KUMARAGURU
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Register Number:……..

B.E DEGREE EXAMINATIONS: APRIL 2015

(Regulation 2009)

Seventh Semester

CIVIL ENGINEERING

CEE125: Estimation and Costing

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. The expected out turn of cement concrete 1:2:4 per mason per day is

   a 1.5 m3 b 2.5 m3

   c 3.5 m3 d 5 m3

2. The most reliable estimate is

   a Preliminary estimate b Detailed estimate

   c Plinth area estimate d Square meter

3. Unit of measurement of pipe in water supply

   a m2 b Running meters

   c m3 d Nos

4. The total length of a cranked bar through (d) at 45degree in case of a beam of effective length L,is

   a L+0.42 d b L+2x0.42 d

   c L - 0.42 d d L-2x0.4 d

5. The height of the sink of wash basin above floor level is kept

   a 60cm b 70cm

   c 75cm d 90cm

6. The unit of measurement for electrical worker in a building is

   a Length of wires in m b Points

   c Circuits d Watts

7. Pick up the correct statement from the following

a Support moments are negative moments
b Bars are cranked at 45 degree
c Stirrups support the shear force
d All the above

8. The Report writing contains

a) Plan
b) Estimation
c) Detailed specification
d) All the above

9. One yard equal to

a 1m
b 1ft
c 3m
d 3ft

10. While estimating a reinforced cement structure, the omitted cover of concrete is assumed

a At the end of reinforcing bar,notn less than 25mm or twice the diameter of the bar
b In thin slab,12mm minium or diameter of the bar whichever is more
c For reinforcing longitudinal bar in a beam 25mm minimum or diameter of the largest bar which is more
d All the above

PART B (10x2 = 20 Marks)

11. Differentiate abstract estimate from Revised estimate?
12. List out main items of work of a building with units of measurement?
13. What do you mean by development of length of reinforcement?
14. Define “Analysis of rate”?
15. Distinguish between Contractor and Contract? Types of Contract?
16. Distinguish book value from scrap value.
17. Define cash flow and cash control.
18. What do you understand by the term Valuation.
19. An old building has been purchased by a person at a cost of Rs 50000 excluding the cost of the land. Calculating the amount of annual sinking fund at 4% interest. life of building as 20 years and scrap value of the building as 20% of the cost of purchase.
20. Define report writing?

PART C (5x14 = 70 Marks)

21. a) Estimate the following quantities for Drawing -I (7)

i) Earth work excavation, Lintel concrete and R.C.C for roof

Estimate the following quantities for Drawing -I (7)

ii) First class brick work in super structure, Basement and DPC

(OR)

b) (i) What are the types of estimate? Explain any three. (7)

(ii) Distinguish between center line method and long and short wall method. (7)

22. a) Prepare the bar bending schedule for the Doubly reinforced beam

Size of the beam -440mmx900mm(overall)

Size of support -300mm

Main reinforcement – 5 nos of16mm dia (Tension reinforcement) and 3nos of 16mmdia(Compression reinforcement)

Assume any other data required

(OR)

b) Prepare a detailed estimate for the construction of a new state highway for one km,The formation width is 12m,average height of embankment is 1.2m.side slope is 2:1The metalled width is 4m.Three coats of metalling (soling coat, Inter coat and Top coat)are provided as per cross section. The surface shall be finished with two coats of painting

23. a) What are the different types of depreciation method? and explain any three methods ? (8)

Calculate the material required for cement concrete of different proportion (6)
i)1:2:4
ii)1:3:6

(OR)

b) Calculate cost for the following item
1.2cm thick Damp proof course with cement mortor1:2-100sq.m
2.Brickwork using I Class bricks in cement mortor 1:6- 10m2

2cm thick Damp proof course with c:m 1:2 – 100m2

Materials

Cement	-0.9m3
Sand	-1.8m3
Cem-seal	-1kg

Labour

Head mason	- 1 No
Mason	-8nos
Mazdoor grade I	- 4 Nos
Mazdoor grade II	-8 Nos

Brick work using II Class brick cm 1;6 – 10m2

Brick	**-800Nos**
Cement mortor 1:6	**-3.2 m3**
Mason Iclass	**- 6Nos**
Mason II class	**- 11 Nos**
Mazdoor Iclass	**-8 Nos**
Mazdoor grade II	**-15Nos**

Cost of material at site

Cement	-Rs4500/m3
Sand	-Rs 600/m3
Cem-seal	-Rs 230/kg
Brick	-Rs2940/1000nos

Cost of labout

Head mason	-Rs 800each/day
Mason I class	-Rs 780each/day
Mason II class	-Rs 560each/day
Mazdoor I class	-Rs 250each/day
Mazdoor II class	-Rs 150each/day

Assume any other data required

24. a) (i) What are the purpose of valuation? and list out the method of valuation (7)

(ii) Explain the following (7)

a)Obsolescence

b)Capitalized value

(OR)

b) In a plot of land costing Rs 200000/-.A building has been constructed at a total cost of RS 8,00,000 including water supply and sanitary. The building consist of six flats for four tenents. Calculate the standard rent for each flat. The owner expect 8% return on the cost of construction and 5% return on the cost o land,

i)The life of building as 70 years and sinking fund will be created on 4%interest basis

ii) Annual repair cost at 2% of the cost of construction

iii)Other outgoings including taxes at 30% of the net returns on the building

25. a) (i) Write short notes on “Detailed specification for building”. (7)

(ii) How will you value the old building and old equipments? (7)

(OR)

b) How will you prepare the report writing for water supply and sanitation system?

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