Question Paper Code : 91319

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/ DECEMBER 2019

Seventh Semester

Civil Engineering

CE 6704 – ESTIMATION AND QUANTITY SURVEYING

(Regulations 2013)

(Also common to PTCE 6704 – Estimation and Quantity Surveys for B.E.
(Part – Time) Sixth Semester – Civil Engineering Regulations 2014)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions.

PART – A   (10×2=20 Marks)

1. Define estimate.

2. What are the units of measurement for

    i) Weathering course

    ii) Coping on the parapet.

3. What is aqueduct ?

4. What are the components of a culvert ?

5. What do you mean by analysis of rates ?

6. What is specification ?

7. Define valuation.

8. Define the Capitalized value.

9. What is report ?

10. State the requirement of a report.

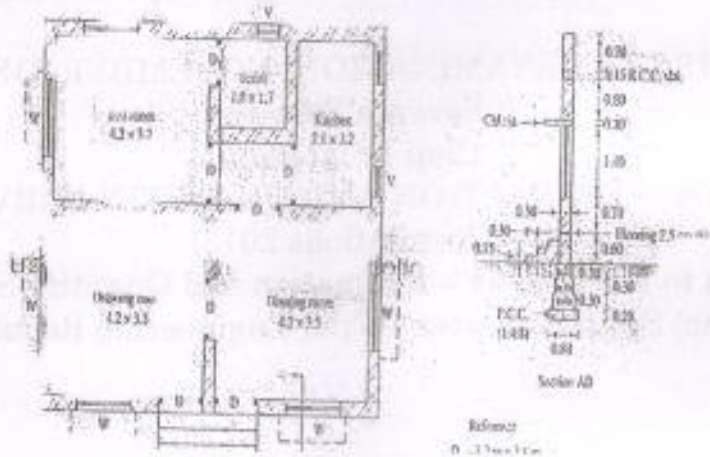PART – B   (5×13=65 Marks)

11. a) Estimate the quantities of the following items of work.

    i) Earth work excavation

    ii) Sand filling in plinth

iii) PCC 1:4:8 in foundation.
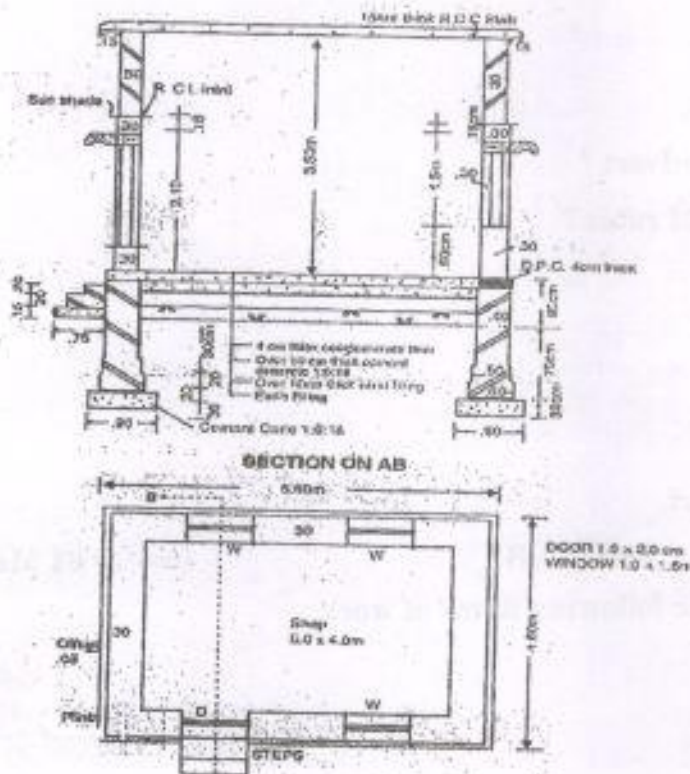
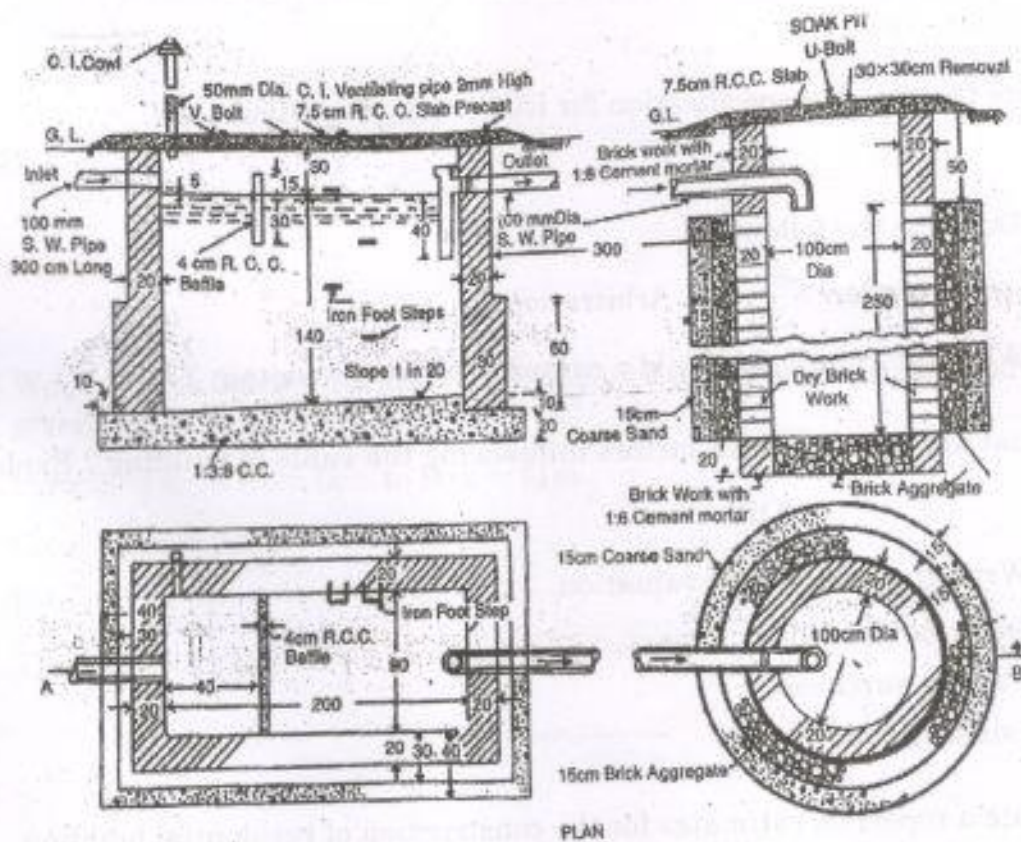## A SINGLE STOREYED RESIDENTIAL BUILDING
Scale 1 cm = 1 m

(OR)

b) Estimate the quantities of the following items of work.

 i) Damp proof course 4 cm thick (1:2:4).

 ii) Brick work in cement mortar in super structure.

 iii) R.C.C. (1:2:4)

12. a) Prepare a detailed estimate of a septic tank with soak pit for 25 users from the given drawing.

Septic tank shall be of I class brick work in 1:4 cement mortar; The foundation and floor shall be 1:3:6 cement concrete. Inside of septic tank shall be finished with 12 mm cement plaster and floor shall be finished with 20 mm cement plaster with 1:3 mortar mixed with water proofing compound. Upper and lower portion of soak pit shall be of II class brick work in 1:6 cement mortar and middle portion shall be of dry brick work. Roof cover slabs and baffle wall shall be of precast R.C.C. The length of the connecting pipe from latrine seat may be taken as 3 m.

(OR)

b) Prepare a detailed estimate for the construction of a new state highway for 1 km length. The formation width of road is 10 m, average height of bank is 1 m and side slope 2:1. The metalled width is 3.7 m and three coats of metalling are to be provide as per cross section shown in fig. The surface shall be finished with two coats of painting.

CROSS SECTION OF ROAD

13. a) Write the detailed specification for RCC work proportion 1:2:4.

(OR)

b) i) Describe the following. **(6)**

    a) E-tender   b) Arbitration.

ii) What informations should a contract document contain ? **(7)**

14. a) What are the important factors influencing the value of building ? Explain.

(OR)

b) i) Write the necessity of valuation. **(7)**

ii) Describe the following :
Year's purchase
sinking fund. **(6)**

15. a) Write a report on estimates for the construction of residential building.

(OR)

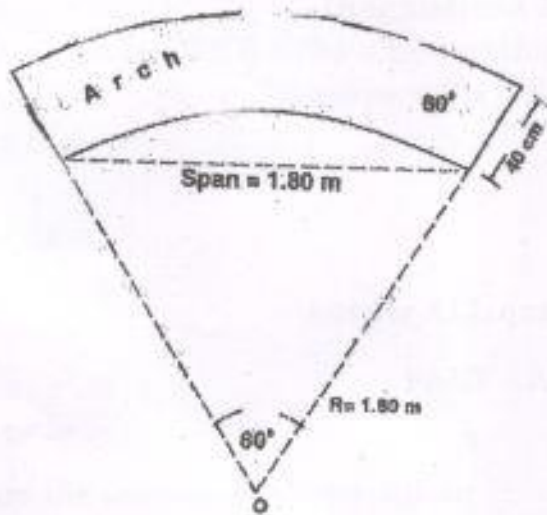b) Write a report on estimates for the construction of a culvert.

PART – C (1×15=15 Marks)

16. a) What are the types of contract ? Explain.

(OR)

b) i) Calculate the quantities of brick work in an arch over 1.8 m span opening as shown in fig. The arch is 40 cm thick and the breadth of the wall is 40 cm.

ii) Work out the Brick work and cement plaster to soffit of an **arch as per data** given below.

Length of arch from face to face = 11m

Clear span = 3.0 m

Rise = 0.86 m

Thickness of arch = 0.4 m