

4E4116

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B.Tech. IV-Sem (Main & Back) Exam; June-July 2016

Civil Engineering

4CE6A Quantity Surveying & Valuation

Time: 3 Hours

Maximum Marks: 80

Min. Passing Marks (Main & Back): 26

Min. Passing Marks (Old Back): 24

Instructions to Candidates:-

Attempt any five questions, selecting one question from each unit. All Questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.

Units of quantities used/ calculated must be stated clearly.

Use of following supporting material is permitted during examination.

(Mentioned in form No.205)

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1. NIL

2. NIL

UNIT-I

Q.1 Discuss the importance of quantity survey and valuation techniques in civil construction projects. [16]

OR

Q.1 (a) What do you mean by 'Supplementary Estimates'? Explain the circumstances under which such estimates are prepared. [8]

(b) Describe various factors that influence the accuracy of estimates of building construction project. [8]

UNIT-II

- Q.2 (a) Write the purposes of 'Rate Analysis'. [6]
- (b) Analyze the rate of 12 mm thick 1: 4 cement and local sand mortar plaster on brick wall including material, labour T and P, watering etc. [10]

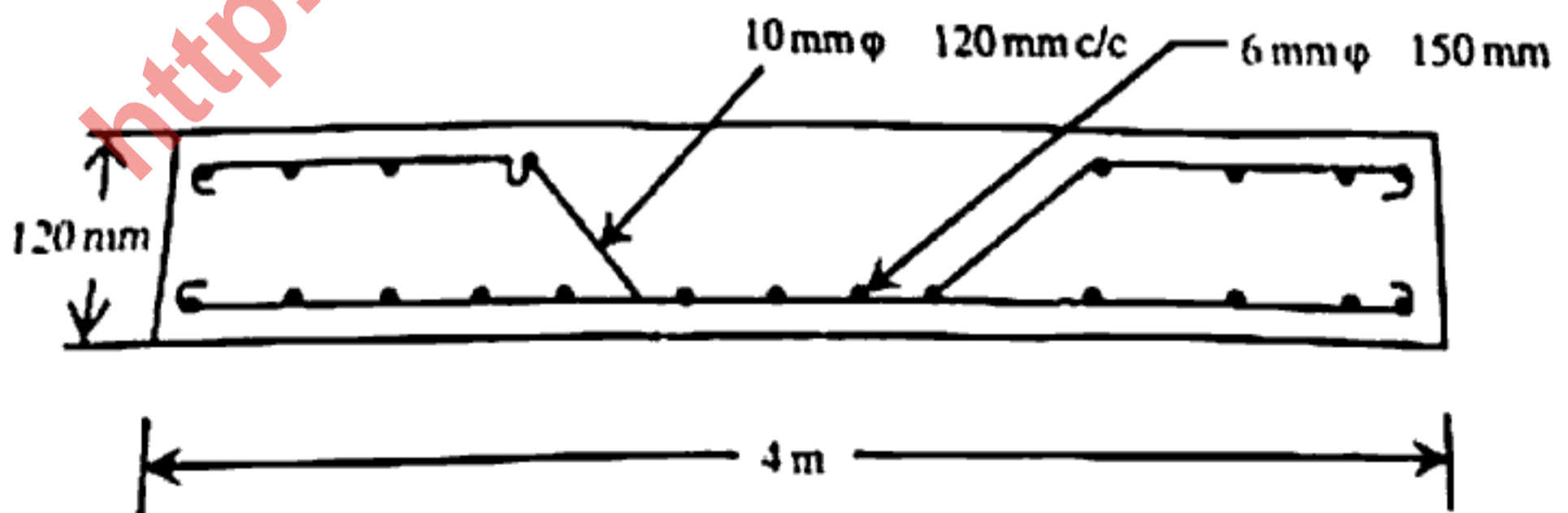
OR

- Q.2 (a) Write detail note on various factors affecting the Rate Analysis. [6]
- (b) Analyze the rate of following item or work (assume suitable data e.g. rates of material and labour etc.) for "First class brick work in 1:6 cement sand mortar". [10]

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UNIT-III

- Q.3 Prepare a details estimate of the quantities of concrete and steel of R.C.C. slab of overall dimensions 4m x 8.5m having an overall depth of 120mm. 10mm diameter main bars are spaced at 120mm centers with alternate bars bend up at 1/5 span. 6mm diameter distribution steel is provided at 150mm centers. Cross section of slab is shown in Figure. Prepare bar bending schedule. Separately. [16]



OR

Q.3 Calculate the quantity of earthwork for a portion of a road from the following data.

Formation width of road = 10m

[16]

Side slope = 2 : 1

Assume there is no transverse slope

Use prismoidal formula

Distance in M	0	100	200	300	400	500	600
R.L. of ground	114.50	114.75	115.25	115.20	116.10	116.85	118
R.L. of formation	115	Upward Gradient 1 : 200					

UNIT-IV

Q.4 (a) Explain with an example the procedure for working out the cost of materials at site. [6]

(b) Differentiate between an ordinary cash book and subsidiary cash book. What certificate is required to be given at the time of closing of a cash book? [10]

OR

Q.4 Write short notes on the following:

[4×4=16]

(a) Work charge establishment

(b) Travelling allowance

(c) Measurement Book

(d) Contingencies

UNIT-V

- Q.5 (a) Write down the purpose of valuation. [4]
- (b) Explain 6 major types of outgoings. [4]
- (c) Explain year's purchase and sinking fund. [8]

OR

- Q.5 (a) What do you mean by depreciation? Explain four major methods of calculating depreciation. [6]
- (b) A three storey building is standing on a plot of land measuring 800 Sq.m. The plinth area of each storey is 400 Sq.m. The building is of RCC framed structure and the future life may be taken as 70 years. The building fetches a gross rent of Rs. 1500 per month. Work out the capitalized value of the property on the basis of 6% net yield. For sinking fund 3% compound interest may be assumed. Cost of land may be taken as Rs 40 per Sq.m. Other data required may be assumed suitably. [10]