

CBCS Scheme



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15CV52

Fifth Semester B.E. Degree Examination, Dec.2017/Jan.2018

Analysis of Indeterminate Structures

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

- 1 Analyze the continuous beam shown in Fig.Q1 by slope deflection method. Draw BMD and EC.

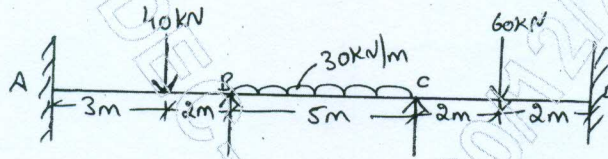


Fig.Q1 (16 Marks)

OR

- 2 Analyze the portal frame shown in Fig.Q2 by slope deflection method. Draw BMD.

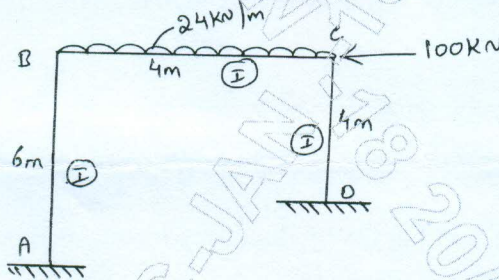


Fig.Q2 (16 Marks)

Module-2

- 3 Analyze the continuous beam by moment distribution method shown in Fig.Q3. The support 'B' sinks by 10 mm. Take $EI = 4000 \text{ kN-m}^2$. Draw BMD and EC.

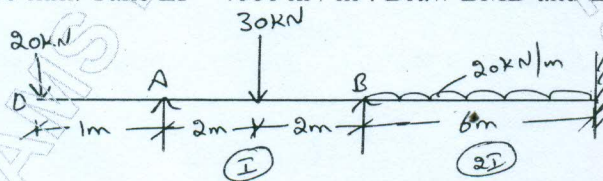


Fig.Q3 (16 Marks)

OR

- 4 Analyze the frame shown in Fig.Q4 by moment distribution method. Draw BMD.

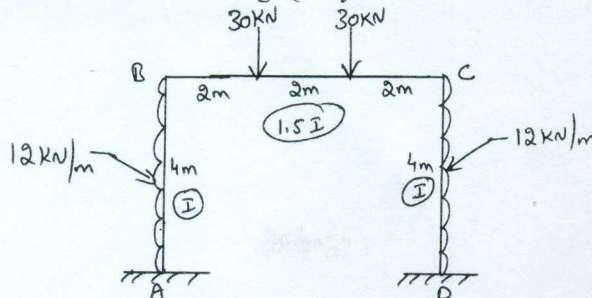


Fig.Q4 (16 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

Module-3

- 5 Analyze the continuous beam by Kani's method. Shown in Fig.Q5. Draw BMD.

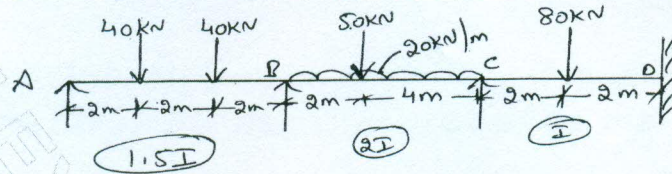


Fig.Q5

(16 Marks)

OR

- 6 Analyze the frame shown in Fig.Q6 by Kani's method. Draw BMD.

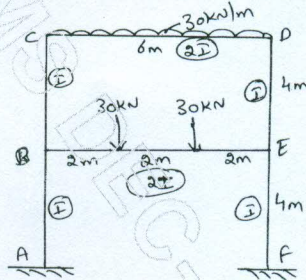


Fig.Q6

(16 Marks)

Module-4

- 7 Analyze the beam shown by flexibility matrix method. Draw BMD.

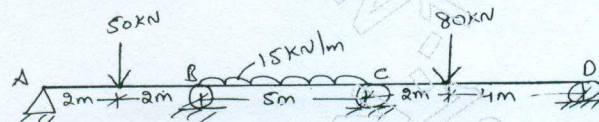


Fig.Q7

(16 Marks)

OR

- 8 Analyze the beam shown in Fig.Q8 by flexibility matrix method. Draw BMD.

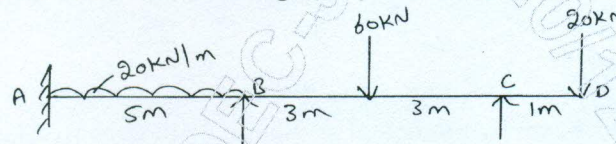


Fig.Q8

(16 Marks)

Module-5

- 9 Analyze the continuous beam shown in Fig.Q9 by stiffness matrix method. Draw BMD.

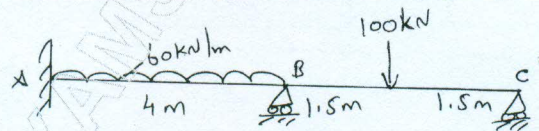


Fig.Q9

(16 Marks)

OR

- 10 Analyze the portal frame shown in Fig.Q10 by stiffness matrix method. Draw BMD.

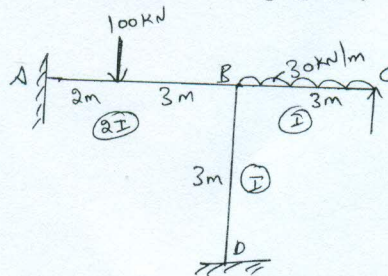


Fig.Q10

(16 Marks)
