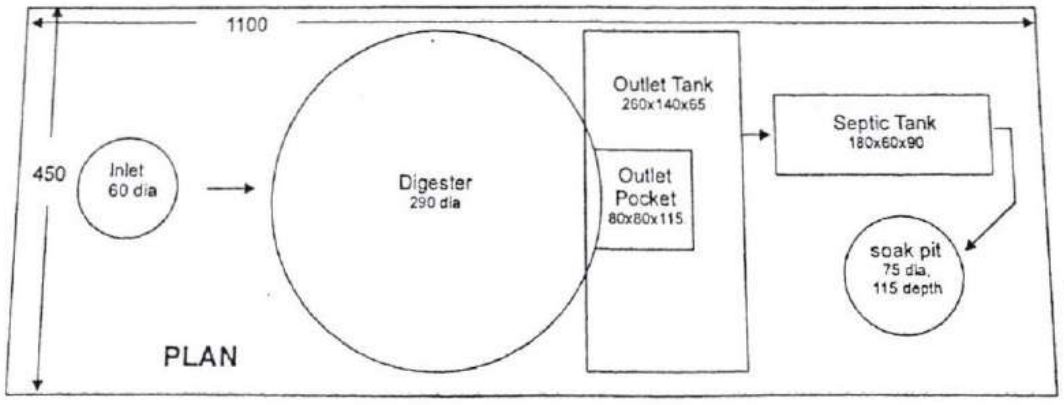
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Say5.400 sqm @ Rs 385.25 / sqm | **Rs 2080.35** | |
| 10 | 13.1.1<br>12 mm cement plaster of mix:1:4 ( 1 cement : 4 fine sand) | | | | | | | |
| | Side wall outer | 1 | 4.800 | 0.900 | | | 4.320 | |
| | | | | | | Total Quantity | 4.320 sqm | |
| | | | | | | Total Deducted Quantity | 0.000 sqm | |
| | | | | | | Net Total Quantity | 4.320 sqm | |
| | | | | | | Say4.320 sqm @ Rs 293.61 / sqm | **Rs 1268.40** | |
| 11 | 50.18.8.9.2<br>Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes with one step PVC Solvent cement and testing of joints complete as per direction of Engineer-in-Charge. Concealed work, including cutting chases and making good the wall etc.<br>110 mm pipe 4 kgf/cm2 | | | | | | | |
| | out let pipe | 1 | 8.000 | | | | 8.000 | |
| | | | | | | Total Quantity | 8.000 metre | |
| | | | | | | Total Deducted Quantity | 0.000 metre | |
| | | | | | | Net Total Quantity | 8.000 metre | |
| | | | | | | Say8.000 metre @ Rs 629.02 / metre | **Rs 5032.16** | |
| | | | | | | | **Amount reserved for GST payments** | **Rs 27580.00** |
| | | | | | | | **Total** | **Rs 257413.35** |
| | | | | | | Lumpsum for round off | **0.0** | |
| | | | | | | | **TOTAL Rs 257413.35** | |
| | | | | | | | **Rounded Total Rs 257413.35** | |
| | | | | | | Rupees Two Lakh Fifty Seven Thousand Four Hundred and Thirteen Only | | |

(Cost Index Applied for this estimate is 35.59%)

# Bio gas Plant (Capacity 50 kg/day)




SECTIONAL VIEW

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