R-15

Code: 5GA51

III B.Tech. I Semester Supplementary Examinations October 2020

Managerial Economics and Financial Analysis

(Common to CE, ME & ECE)

Max. Marks: 70   Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1.	Define managerial economics? Explain nature and scope.	14M

OR

2.	What is demand? State and explain law of demand. Are there any exceptions to the law?	14M

UNIT–II

3.	Define cost. Explain the difference types of cost concepts used in the process of cost analysis.	14M

OR

4.	State the break even analysis? Explain objectives, importance's and show the graphical representation of BEP.	14M

UNIT–III

5.	Evaluate sole trader form of organization	14M

OR

6.	Despite the features, advantages and disadvantages of partnership business.	14M

UNIT–IV

7.	Define capital? Explain significance, need and types of capital.	14M

OR

8.	What is working capital? Explain the factors governing working capital requirements?	14M

UNIT–V

9. Prepare journal entries and ledger accounts from the following

   Jan 1 started business with cash Rs 10000

   Jan 3 deposit into bank Rs 15000

   Jan 10 purchased machinery Rs34000 from jawahar.

   Jan 16 sold goods for cash Rs 52000

   Jan 20 received cash from business Rs 12000   14M

OR

10.	Define ratio analysis? Explain advantages and disadvantage ratio analysis.	14M

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III B.Tech. I Semester Supplementary Examinations October 2020
Design and Drawing of Reinforced Concrete Strucrures
(Civil Engineering)

Max. Marks: 70   Time: 3 Hours

PART-A
Answer *any One* question from the following   1 x 28 = 28 Marks
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1. Design a simply supported rectangular beam to carry 38 kN/m super imposed over a span of 5.5m on 300mm wide supports. Use M20 grade concrete and HYSD reinforcement .check the design for all necessary conditions .Draw to a suitable scale
    (a) Longitudinal section showing the reinforcement details.
    (b) The cross section of the beam at salient points, showing reinforcement details.

OR

2. A simply supported one-way slab of clear span 3.0 m is supported on masonry wall of thickness 350 mm. Slab is used for residential loads. Design the slab .The material are grade M20 and HYSD reinforcement of grade Fe415. Live load shall be 2 KN/m^2

PART-B
Answer *any Three from the following* question   3 x 14 = 42 Marks
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3. a) What are the assumptions made in the limit state design method? Explain stress block parameters?   6M

    b) A doubly reinforced concrete beam having a rectangular section 250mm and 540mm overall depth is reinforced with 2 bars of 12mm diameter in the compression side and 4 bars of 20mm diameter in the tension side. The effective cover to the bars is 40mm. Using M$_{20}$ grade concrete and Fe415 grade steel, estimate the flexural strength of the section using IS456-2000 code recommendations?   8M

4. A Reinforced concrete beam of size 230mm x 550mm effective is reinforced with 4 bars of 20mm diameter, out of which 2 bars are bent up near the support section where a factored shear force of 300KN is acting. Design suitable shear reinforcement. Use M$_{20}$ grade concrete and Fe$_{415}$ grade steel.   14M

5. A rectangular simply supported beam of clear span 4.2m is 340mm*540mm in cross section. It is reinforced with 4 bars of 20 mm diameter. Use M20 grade concrete and Fe415 steel. The effective cover is 40mm, Calculate the short term and long term deflections of the beam.   14M

6. Design a rectangular sloped footing for a column of size 350mm*450mm using 20 mm diameter bars to transmit   characteristic loads of 600 KN as dead load and 400Kn as live load to a foundation with safe bearing capacity of 200 kN/m^2 .Grades of materials are M20 and Fe415 steel.   14M

7. a) Design a short axially loaded column 300mm*300mm to support a service load of 950kN. Use M20 grade concrete and Fe415 steel?   7M

    b) What is the minimum and maximum percentage of steel reinforcement in column as per IS code. Why it is required?   7M

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