C

Reg. No. :

Question Paper Code: 57102

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018
Seventh Semester
Civil Engineering
15UCE702 - ESTIMATION,COSTING AND VALUATION ENGINEERING
(Regulation 2015)
(Schedule of Rates is Permitted)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Brick walls are measured in sq. m if the thickness of the wall is   CO1-R

    (a) 10cm   (b)15cm   (c) 20cm   (d) 25cm

2. For 100 sq. m cement concrete (1 : 2: 4) 4 cm thick floor, the quantity of   CO2-R
   cement required, is

    (a) 0.90 m^3 (b) 0.94 m^3 (c) 0.98 m^3 (d) 1.00 m^3

3. A cement concrete road is 1000 m long, 8 m wide and 15 cm thick over   CO3- R
   the sub-base of 10 cm thick gravel. The box cutting in road crust is

    (a) 500 m^3 (b) 1000 m^3 (c) 1500 m^3 (d) 2000 m^3

4. The brick work is not measured in cu m in case of   CO4- R

    (a) One or more than one brick wall   (b) Brick work in arches

    (c) Reinforced brick work   (d) Half brick wall

5. The value at the end of useful life of the property is called_____ value.   CO5- R

    (a) Salvage   (b) Scrap   (c) Depreciation   (d) Salvage and Scrap

PART – B (5 x 3= 15 Marks)

6. When do you prepare supplementary Estimate?   CO1- U

7. What are the purpose of Rate Analysis?   CO2- U

8. Define Center Line Method.   CO3- R

9. List out the various parts of an aqueduct.   CO4- R

10. Define years purchase and state its use.   CO5- R

PART – C (5 x 16= 80 Marks)

11. (a) (i) What are the steps used in preparation of detailed estimate?   CO1- U   (8)

       (ii) Describe revised estimate and when it is prepared?   CO1- U   (8)

Or

(b) (i) Enlist the types of estimate. Mention the situation when revised   CO1- U   (8)
estimate is prepared**.**

(ii) Prepare approximate estimate of a building using following   CO1- App   (8)
data.

     1. Proposed area of the buildings 140 sq.m.

     2. Similar type of building is recently constructed in nearby
locality having built up area 100 sq.m. and the total cost of
that construction is Rs.12 lakhs.

12. (a) An RCC roof slab of overall size 6600 mm x 2500 mm &   CO2- App   (16)
thickness 150 mm is provided with 10 mm diameter main bars
bent up (45°) alternatively and placed at 150mm c/c .The
distribution steel of 6mm diameter is provided @ 200mm c/c.
Concrete cover is 15 mm on all sides. Find out the total quantity of
plain steel. Prepare a bar bending schedule.

Or

(b) Explain standard data and the assessment of man hours, materials   CO2- U   (16)
and machinery for common civil works with an example.

13. (a) Estimate the quantity of brickwork in foundation and quantity of   CO3- App   (16)
concrete for roof slab for the building shown in figure.

PLAN

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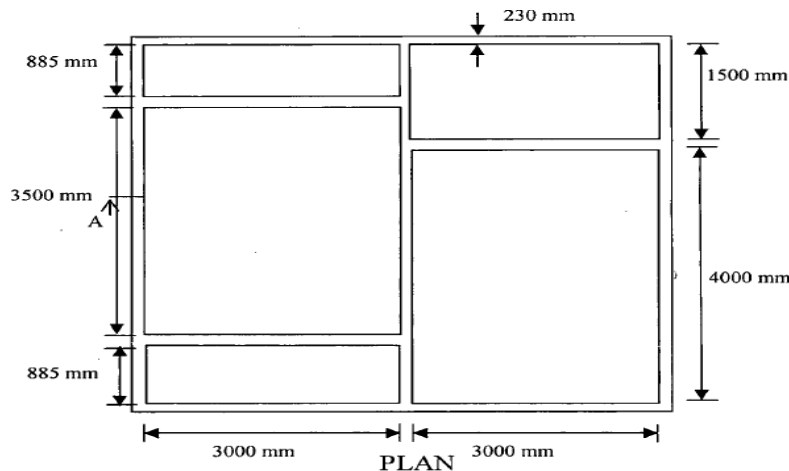
(b) Estimate the quantities of following item of works for the shop shown in fig given below   CO3- App   (16)
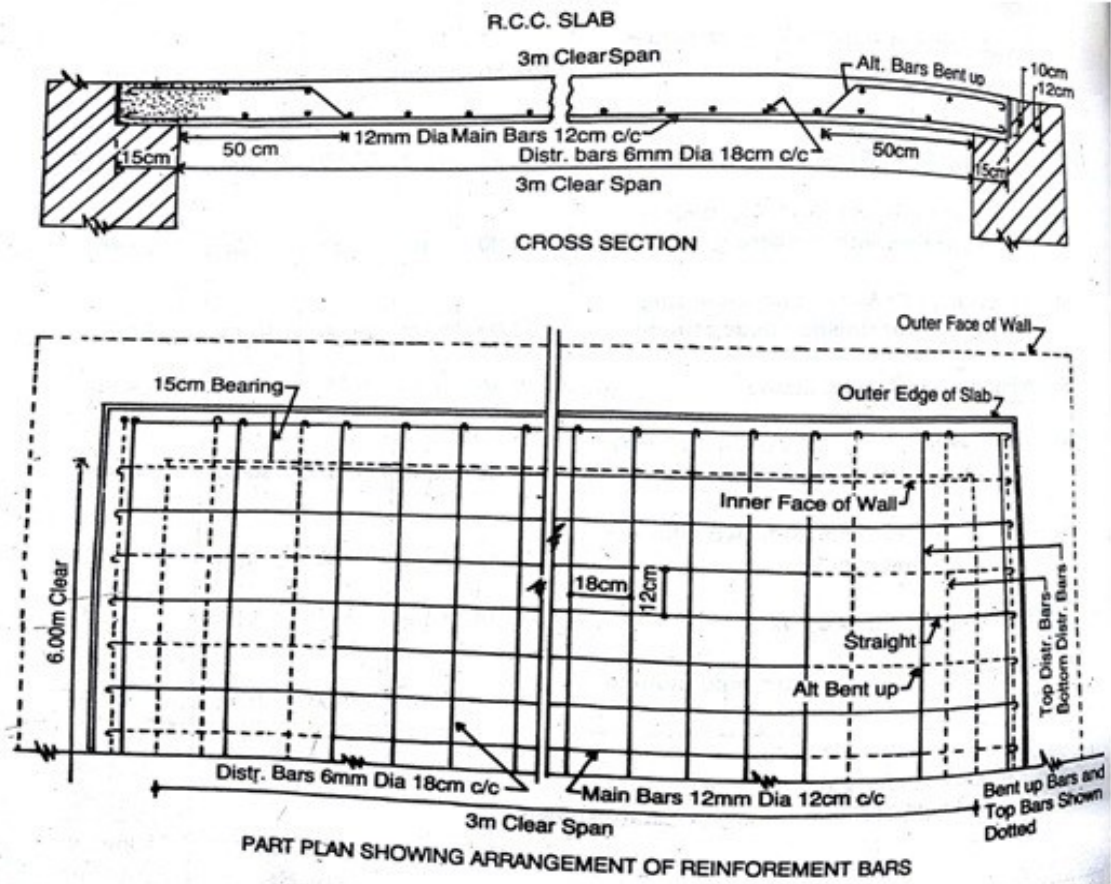
   (a) Excavation for foundation

   (b) Cement concrete in foundation

   (c) Reinforced cement concrete work in lintels, sunshade and Roof slab
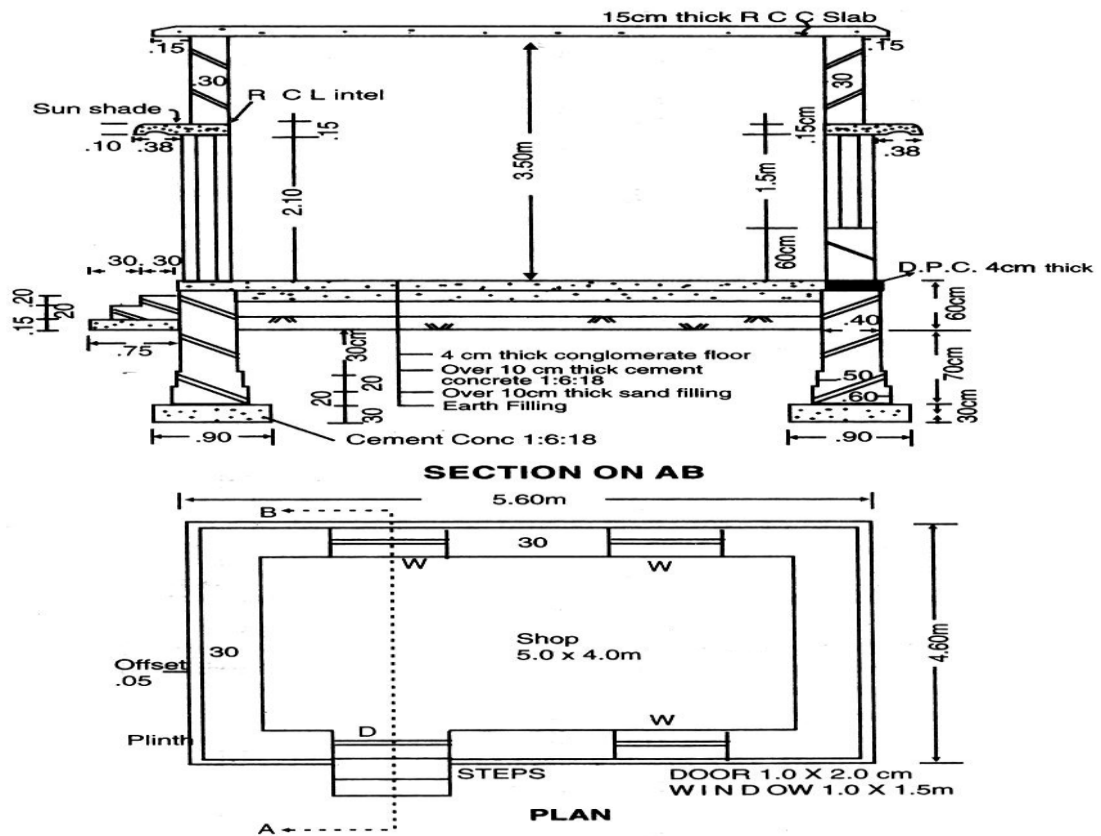
14. (a) Briefly explain the report preparation for estimation of culvert and roads.   CO4- U   (16)

(b) Prepare a detailed estimate of a R.C.C. slab of 3 metres clear span and 6 metres long from the given drawings. R.C.C work including centering and shuttering and steel reinforcement in detail shall be taken separately.   CO4- App   (16)

R.C.C. SLAB

3m Clear Span

Alt. Bars Bent up   10cm   12cm

12mm Dia Main Bars 12cm c/c
Distr. bars 6mm Dia 18cm c/c

50 cm   15cm   50cm   15cm

3m Clear Span

CROSS SECTION

Outer Face of Wall

15cm Bearing   Outer Edge of Slab

Inner Face of Wall

18cm   12cm

Straight

Alt Bent up

6.00m Clear

Top Distr. Bars
Bottom Distr. Bars

Distr. Bars 6mm Dia 18cm c/c   Main Bars 12mm Dia 12cm c/c   Bent up Bars and Top Bars Shown Dotted

3m Clear Span

PART PLAN SHOWING ARRANGEMENT OF REINFOREMENT BARS

15. (a) (i) Explain any two methods of calculating depreciation of property with examples.   CO5- U   (8)

    (ii) Write notes on the following factors   CO5- U   (8)
        (a) Compound interest factor
        (b) Discount factors
        (c) Rental method of valuation
        (d) Valuation based on cost

                         Or

    (b) (i) Calculate the standard rent of a building with the following data   CO5- App   (8)
            Cost of land: Rs. 7,00,000/-
            Cost of building: Rs. 16,00,000/-
            Expected life of the building in 65 years, returns expected
            5% on land and 8% on building. Annual repair 1% on the
            cost of building, sinking fund on 4% interest basis on 90%
            of the cost of building. Other outgoing 30% of the return
            from the building.

        (ii) Mention the various methods of valuation and explain.   CO5- U   (8)

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