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Code: 7G651

III B.Tech. I Semester Supplementary Examinations Nov/Dec 2022

Design and Drawing of Reinforced Concrete Design

(Civil Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

PART-A

Answer any one question carry's 28 marks

| | Marks | CO | BL |
|--|-------|----|----|
| 1. Design the two way slab of span 5x6m subjected to an imposed load of 15KN/m ² . The Two adjacent edges are discontinuous. Use M ₂₅ concrete and fe ₄₁₅ steel. Draw the cross-section with reinforcement details. | 28M | 3 | 3 |
| OR | | | |
| 2. Design a square footing for a short axially loaded column of size 300mm x 300mm carrying 630kN load. Use M ₂₀ grade concrete and Fe ₄₁₅ steel. SBC of soil is 180kN/m ² . Sketch the details of reinforcements. | 28M | 5 | 3 |

PART-B

**Answer any three questions
Each question carry's 14 marks**

| | | | |
|---|-----|---|---|
| 3. a) What is meant by limit state? Discuss different limit states to be considered in reinforced concrete design | 10M | 1 | 1 |
| b) List out the assumptions made in limit state method. | 4M | 1 | 1 |
| 4. Design the torsion reinforcement for a beam of size 300X600mm in size is subjected to shear force 70KN,torsionalmoment 50KNm and bending moment 24KNm.Consider 0.3% of tension steel is provided, M 20 grade concrete and mild steel bars. Assume any required data. | 14M | 2 | 3 |
| 5. Design a rectangular column of 4.5 m unsupported length, restrained in position and direction at both the ends, to carry an axial load of 500 kN and moment 310KNm. Use M20 grade concrete and Fe415 steel. | 14M | 4 | 2 |
| 6. Check for the limit state of deflection using empirical method for the T beam with following data. Ast = 1600 mm ² ; Asc=900 mm ² , bw=300mm, d=400mm, bf= 900mm; Fe415; Span= 8m and continuous | 14M | 5 | 2 |
| 7. a) Differentiate the working stress method and limit state method. | 10M | 1 | 1 |
| b) Define neutral axis and lever arm. | 4M | 1 | 1 |

END

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| R-17 |
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Code: 7BA51

III B.Tech. I Semester Supplementary Examinations Nov/Dec 2022

Managerial Economics and Financial Analysis

(Civil Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

| | Marks | CO | Blooms Level |
|---|-------|-----|--------------|
| UNIT-I | | | |
| 1. Define Managerial Economics. Write about the nature and scope of managerial economics. | 14M | CO1 | L1 |
| OR | | | |
| 2. What is opportunity cost? How it is calculated? Describe the significance of opportunity cost in allocation of resources by firms. | 14M | CO1 | L1 |
| UNIT-II | | | |
| 3. What is Break even analysis? Show the graphical representation for BEA with its assumptions and importance. | 14M | CO1 | L1 |
| OR | | | |
| 4. Explain the different statistical methods of demand forecasting. | 14M | CO1 | L2 |
| UNIT-III | | | |
| 5. Discuss briefly: a) Market skimming pricing b) penetration pricing c) Block pricing | 14M | CO1 | L2 |
| OR | | | |
| 6. Explain with neat diagrams the price determination under perfect competition in long run and short run. | 14M | CO1 | L2 |
| UNIT-IV | | | |
| 7. Prepare journal entries and Ledger accounts from the following: Jan 1 started Business with cash Rs.10, 000. Jan 3 Deposited into Bank Rs.15, 000 Jan10 Purchased Machinery Rs.34, 000 from Jawahar. Jan 16 sold goods for cash Rs.52, 000 Jan 20 received cash from Business Rs.12, 000 | 14M | CO2 | L2 |
| OR | | | |
| 8. Write in detail about the Features of Capital Budgeting. | 14M | CO2 | L1 |
| UNIT-V | | | |
| 9. Define ratio. Write about the significance of Financial ratios in Business. | 14M | CO3 | L1 |
| OR | | | |
| 10. A firm sold goods worth Rs. 5, 00,000 and its gross profit is 20 percent of sales value. The inventory at the beginning of the year was 14,000. Compute inventory turnover ratio and also the inventory holding period. | 14M | CO3 | L4 |
