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**Question Paper Code: 57102**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2020

Seventh Semester

Civil Engineering

15UCE702 – ESTIMATION, COSTING AND VALUATION ENGINEERING

(Regulation 2015)

Duration: One hour

Maximum: 30Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any six of the following questions)**

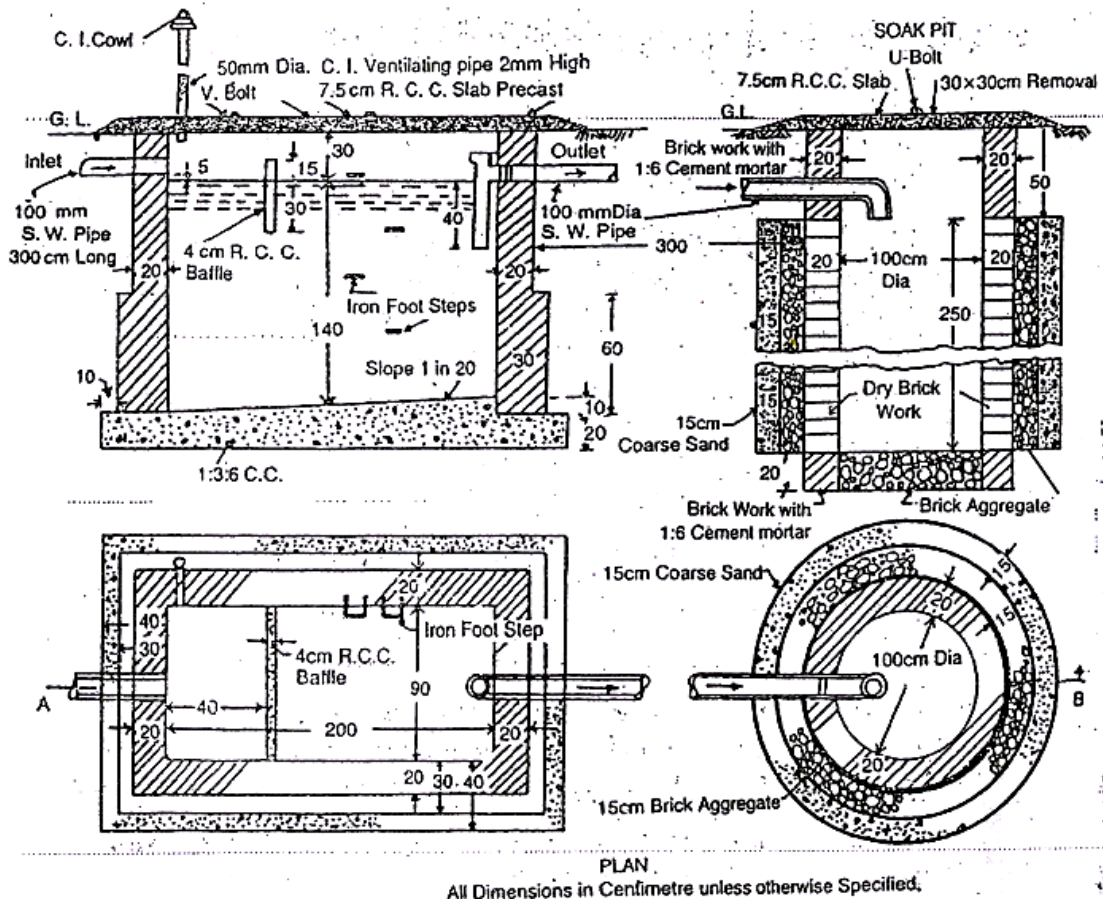
1. What is the unit of measurement for Cement? CO1- R  
(a) kg (b) Bag (c) Tonne (d) All of the above
2. The Average Initial setting time of the cement is \_\_\_\_\_ CO1- R  
(a) 10 mins (b) 45 mins (c) 30 mins (d) 10 Hours
3. Earnest money deposit is usually \_\_\_\_\_% of estimated cost. CO2-R  
(a) 4% (b) 2% (c) 3% (d) 1%
4. What is the quantity of cement required for CM 1:4 – 1 m<sup>3</sup>? CO2- R  
(a) 360 kg (b) 288 kg (c) 1440 kg (d) 480 kg
5. The order of booking dimensions is CO3- R  
(a) B\*L\*H (b)L\*B\*H (c)H\*B\*L (d) None of the above
6. The standard thickness of the wall provided in Residential Building is CO3- R  
(a) 100 mm (b) 300 mm (c) 200 mm (d) 230 mm
7. The minimum width of a septic tank is taken CO4- U  
(a) 70 cm (b) 75 cm (c) 80 cm (d) 90 cm
8. Cost of fittings and their fixing is specified for the following sanitary fittings CO4- R  
(a) Water closets (b) Flushing pipes (c) Lavatory basins (d) All the above
9. The value of the material without dismantling is mentioned as CO5- U  
(a) Depreciation (b) Annuity (c) Scrap value (d) Salvage value

10. The scarp value is maximum for CO5- U  
(a) Country wood      (b) Iron      (c) Plastic      (d) All of the above

PART – B (3 x 8= 24 Marks)

**(Answer any three of the following questions)**

11. Prepare a detailed report for laying of water bound macadam road to your village. CO1- U      (8)
12. Explain about Arbitration and its legal requirements. CO2- U      (8)
13. The arches of a road culvert are to be constructed with first class brickwork in cement mortar 1:5 and soffit of arches are to be finished with 12 mm thick cement plaster 1:3. The culvert consists of two spans of 4.50 m each, rise of the arch is 1.20 m and the thickness of the arch is 40 cm, clear roadway in between the parapet is 9.60 m and the thickness of parapet at the road level is 45 cm. Calculate the quantities of brickwork and cement plastering for the construction and finishing of the arches. Also find the materials required for this particular work. CO3- App      (8)
14. Estimate the quantities of following items of a septic tank shown in the Figure 2. CO4- App      (8)  
(i) Internal Plastering  
(ii) Brickwork in CM 1:6 in soak pit  
(iii) RCC cover slab for septic tank and soak pit



15. A newly constructed building stands on a plot costing Rs.6 lakhs. The construction cost of the building is Rs.20 lakhs and the estimated life of the building is 66 years. The investor desires to have 8% return on the construction cost and 5% return on the land cost. Assuming annual repairs to be at 0.5% of the cost of construction and other outgoings at 30% of the gross rent. Calculate the monthly standard rent that will have to be charged for the building. Interest on sinking fund is 3%
- CO5- App (8)