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## GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Seventh Semester – Regular) Examinations, November – 2022

### BPCCV7010 – Estimation Costing and Professional Practice

(Civil Engineering)

Time: 3 hrs

Maximum: 70 Marks

#### Answer ALL Questions

The figures in the right hand margin indicate marks.

#### PART – A: (Multiple Choice Questions)

(1 x 10 = 10 Marks)

- Q.1. Answer ALL questions** [CO#] [PO#]
- |    |   |   |     |     |
|----|---|---|-----|-----|
| a. | The brick work is not measured in cum in case of  |   | CO1 | PO3 |
|    | (i) One or more than one brick wall   | (ii) Brick work in arches   |     |     |
|    | (iii) Reinforced brick work   | (iv) Half brick wall  |     |     |
| b. | The plinth area of a building not includes  |   | CO1 | PO2 |
|    | (i) Area of the walls at the floor level  | (ii) Internal shaft for sanitary installations up to 2 Sq m. in area                        |     |     |
|    | (iii) Lift and wall including landing   | (iv) Area of cantilevered porch   |     |     |
| c. | In long and short wall method of estimation, the length of long wall is the centre to centre distance between the walls and                     |   | CO1 | PO1 |
|    | (i) Breadth of the wall   | (ii) Half breadth of wall on each side  |     |     |
|    | (iii) One fourth breadth of wall on each side   | (iv) None of these  |     |     |
| d. | The most reliable estimate is   |   | CO2 | PO2 |
|    | (i) Detailed estimate   | (ii) Preliminary estimate   |     |     |
|    | (iii) Plinth area estimate  | (iv) Cube rate estimate   |     |     |
| e. | According to ISI method of measurement, the order of the sequence is  |   | CO2 | PO2 |
|    | (i) Length, breadth, height   | (ii) Breadth, length, height  |     |     |
|    | (iii) Height, length, breadth   | (iv) None of these  |     |     |
| f. | Pick up the correct statement from the following:   |   | CO3 | PO1 |
|    | (i) Bricks are paid per thousand  | (ii) Cement is paid per 50 kg bag   |     |     |
|    | (iii) Lime is paid per quintal  | (iv) All of the above   |     |     |
| g. | Pick up the incorrect statement from the following:   |   | CO3 | PO3 |
|    | (i) The built up covered area at the floor level of any storey of a building is called plinth area  | (ii) The usable covered area of the rooms of any storey of a building is called carpet area |     |     |
|    | (iii) The carpet area of a building along with area of its kitchen, pantry, store, lavatory, bath room and glazed veranda, is called floor area | (iv) None of these  |     |     |
| h. | Pick up the item of work not included in the plinth area estimate   |   | CO3 | PO2 |
|    | (i) Wall thickness  | (ii) Room area  |     |     |
|    | (iii) W.C. area   | (iv) Courtyard area   |     |     |
| i. | The expected out turn for earth work in excavation in ordinary soil per workman per day is  |   | CO4 | PO3 |
|    | (i) 1.00 cum  | (ii) 2.00 cum   |     |     |
|    | (iii) 3.00 cum  | (iv) 4.00 cum   |     |     |
| j. | The damp proof course (D.P.C.) is measured in   |   | CO4 | PO2 |
|    | (i) Cub. m  | (ii) Sq. m  |     |     |
|    | (iii) Meters  | (iv) None of these  |     |     |

**PART – B: (Short Answer Questions)**

**(2 x 10 = 20 Marks)**

Q.2. Answer ALL questions

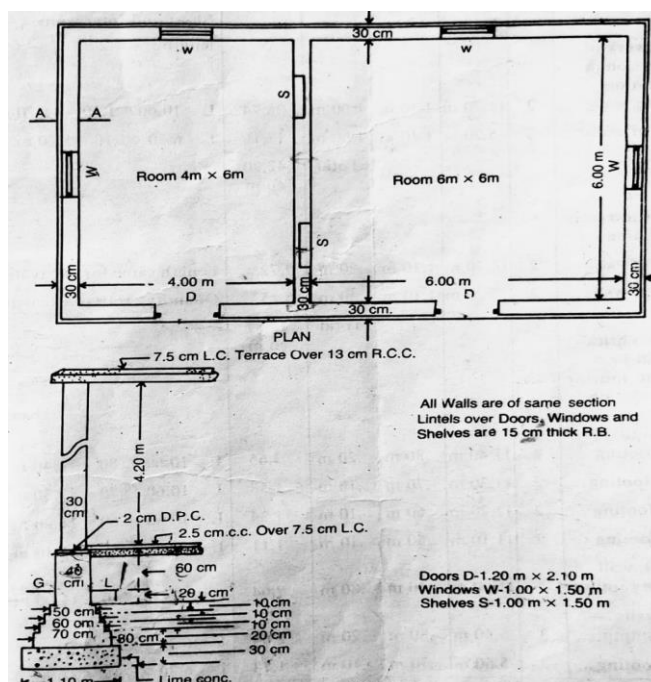
	[CO#]	[PO#]
a. State any four purposes of preparing approximate estimate?	CO1	PO3
b. State and explain data required for preparing detailed estimate?	CO1	PO2
c. Explain the term “Contingencies”?	CO2	PO2
d. What do you mean by schedule of rates?	CO2	PO3
e. What is quantity of dry concrete required for 1m <sup>3</sup> of wet concrete?	CO2	PO1
f. Name the two types of lease ?	CO3	PO2
g. What is depreciation method of valuation?	CO3	PO1
h. What is CPM in a Project Management?	CO3	PO3
i. State the rules of deduction in plastering as per I.S. 1200?	CO4	PO2
j. Define (i) Administrative approval (ii) Technical sanction	CO4	PO1

**PART – C: (Long Answer Questions)**

**(10 x 4 = 40 Marks)**

Answer ALL questions

	Marks	[CO#]	[PO#]
3. a. What are the various aspects involved in method of estimating? Explain the importance of each aspect	5	CO1	PO2
b. List out general items of work for building estimates?	5	CO1	PO1
(OR)			
c. Give detailed specifications for the brick masonry?	5	CO1	PO2
d. Explain principle units for various items of Work?	5	CO1	PO2
4. a. Prepare bar bending schedule and calculate the quantity of reinforcement in a R.C.C (1:2:4) lintel as per data given below: Total Length of the lintel including bearing=1.30 m Thickness of wall=300 mm; Thickness of lintel=150 mm; Main reinforcement 6 bars of 12 mm $\phi$ (out of which 2 bars are bent up near support) Top reinforcement 2 bars of 10 mm $\phi$ ; 6 mm $\phi$ , 2 legged stirrups are provided @ 175mm c/c uniformly	5	CO2	PO3
b. Estimate the Earth work excavation for the figure given below:	5	CO2	PO3



(OR)

- |       |  |   |     |     |
|-------|--|---|-----|-----|
| c.    | Estimate the concrete filling in foundation for the figure given above   | 5 | CO2 | PO2 |
| d.    | Estimate the Brick work for the figure given above   | 5 | CO2 | PO3 |
| 5. a. | Prepare the unit rate for Lime concrete in Foundation or floor with 40mm gauge stone ballast , White lime and Sand (proportion 1:2:4)unit 1cum,Take 10 cum | 5 | CO3 | PO2 |
| b.    | Prepare the unit rate for R.C.C work in beams , Slabs 1:2:4 unit 1Cum. Take 10 Cum   | 5 | CO3 | PO2 |

(OR)

- |       |  |   |     |     |
|-------|--|---|-----|-----|
| c.    | Prepare the unit rate for 1 Class Brick work in foundation and Plinth with nominal size bricks with cement sand mortar 1:6-unit 1 Cum. Take 10 Cum | 5 | CO3 | PO1 |
| d.    | Prepare the unit rate for Brick floor 10cm thick cement pointed – unit 1 Sqm. Take 100 Sqm   | 5 | CO3 | PO2 |
| 6. a. | Explain how you will calculate the quantity of earth work in hill road?  | 5 | CO4 | PO3 |
| b.    | What are the different overhead charges in rate analysis? Explain.   | 5 | CO4 | PO1 |

(OR)

- |    |   |   |     |     |
|----|---|---|-----|-----|
| c. | Compare the following types of contract: (i) Item rate contract vs lump – sum contract. (ii)Cost plus contract vs turnkey contract. | 5 | CO4 | PO2 |
| d. | Write short notes on Labour schedule and finance schedule.  | 5 | CO4 | PO3 |

--- End of Paper ---