320734(20)

B. E. (Seventh Semester) Examination, April-May 2021

(New Scheme)

(Civil Engg. Branch)

QUANTITY SURVEYING and COST EVALUATION

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

*Note : Attempt all questions. Part (a) from each question is compulsory. Attempt any **two** parts from part (b), (c) and (d) of each question.*

Unit-I

1. (a) Write units of measurement for 4 items of works.   2

(b) Name different method of estimates. Explain in brief centerline method.   7

(c) Explain a revised estimate and a supplementary estimate. State also the conditions under which they are prepared.   7

(d) Write short notes on :   7

    (i) Suspense account

    (ii) Materials at site accounts

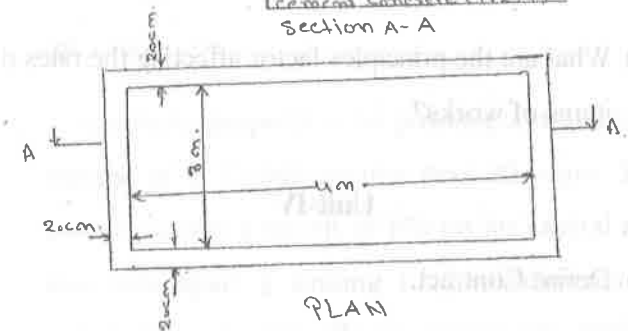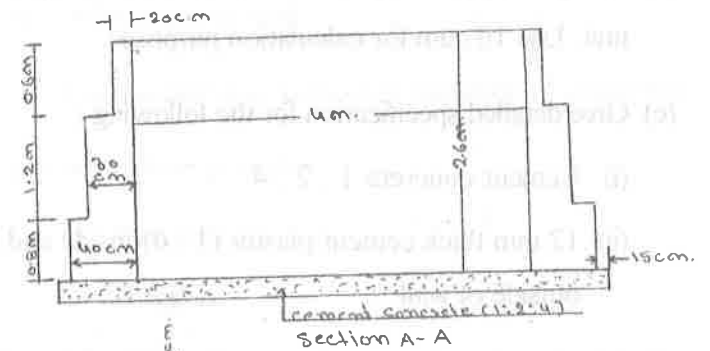   (iii) Indent of stoves

    (iv) Measurement book

Unit-II

2. (a) What type of data is required for detaile estimate.   2

   (b) Explain about following formulae to be used estimate for quantity of earthwork :   7

    (i) Mid sectional area method

    (ii) Mean sectional area method

    (iii) Prismoidal formula method

(c) Estimate the quantities of following items in underground masonry water tank as shown in figure :

    (i) Earthwork

    (ii) 1st class brick work in cement mortar 1 : 4

    (iii) 20 mm internal plaster   7

Section A- A

PLAN

(d) A road embankment is 20 m wide with side slope 2 : 1. The ground is level in transverse directions to the centre line. Calculate volume contained in the length of 350 m. The central height at 50 m intervals

being 2·0, 3·5, 3·0, 4·0, 4·5, 3·0, 3·5 and 4·0 m
respectively.　　　　　　　　　　　　　　　　7

Unit-III

3. (a) What is the purpose of analysis of rates?　　2

(b) Analysis the rate of cement concrete 1 : 2 : 4 per
unit. Use 10 cum for calculation purposes.　　7

(c) Give detailed specification for the following :

(i) Cement concrete 1 : 2 : 4

(ii) 12 mm thick cement plaster (1 : 6) inside and
outside of wall　　　　　　　　　　7

(d) What are the principles factor affecting the rates of
items of works?　　　　　　　　　　　7

Unit-IV

4. (a) Define Contract.　　　　　　　　　　　2

(b) Explain in brief different types of contract.　　7

(c) Discuss the following :　　　　　　　　7

(i) Arbitration

(ii) Escalation

(iii) Liquidated damages

(d) Discuss the different types of contracts with their
advantages and disadvantages.　　　　　　7

Unit-V

5. (a) Define Sinking fund.　　　　　　　　　2

(b) Explain different method of valuation of properties.　7

(c) Write short notes on :　　　　　　　　7

(i) Year purchase

(ii) Mortgage

(iii) Lease

(d) A leasehold property is to produce a net annual
income of ₹ 12,000 for the next 30 years. The
owner expects a return of 8% on his capital and
also sets apart a sinking fund installments to
accumulate 6% annually to replace the capital.
Determine the value of the property.　　　　7