Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐

## Question Paper Code : 52784

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Seventh Semester

Civil Engineering

CE 6704 — ESTIMATION AND QUANTITY SURVEYING

(Regulation 2013)

(Common to PTCE 6704 – Estimation and Quantity Surveying for B.E. Part Time – Sixth Semester – Civil Engineering – Regulation 2014)

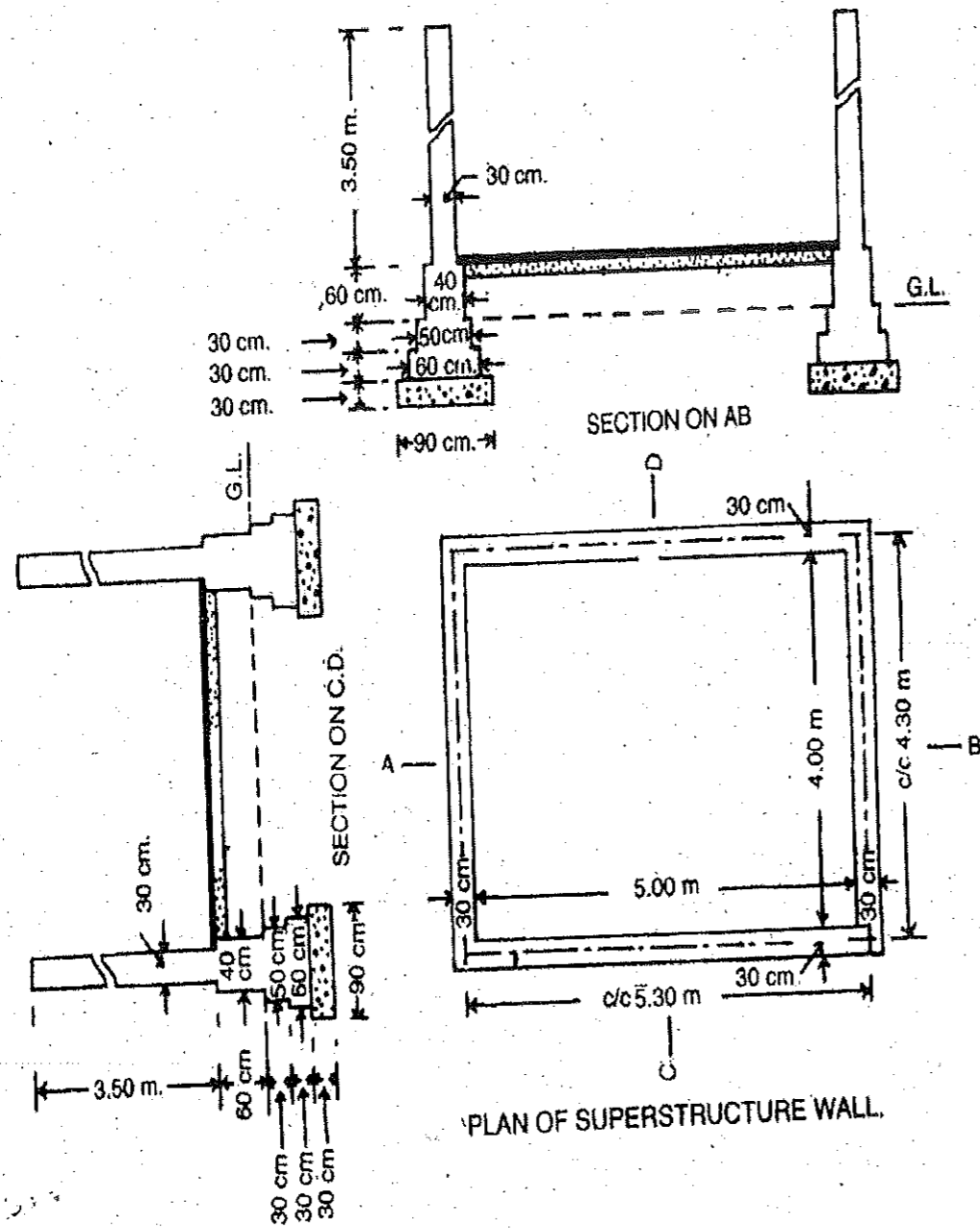Time : Three hours                                                                 Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write the way of building estimate by individual wall method.

2. Recall how the quantities of masonry work in arch is calculated.

3. Calculate the number of standard modular bricks required for flat brick soling for one kilometer length of 4m wide road.

4. Name the important parts to be considered in the estimation of Culvert.

5. Mention the two heads in the analysis of rates.

6. List the important content in contract documents.

7. Write any two methods of valuation.

8. Name the two types of lease.

9. Write the principle of report preparation.
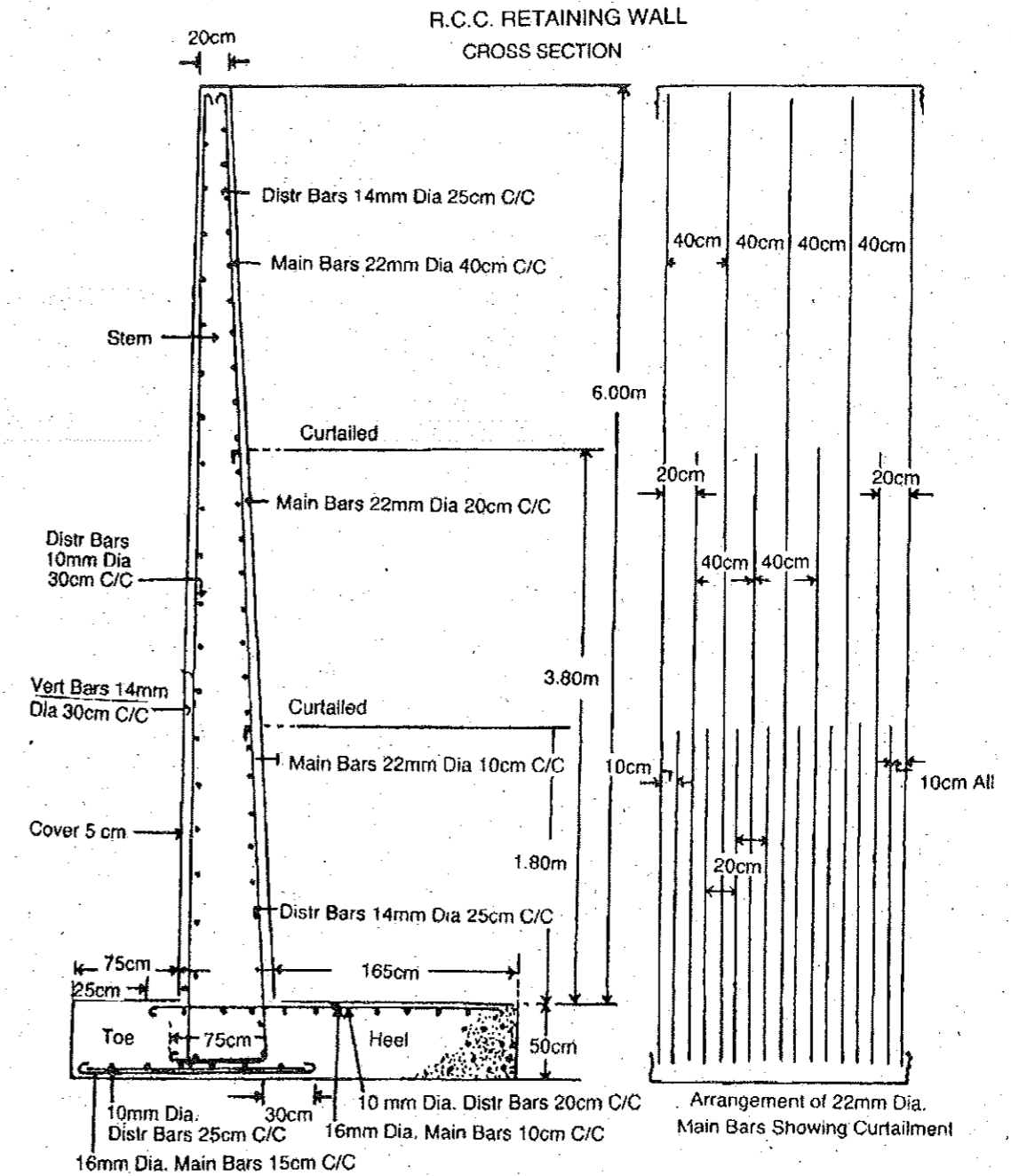
10. Define capital cost.

11. (a) Estimate the following quantity for the plan of a single room building of 5m × 4m and sections represents the cross sections of the walls with foundation. (i) Earthwork in excavation in foundation, (ii) Concrete in foundation, (iii) Brickwork in foundation and plinth and (iv) Brickwork in superstructures.



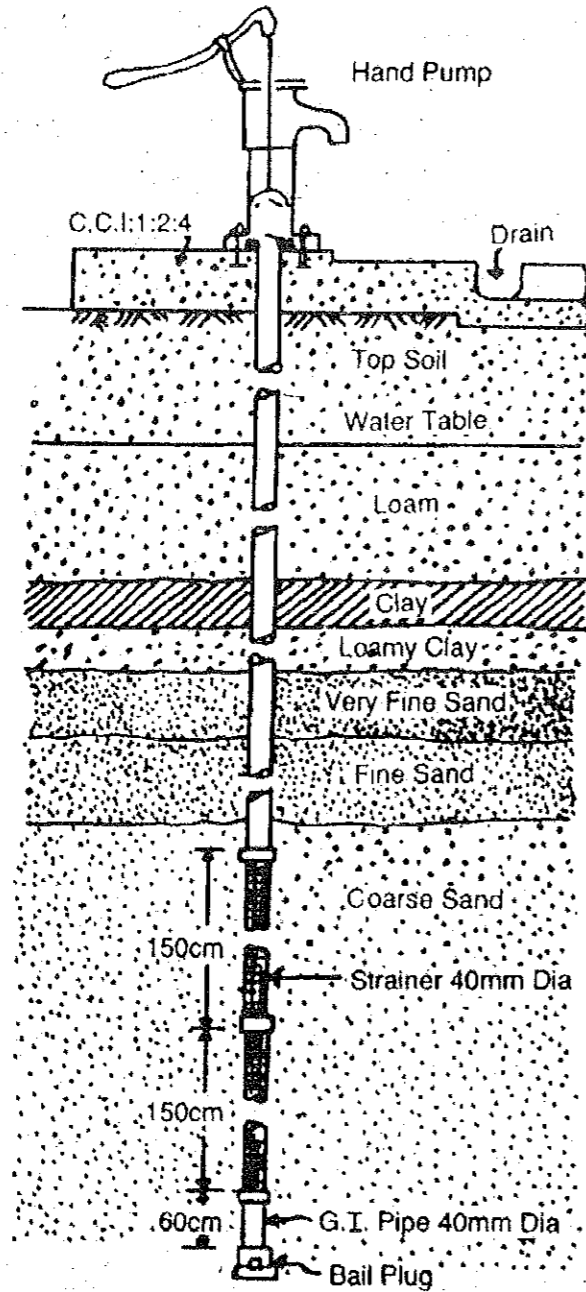SECTION ON AB

SECTION ON C.D.

PLAN OF SUPERSTRUCTURE WALL.

Or

(b) (i) The arch of a culvert subtends an angle of 120° at the center. The span of the arch is 5m and the thickness of the arch is 50cm. The length of the arch is from face to face. Calculate the quantities of arch masonry work and cement plastering in the soffit of arch. (8)

(ii) An arch of 2.5m span subtends an angle of 80° at the center. The thickness of arch is 30cm and the breadth of wall is 40cm. Calculate the quantity of arch masonry work. (5)

12. (a) Prepare a detailed estimate of a R.C.C retaining wall of 25 m in length whose cross section is given below. Steel bars in reinforcement shall have to be taken separately.

R.C.C. RETAINING WALL
CROSS SECTION



Arrangement of 22mm Dia. Main Bars Showing Curtailment

Or

(b) Prepare a detailed estimate of a 40mm diameter tube well 40m deep from the given drawing. Length of the strainer is 3 meter. Assume suitable rates.



13. (a) Write the general specifications of a first class building.

Or

(b) (i) Recall the types of contracts. (5)

(ii) Write the important particulars in tender documents. (8)

14. (a) (i) Recall the purpose of valuation. (6)
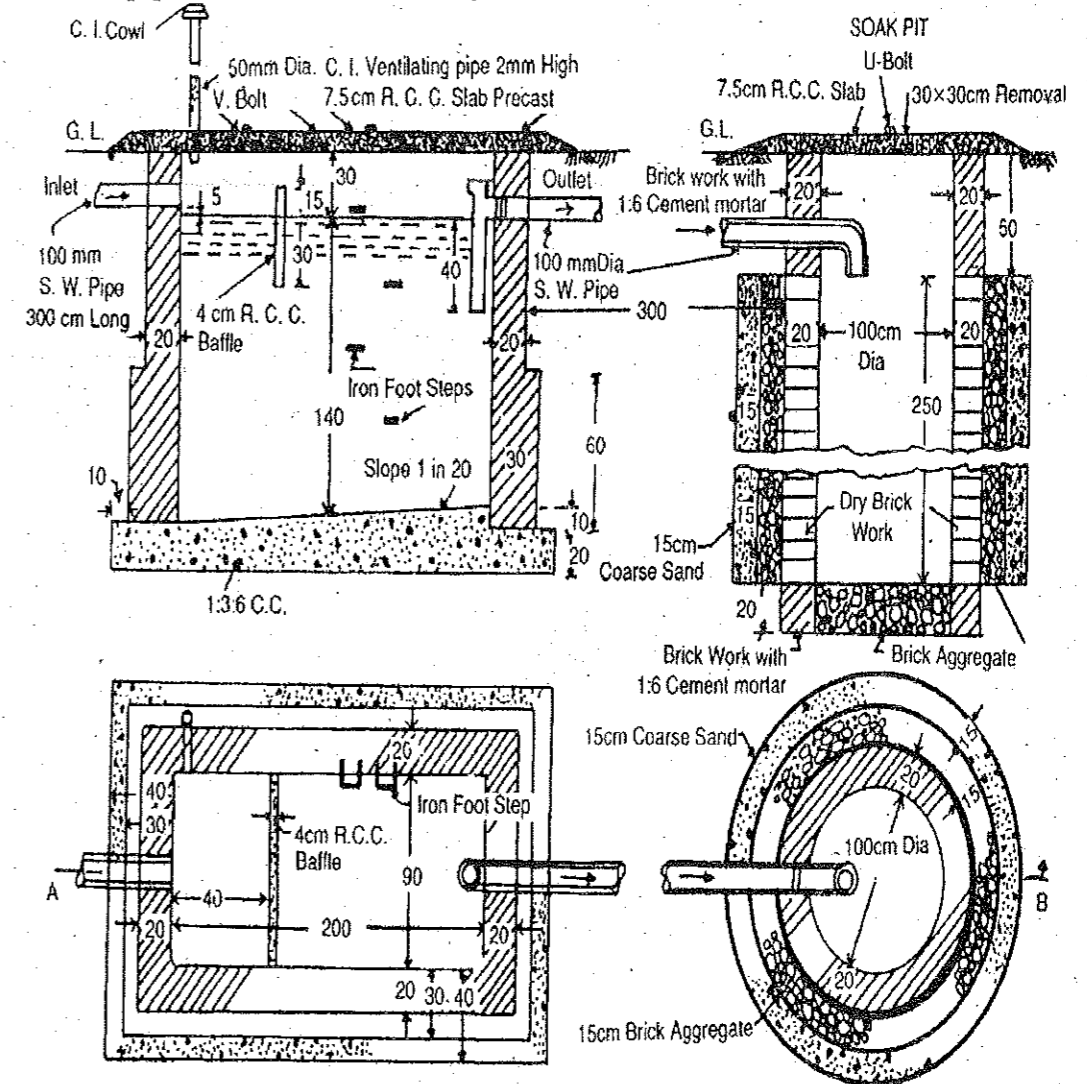
(ii) Rewrite the types of outgoings. (7)

Or

(b) Explain the methods of calculating deprecation.

15. (a) Reproduce the report on the estimate for the construction of a culvert.

Or

(b) Write the report on estimate for the construction of residential building.

PART C — (1 × 15 = 15 marks)

16. (a) Prepare a detailed estimate of a septic tank with soak — pit for 25 users from the given drawings. Septic tank shall be of first class brickwork in 1:4 cement mortar, the foundation and floor shall be of 1:3:6 cement concrete. Inside of a Septic tank shall be finished with 12mm cement plaster and floor shall be finished with 20mm cement plaster with 1:3 mortar mixed with standard water proofing compound. Upper and lower portion of soak-pit shall be of second class brickwork in 1:6 cement mortar and middle portion shall be of dry brickwork. Roof covering slabs and baffle wall shall be of precast R.C.C. The length of the connecting pipe from latrine seat may be taken as 3m. Assume suitable rates.



PLAN
All Dimensions in Centimetre unless otherwise Specified.

Or

(b) Prepare a detailed estimate of a R.C.C. column with foundation footing from the given drawing.



10cm Bend
10cm R.C.C. Beam
Vertical Bars 6 Nos. 16mm Dia
3.30m
Ties 10mm Dia 15cm Pitch
4cm Cover
30cm Dia
P.L.
60cm
45cm
G.L
Dowel Bars 6 Nos 16mm Dia
50cm
35cm sq.
75cm
15cm Bend
25cm
8cm c.c. 1:4:8
8cm
2m sq.
12mm Bars 15cm c/c Bothway
5 cm Cover
SECTION

30cm Dia.
35cm
35cm
2.00m
2.00m
PLAN

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