

**R09**

**Code No: 09A70107**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year I Semester Examinations, May/June - 2013**

**Estimating and Costing  
(Civil Engineering)**

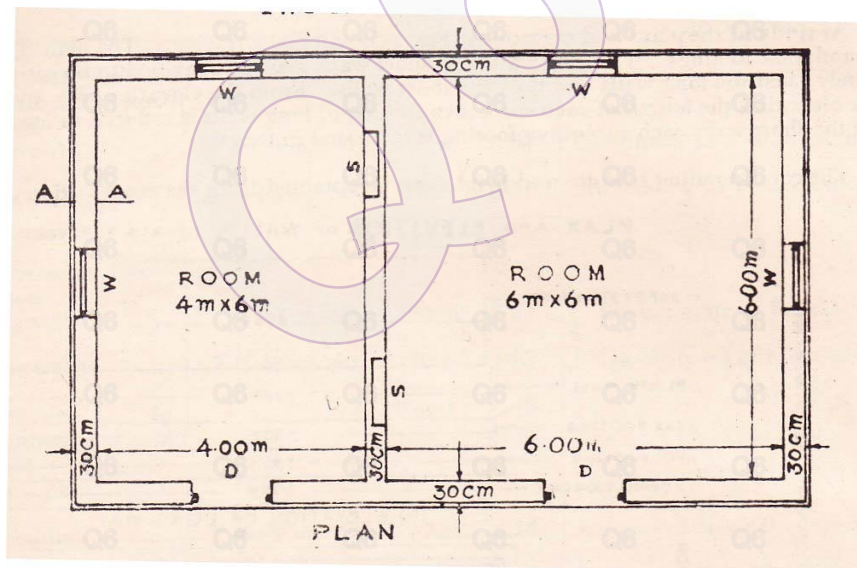
**Time: 3 Hours**

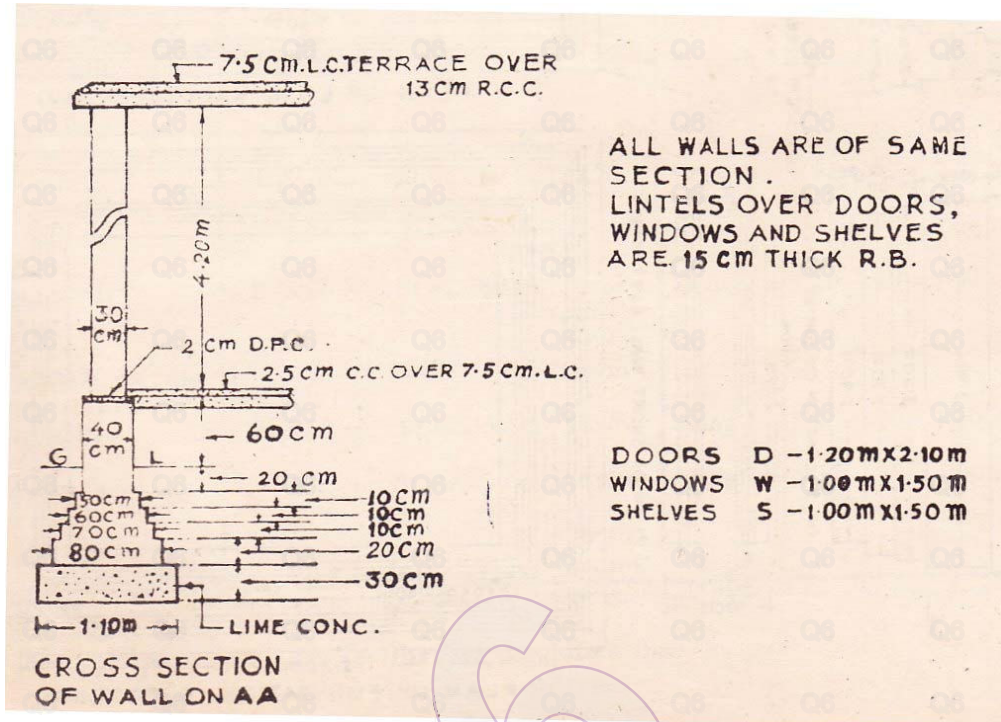
**Max. Marks: 75**

**Answer any Five Questions  
All Questions Carry Equal Marks**

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1. What are the general items of work in a building ? Write down their standard units and briefly explain the principles of working out quantities. [15]
2. Estimate the quantities of the following items of a two roomed building from the given plan and sections as shown in figures below. Use Centre line method.
  - a) Earthwork in excavation in foundation
  - b) Lime concrete in foundation
  - c) 1st class brickwork in 1:6 cement mortar in foundation and plinth
  - d) 2.5 cm thick c.c. damp proof course[15]



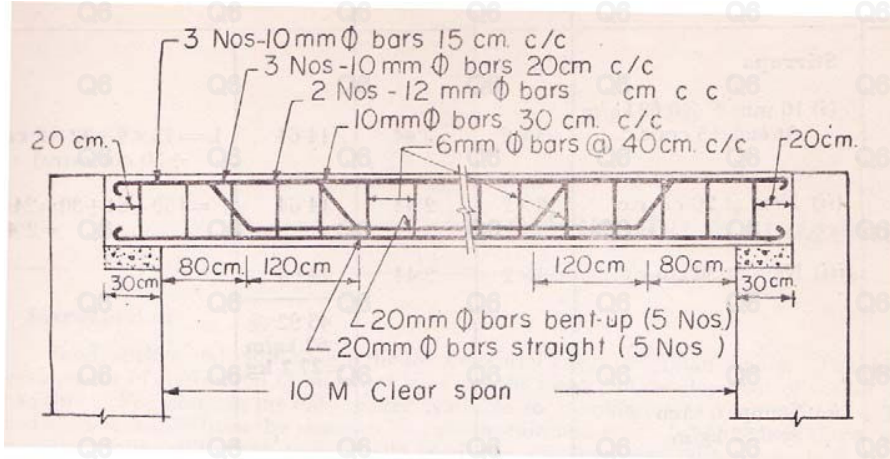


3. Estimate the quantity of earthwork for a portion of a road from the following data. Formation width of road is 10 m, Side slopes 2:1 in banking and 1.5:1 in cutting. [15]

Distance in m.	R.L. of ground	R.L. of formation
0	114.50	115
100	114.75	Upward gradient of 1 in 200 upto 600m.
200	115.25	
300	115.20	
400	116.10	
500	116.85	
600	118.00	
700	118.25	Downward gradient of 1 in 400
800	118.10	
900	117.80	
1000	117.75	
1100	117.90	
1200	119.50	

4. Calculate the materials, labour etc. required and work out the rate analysis for the following items. [15]
- R.C.C. work in Columns 1:1.5:3 per 1 cubic m.
  - I Class brickwork in superstructure with 20x10x10 cm. bricks with 1:6 cement sand mortar per 1 cubic m.

5. Prepare schedule of reinforcement for a RCC beam 40 cm x 90 cm in section from the figure shown below. [15]



6. Write a detailed note on “Contract Document”. What are the possible contractual problems? Discuss. [15]
7. A RCC framed structure 8 storeyed building having a cubic content of  $1400 \text{ m}^3$  was constructed 15 years back on a freehold tenure land to measure about  $1100 \text{ m}^2$ . The building fetches a rent of about Rs. 14,000 per month. What amount will you recommend for advancing a loan to the owner against the mortgage, if the rate of land in that area is Rs. 500 /  $\text{m}^2$ .  
 Insurance premium = Rs. 900 per annum.  
 Municipality taxes = 30 % of gross rent.  
 Assume the future life to be 60 years.  
 Rate of interest as 8% and for redemption of capital 5% [15]
8. Write down the detailed specifications of the following items of works  
 a) Cement concrete flooring  
 b) Painting. [15]

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