ESTIMATING AND COSTING

Time : 3 Hour   *Max.Marks : 75*

PART A

(9 x 1 = 9)

I. Answer all questions in one word or one sentence.Each question carries 1marks.

1. Define plinth area.

2. State the term GST?

3. Write down the Prismoidal formula for finding out the earthwork volume

4. % of contractors profit in the rate analysis

5. Deduction for opening in plastering is not consider when the area is less than --------------

6. Identify jack rafter.

7. State Sinking fund.

8. Define Free hold property.

9. Define value of a property.

PART B II.

II. Answer any eight questions from the following, Each question carries 3 marks.

1. Distinguish between detailed and abstract estimates.

2. List the different types of estimates

3. The plinth area of a building with tiled roof is 80 m^2. The rise of roof is 1.6 m and height of wall

3 m. Calculate the cost of building assuming cube rate as Rs. 1100/m^3

4. Write down the steps involved in the computation of rate analysis

5. Define the terms Lead, Lift, and Cost Index

6. Identify the different methods for preparing detailed estimate.

7. Calculate the length of hip rafter and quantity of wood work required for hip rafter of the pitched tiled roof with eve to eve span 4.6m and1/3 rise. Size of hip rafter is 6 x 13 cm.

8. Calculate the number of bricks required for the construction of a Compound Wall having length 20m, height l.5m and thickness 0.20m. Using standard brick.

9. Write short notes on scrap value, salvage value and market value

10. List the different types of valuation.   3 x 8 = 24 Marks

PART C

III. Answer ALL questions. Each question carries 7 marks.

III. Identify any three methods of earth work volume computation.

OR

IV. Details of an embankment are given. There is no transverse slope for the ground. Formation width l2m and side slope 2:1. Calculate the quantity of earthwork using trapezoidal formula from   0 m to l20m chainage.

Ground level	32.0	33.2	34.4	34.6	37.0	37.2	37.4
Chainage	0	20	40	60	80	100	120

V. Work out the rate per unit for RR Masonry in CM l:6 from the following data.

Materials :	Labour :
I m3 blasted rubble @ Rs. 650/m^3	0.70 mason @ Rs. 750/Each
0.3m^3 dry sand @ Rs. 850/m^3	0.35 man @ Rs. 600 /Each
72 Kg cement @ Rs. 9000/t	0.70 woman @ Rs. 600/Each

OR

VI. Work out the rate for lm3 CC 1: 4 : 8 using 40 mm broken stone

Materials :	Labour :

40 mm broken stone 0.95 m^3 @ R. 760/m^3	Mason 0.10 @ Rs. 700/E
River sand 0.48 m^3 @ Rs. 2800/m^3	Man 1.00 @Rs.550/E
Cement 171 kg. @ Rt. 6000/t	Women 1.40 @. Rs. 500/E

VII. Write down the standard specification for First class brick work in cm 1:6 for superstructure

<div align="center">OR</div>

VIII. Conclude the following: (i) Standard Data book (ii) Schedule of rates. (iii) Cost of material at site

IX.Calculate the quantity of brick work in CM1:6 for the given residential building.

<div align="center">OR</div>

X. Calculate the quantity of inside and outside wall plastering in CM 1:4 for the residential building given in fig.1

XI. Calculate the quantity of earth work and PCC required for the given septic tank.

<div align="center">OR</div>

XII. Calculate the quantity of earth work and PCC required for the given Retaining wall

XIII. The sinking fund amount of a building is estimated to Rs. 50,000. Whose future life is 25 years? Find the yearly installment of sinking fund, which should be @ 6 %. Also define sinking fund.

<div align="center">OR</div>

XIV. A Government employee having a pay of ? 10,000 per month, occupies a quarter having a plinth area of 90sq.m. The prevailing rate per square meter of plinth area is Rs. 3,000. Calculate and suggest the amount of monthly rent payable by the employee.

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Designation :

Institution :

Course:ESTIMATING AND COSTING

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MarkDistribution

| Module | h i / M o d ule | M a r ks= hi /∑ Hi) * 12 3 (± 5 %) | Type of Questions | | | | | | | |
| | | | PART A | | PART B | | PART C | | TOTAL | |
			No of Questions	Marks	No of Questions	Marks	No of Questions	Marks	No of Questions	Marks
I	13	27.5	3	2	3	9	2	14	8	26
II	15	31.81	1	1	2	6	4	28	7	36
III	18	38.17	2	2	3	9	4	28	9	39
IV	12	25.44	3	3	2	6	2	14	7	22
TOTAL	58		9	9	10	30	12	84	31	123

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QuestionWiseAalysis

Course:ESTIMATING AND COSTING

Q.No Module	Outcome	Cognitive Level	Marks	Timein min.
PART A				
I.1	MO 1.01	R	1	2.4
I.2	MO 1.01	R	1	2.4
I.3	MO1.04	R	1	2.4
II.1	MO 2.01	R	1	2.4
III.1	MO3.02	R	1	2.4
III.2	MO 3.02	U	1	2.4
IV.1	MO 4.02	R	1	2.4
IV.2	MO 4.06	R	1	2.4
IV.3	MO4.01	R	1	2.4
PART B				
I.1	MO 1.01	U	3	7.2
I.2	MO 1.02	R	3	7.2
II.1	MO 2.02	U	3	7.2
II.2	MO 2.05	U	3	7.2
II.3	MO 2.01	R	3	7.2
II.1	MO 3.01	U	3	7.2
III.2	MO 3.02	U	3	7.2
II.3	MO 3.03	U	3	7.2
IV.1	MO 4.03	R	3	7.2
IV.2	MO 4.04	U	3	7.2
PART C				
I.1	MO 1.03	R	7	16.8
I.2	MO 1.04	A	7	16.8
II.1	MO 2.02	U	7	16.8
II.2	MO 2.02	U	7	16.8
III.1	MO 3.04	A	7	16.8
III.2	MO 3.03	U	7	16.8
III.3	MO3.03	U	7	16.8
III.4	MO3.02	R	7	16.8
IV.1	MO 4.04	A	7	16.8
IV.2	MO4.03	A	7	16.8
IV.3	MO4.01	R	7	16.8
IV.4	MO4.02	R	7	16.8