KERALA AGRICULTURAL UNIVERSITY

Kelappaji College of Agricultural Engineering Technology

Ellw.4207 Quantity Surveying and Valuation 3(2+1)

B.Tech. Agricultural Engineering 2022 Admission

8^{th} Semester Final Theory Examination -2026

Date and Time: 17-06-2026, 10.00 A.M.-12 P.M. Name:.....

Max. marks: 50 marks Roll No.:.....

I. State TRUE or FALSE. (10*1=10 marks)

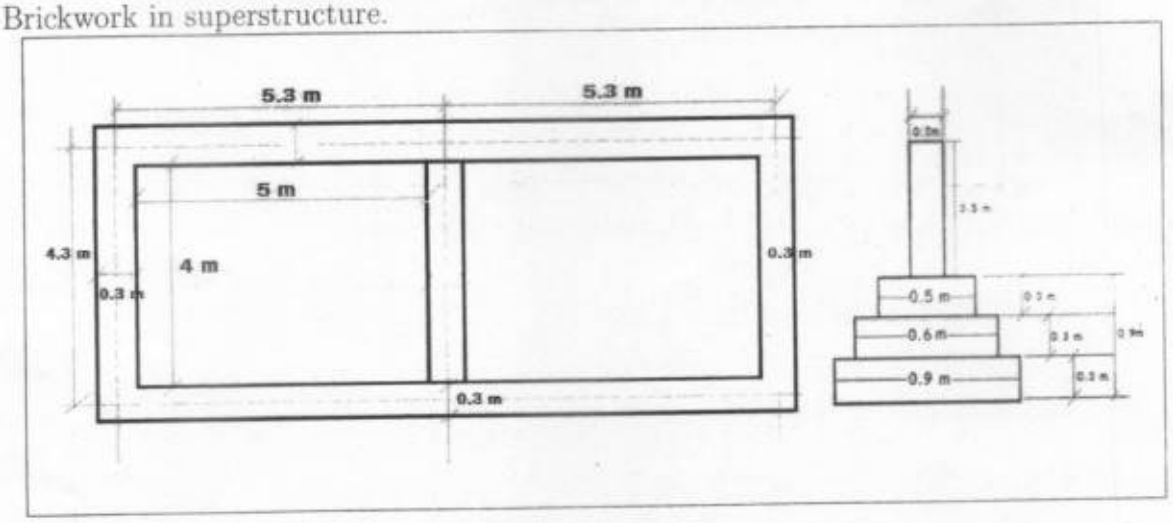
1. Two way slab carries load in both the direction.
2. The fixation of cost or return expected of a building or engineering structure at present day rates is called estimation.
3. The quantity of steel work is calculated in kg.
4. Part of the form work which supports the Vertical surface is called centering.
5. The unit of measurement of plastering is expressed in cubic meters.
6. SP-34: 1987 is the code of practice for design of plain and reinforced cement concrete.
7. The built up covered area of a building measured at floor level of any storey is called carpet area.
8. The unit of measurement used for the estimation of quantity of damp proof course (DPC) is in square meter.
9. The approval or sanction of the competent authority with respect to the cost and work necessary at the first instance is called technical sanction.
10. Full deduction is made for rectangular openings.

II. Write short notes on ANY FIVE of the following. (5*2=10 marks)

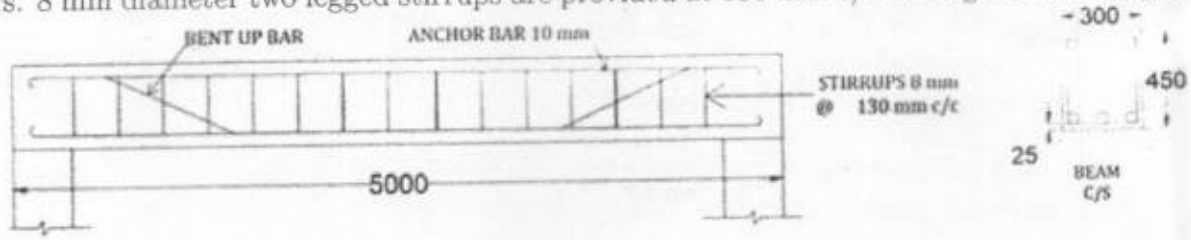
1. Valuation.
2. Stirrups.
3. Bar Bending schedule.
4. Preliminary estimate.
5. Analysis of rates.
6. Administrative sanction.
7. Technical Sanction

III Attempt ANY FOUR questions (5*4 =20 marks)

1. Calculate the quantity of the following items of work needed for the building using centre line method. a) Earthwork in excavation. b) Concrete in foundation. c) Brickwork in foundation for first footing. d) Brickwork in foundation for second footing. e) Brickwork in plinth. f) Brickwork in superstructure.



2. Workout the quantity of 8 mm, 10 mm and 16 mm diameter reinforcement for a 5 m long rectangular beam of size 300 x 450 mm. The beam is reinforced with 2 nos. - 10 mm diameter bars at top, 2 nos. -16 mm diameter bars at bottom and 2 nos. - 16 mm diameter bent up bars. 8 mm diameter two legged stirrups are provided at 130 mm c/c throughout the length.



3. Explain a brief on long wall short wall method with a simple example.

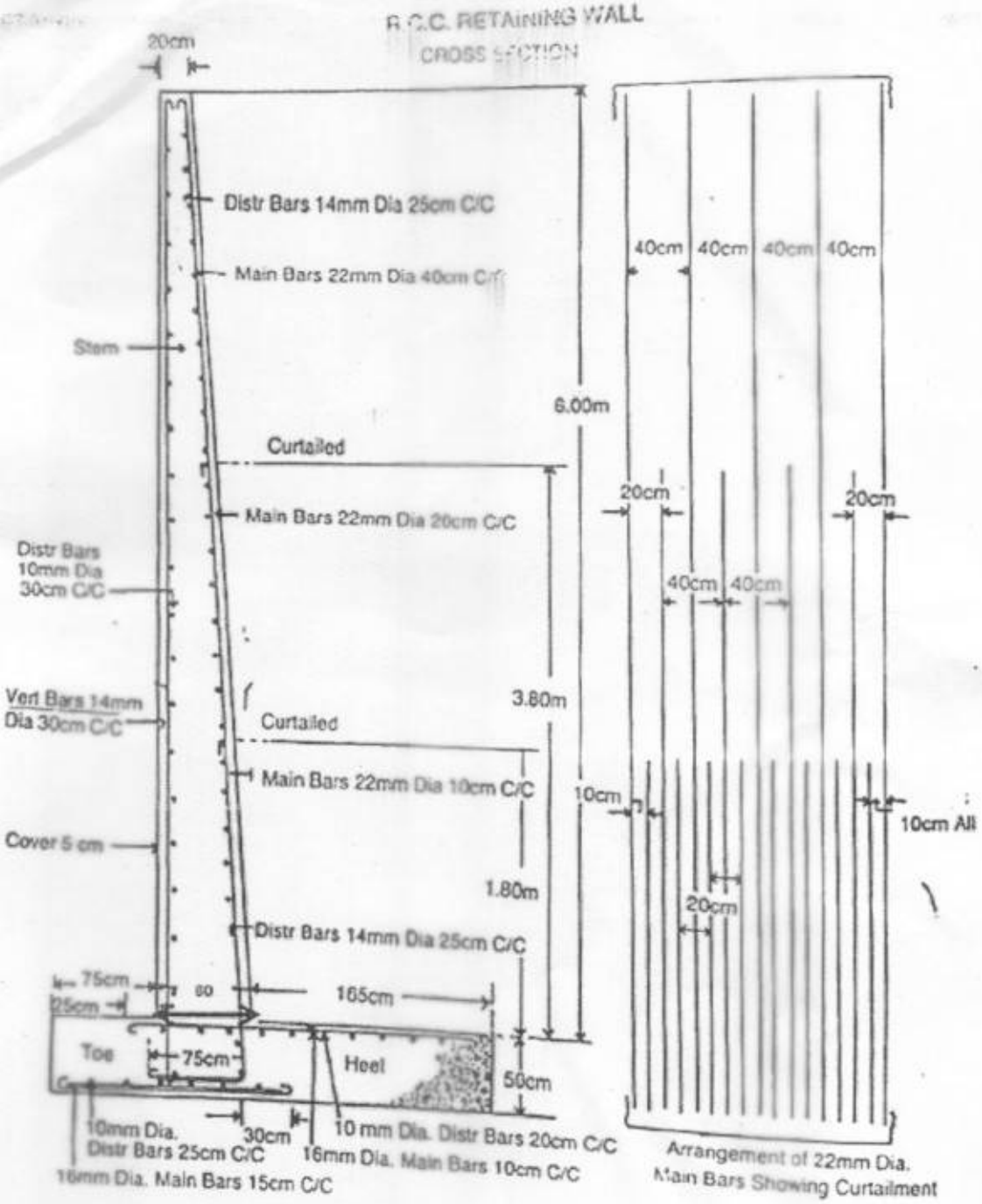
4. Give a detailed description of the various types of estimates.

5. Estimate the quantities of brickwork and plastering (2 faces) required in a wall 4m long, 3m high and 30 cm thick.Calculate the cost if the rate of brickwork is Rs.320.00 per cubic meter and rate of plastering is Rs.8.50 per square meter.

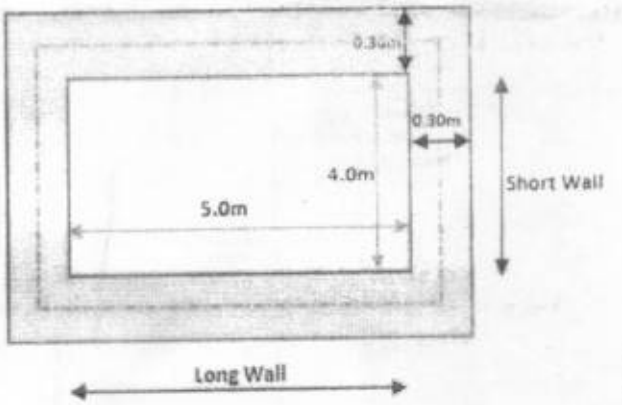
IV Attempt ANY ONE question. (1*10 =10 marks)

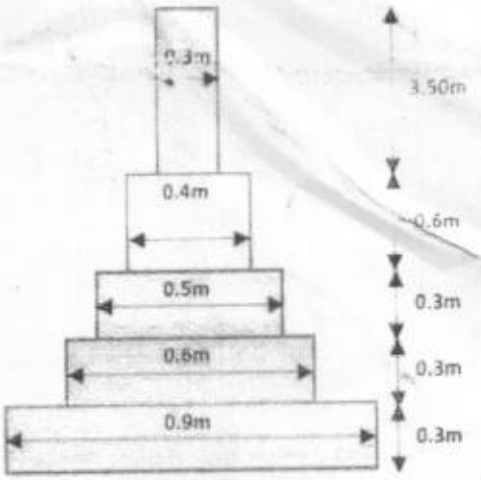
1. Prepare the detailed estimate of an RCC retaining wall of 30 m in length whose cross-section is given in the figure. Steel bars in the reinforcement shall be taken separately. RCC work (1:2:4) including centering and shuttering (@Rs. 675/m^3) and mild steel reinforcement (@

Rs. 515/quintal) in detail shall be taken seperately.



2. The plan of the superstructure wall of a single-room building of 5 m x 4 m, and cross sections of the walls with the foundation are given. Estimate the following quantities using the Long wall - Short wall method.
   a. Earthwork in excavation in foundation
   b. Concrete in foundation
   c. Brickwork in foundation and plinth
   d. Brickwork in superstructure


0.30m
0.30m
4.0m
5.0m
Short Wall
Long Wall


0.3m
3.50m
0.4m
0.6m
0.5m
0.3m
0.6m
0.3m
0.9m
0.3m

—Best wishes—