

Code :R7320105

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III B.Tech II Semester(R07) Regular & Supplementary Examinations, April/May 2011  
ESTIMATING & COSTING  
(Electronics & Control Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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1. Distinguish between detailed specifications and general specifications with example.
2. Explain the procedure for estimation of steps for all quantities taking example.
3. How do you calculate?
  - (a) Earth work with vertical fall of the ground surface for fully in banking, fully in cutting and partly in banking cutting.
  - (b) Earth work on curvature of a road without transverse slope.
4. Calculate the rate of 2.5 cm thick D.P.C with cement and sand in (1:2).
5. Prepare bar bending schedule and calculate the quantity of reinforcement in a R.C.C (1:2:4) lintel as per data given below:  
Total Length of the lintel including bearing=1.50 m  
Thickness of wall=400 mm;  
Thickness of lintel=150 mm;  
Main reinforcement 5 bars of 12 mm  $\phi$  (out of which 2 bars are bent up near support)  
Top reinforcement 2 bars of 10 mm  $\phi$ ;  
6 mm  $\phi$ , 2 legged stirrups are provided @175mm c/c uniformly.
6.
  - (a) What are the essential requirements of a valid contract?
  - (b) Give proforma for a tender notice.
7.
  - (a) Explain the concept of sinking fund.
  - (b) A leasehold property is to produce a net income of Rs. 5,000/- per annum for the next 60 years. Estimate the value of the property: Assume that the owner requires a return of 6% on his capital and that a sinking fund to replace the capital is also to be accumulated at 6%.
8.
  - (a) Write about purpose of specifications.
  - (b) Write detailed specifications for centering & shuttering and R.C.C.

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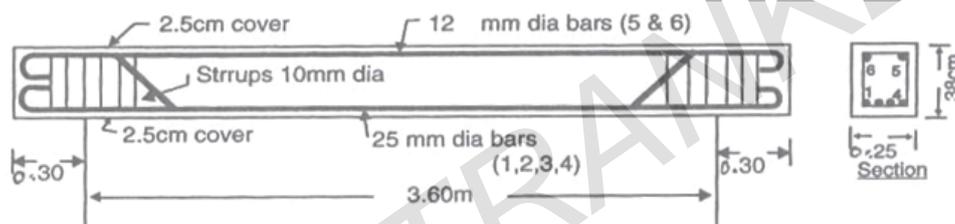
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- List out the various items of work involved in the construction of class 'A' residential building.
- Distinguish between out-to-method and centre line method. State the merits and demerits of each.
- (a) List out the general methods for computation of earth work. Explain.  
 (b) Explain about curvature correction.
- Calculate the rate of 50 sq m of 12 mm thick plastering in cm (1:3) for first floor.
- Workout the quantity of reinforcement by preparing bar requirement schedule of a beam as per the drawing given below.



- (a) Write about lump sum and item rate contracts.  
 (b) Explain the procedure of settlement of dispute.
- (a) Differentiate between the following:  
 (i) Salvage value and Scrap value. (ii) Free hold and Lease hold properties.  
 (b) A property is let out a monthly rent of Rs. 1,500/- . If the out goings is taken at 30% of gross annual rent, and if the owner of the property expects a return of 12%, what is the capitalized value of the property?
- Write detailed specifications for damp proof course, painting to steel and iron works.

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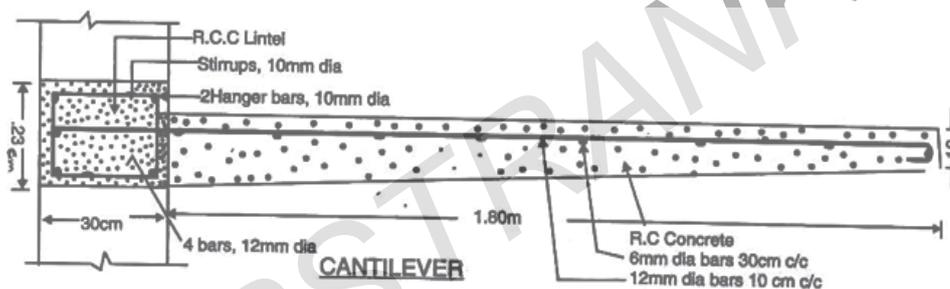
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- Write down the various items of work involved in the construction of class 'B' residential building.
- Explain Centre line method in detail.
- (a) Explain the different methods for calculating the quantities of earth work.  
 (b) Explain about Lead and lift.
- Calculate the rate for 10 cum of RCC (1:2:4) for foundation.
- Calculate the quantity of steel required by preparing bar bending schedule, for a R.C.C (1:1<sup>1/2</sup>:3) lintel cum sunshade as per the drawing given below. Take clear span of Lintel as 1.2 m and bearing over the support is 0.3 m on either side.



- (a) What are the essentials and conditions of contract?  
 (b) Define arbitration. Explain arbitration arrangements and different kinds of arbitration.
- Discuss the methods of valuation for lands with buildings.
- Write detailed specifications for earth work and plastering.

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1. (a) Explain about Proforma estimate in detail.  
(b) How do you estimate the quantity of steel in preliminary estimate?
2. Explain long wall and short wall method.
3. List out three types of canal sections involved in irrigational works in detail.
4. (a) List out the factors on which rates of a particular item of work depend.  
(b) Prepare rate analysis for painting one coat over a coat of priming.
5. Estimate the quantity of steel required for a R.C.C (1:2:4) slab 125 mm thick provided for a room 3.0 m X 6.5 m, resting over a 300 mm thick walls.  
Reinforcement details:  
Main reinforcement: 10mm  $\phi$  bars at 150mm c/c (alternate bars are bent-up). Distribution reinforcement: 8mm  $\phi$  at 180mm c/c. Also prepare the bar bending schedule.
6. (a) List different types of construction contracts and state their main attributes.  
(b) List the documents included in a construction contract.
7. Explain depreciation. Explain the different methods of calculating depreciation of property building.
8. Write detailed specifications for brick masonry and color washing.

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