QPC: RN18001228 AR 18 Reg. No

GIET MAIN CAMPUS AUTONOMOUS GUNUPUR – 765022

B. Tech Degree Examinations, November – 2021

(Seventh Semester)

BCVPE7020 – Estimation Costing and Professional Practice

(**Civil Engineering**)

Time: 3 hrs Maximum: 100 Marks

Answer ALL Questions

The figures in the right hand margin indicate marks.

PART – A: (Multiple Choice Questions) **(2 x 10 = 20 Marks)**

Q.1. Answer ***ALL*** questions — CO # PO #

a. If the formation level of a highway has a uniform gradient for a particular length, and the ground is also having a longitudinal slope, the earthwork may be calculated by — CO1 PO1
   i. Mid-section formula ii. Trapezoidal formula
   iii. Prismoidal formula iv. All of the above

b. The expected out turn of 12 mm plastering with cement mortar is — CO2 PO2
   i. 8.0 sq m ii. 2.0 sq m
   iii. 6.0 sq m iv. 4.0 sq m

c. Due to change in price level, a revised estimate is prepared if the sanctioned estimate exceeds — CO2 PO2
   i. 2 % ii. 5 %
   iii. 3 % iv. 4 %

d. A cement concrete road is 1000 m long, 8 m wide and 15 cm thick over the sub-base of 10 cm thick gravel. The box cutting in road crust is — CO1 PO1
   i. 500 m^3 ii. 1000 m^3
   iii. 1500 m^3 iv. 2000 m^3

e. The expected out turn of cement concrete 1:2:4 per mason per day is — CO2 PO2
   i. 1.5 m^3 ii. 5 m^3
   iii. 3.5 m^3 iv. 2.5 m^3

f. For 12 mm thick cement plastering 1:6 on 100 sq m new brick work, the quantity of cement required, is — CO1 PO2
   i. 0.2 m^3 ii. 0.247 m^3
   iii. 0.274 m^3 iv. 0.295 m^3

g. Pick up the item of work not included in the plinth area estimate — CO1 PO1
   i. Wall thickness ii. Room area
   iii. Verandah area iv. Courtyard area

h. Brick walls are measured in sq. m if the thickness of the wall is — CO2 PO2
   i. 10 cm ii. 15 cm
   iii. 20 cm iv. None of these

i. The minimum width of a septic tank is taken — CO1 PO1
   i. 70 cm ii. 75 cm
   iii. 80 cm iv. 90 cm

j. The item of the brick structure measured in sq m is — CO1 PO1
   i. Reinforced brick work ii. Brick work in arches
   iii. Brick edging iv. Broken glass coping

PART – B: (Short Answer Questions) **(2 x 10 = 20 Marks)**

Q2. Answer ALL questions		CO #	PO #
a.	Write any two methods of valuation.	CO1	PO1
b.	Define capital cost.	CO2	PO1
c.	Calculate the number of standard modular bricks required for flat brick soling for 1 km length of 5m wide road.	CO2	PO1
d.	Mention the two heads of analysis of rates.	CO3	PO2
e.	What is analysis of rate? What is the purpose of rate analysis?	CO1	PO1
f.	List the principles adopted while writing the specification.	CO1	PO1
g.	Write down the unit of measurement and unit of payment for plastering and DPC.	CO2	PO1
h.	Explain necessity of Measurement book in estimation.	CO2	PO1
i.	Write the full form BOQ, EPC and BOT.	CO1	PO1
j.	How much quantity of bricks is required for 1.5 m^3 of brick work?	CO1	PO1

PART – C: (Long Answer Questions) **(15 x 4 = 60 Marks)**

Answer ***ALL*** questions

		Marks	CO #	PO #
3.a.	Estimate the labour and material cost of cement concrete 1:2:4 for 1 cum.	8	CO3	PO2
b.	Estimate the labour and material cost of cement concrete 1:1:2 for 1 cum.	7	CO3	PO2
	(OR)			
c.	Estimate the labour and material cost for I-class brickwork in superstructure with 20X20X10 cm brick with 1:6 cement sand mortar for 1 cum.	8	CO2	PO2
d.	Estimate the labour and material cost for II-class brickwork in superstructure with 20X20X10 cm brick with 1:5 cement sand mortar for 1 cum.	7	CO2	PO2
4.a.	Estimate the labour and material cost for 12 mm plastering 1:6 for 1 sq m.	8	CO3	PO2
b.	Estimate the labour and material cost for 12 mm plastering 1:5 for 1 sq m.	7	CO2	PO2
	(OR)			
c.	Explain the general specifications of first class and second class brickworks.	8	CO2	PO2
d.	Enlist and analyze different methods for valuation of building?	7	CO2	PO2
5.a.	What is a contract? What are the different types of civil engineering contract? State the suitable of item rate contract.	8	CO3	PO2
b.	Determine the quantities of earthwork for the portion of a road between chainages and 55 from the following data, length being measured with a standard 20 m chain:	7	CO1	PO2

Chainage	50	51	52	53	54	55
G.L.	131.1	131.2	130.9	131.2	130.8	130.7

(OR)

c.	Prepare bar bending schedule for a beam of span 5m and cross section 230mmX500mm, is reinforced with stirrups 8mm dia @ 150c/c.	8	CO3	PO2
d.	Prepare bar bending schedule for a beam of span 5m and cross section 230mmX450mm, is reinforced with stirrups 16mm dia @ 200c/c.	7	CO1	PO3
6.a.	Differentiate between center line method and long wall short wall method with a example of one room.	8	CO2	PO3
b.	Write short notes on Earnest money deposit and Price escalation clause of contract.	7	CO1	PO3
	(OR)			
c.	Write short notes on technical sanction and role of a quantity surveyor.	8	CO1	PO3
d.	Explain in detail the different types of tenders with suitability and advantages.	7	CO2	PO2

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