**R16** 

Q.P. Code: 16CE134

Reg. No:

## SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR (AUTONOMOUS)

# B.Tech IV Year I Semester Supplementary Examinations August-2021 ESTIMATION, COSTING AND VALUATION

(Civil Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units  $5 \times 12 = 60$  Marks)

UNIT-I

1 i What is meant by detailed estimate?

12M

ii Differentiate between estimating and costing.

iii Define plinth area estimate.

iv List out the method for building estimate.

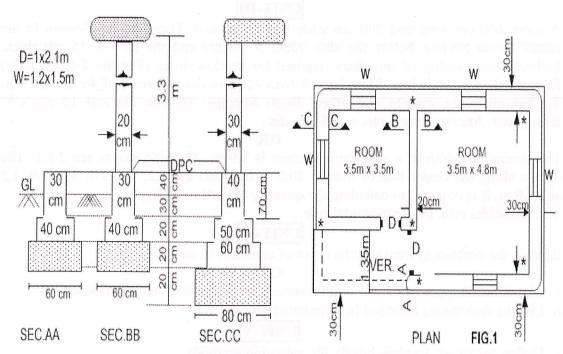
OR

2 List various types of estimates. Explain any two in brief.

12M

UNIT-II

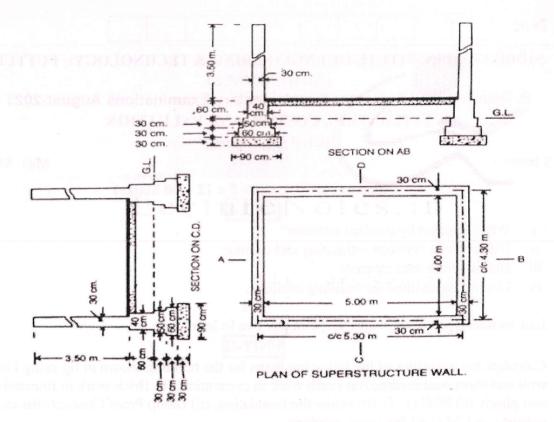
Calculate the quantities of the following items for the building shown in fig using Long wall and short wall method. (a) Earth work in excavation, (b) Brick work in foundation and plinth, (c) PCC (1: 5: 10) below the foundation, (d) Damp Proof Course, (e) Brick masonry in CM (1:6) for super structure.



OR

- 4 Calculate the quantities of the following items for the building shown in fig using Long wall and short wall method.
  - (i) Earth work in excavation
  - (ii) Brick work in foundation and plinth
  - (iii)PCC (1: 5: 10) below the foundation
  - (iv) Damp Proof Course
  - (v)Brick masonry in CM (1:6) for super structure

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### UNIT-III

A room 600 cm long and 500 cm wide has a flat roof. There is one T-beam in the center (cross Section below the slab 30cm X 50cm) and the slab is 15 cm thick. Estimate the quantity of iron Bars required for reinforcement (For the T-beam only) from the data given below. Main bars: 8 No.s - 25mm dia in 2 rows of 4 each (all 4 in the bottom being straight and others Bent) Stirrups: 10 mm dia and 15 cm C/C throughout. Anchor bars: 2 No. s - 16 mm dia.

#### OR

6 The formation width of a road embankment is 9.0 m. The side slopes are 2.5:1. The depths along the center line of road at 50.0 m intervals are 1.2, 1.1, 1.4, 1.2, 0.9, 1.5 and 1.0 m. It is required to calculate the quantity of earthwork by:

(i) Prismoidal rule. (ii) Trapezoidal rule.

UNIT-IV

7 Explain the contract system and the types of contracts in detail.

12M

8 a List different types of construction contracts and state their main attributes.

**6M** 

**b** List the documents included in a construction contract.

**6M** 

### UNIT-V

9 a Define valuation. Explain briefly the valuation methods.

6M 6M

**b** An old building has been purchased by a person @ a cost of Rs.4, 00,000 excluding the cost of land. Calculate the amount of annual sinking fund @ 8% interest assuming the life of the building as 25 years and the scrap value of the building as 10% of the purchase.

OR

10 Explain the rate analysis of brickwork in 1:6 cement sand mortar and brick work in 1:4 12M cement sand mortar

\*\*\* END \*\*\*