

USN

Fifth Semester B.E. Degree Examination, Feb./Mar. 2022 Analysis of Indeterminate Structures

Time: 3 hrs.

Max. Marks: 100

- Note:** 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Assume missing data suitably.

Module-1

- 1 Analyze the continuous beam shown in Fig.Q.1 by slope deflection method. Draw BMD and SFD. (20 Marks)

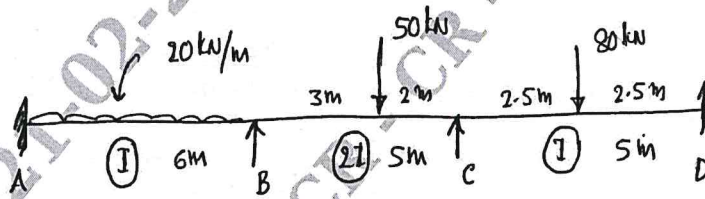


Fig.Q.1

OR

- 2 Analyze the portal frame shown in Fig.Q.2 by slope deflection method. Draw BMD. (20 Marks)

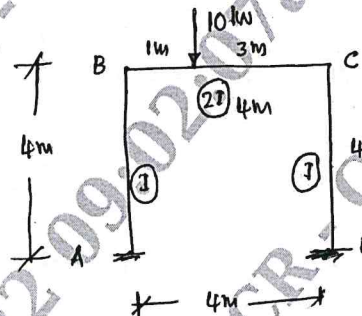


Fig.Q.2

Module-2

- 3 Analyze the beam shown in Fig.Q.3 by moment distribution method. Draw BMD EI is constant. (20 Marks)

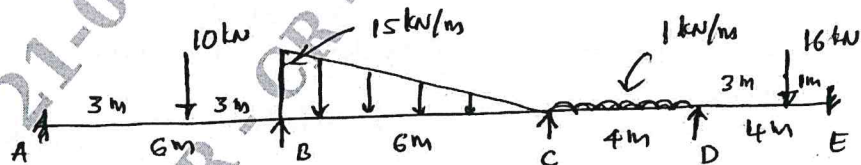


Fig.Q.3

OR

- 4 Analyze the portal frame by moment-distribution method draw BMD.

(20 Marks)

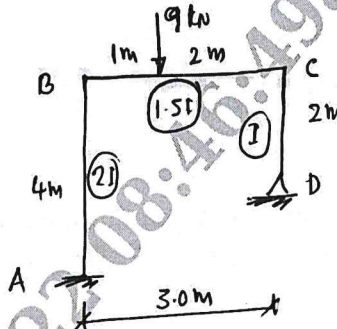


Fig.Q.4

Module-3

- 5 Analyze the continuous beam loaded shown in Fig.Q.5 by Kani's rotation method. Draw BMD.

(20 Marks)

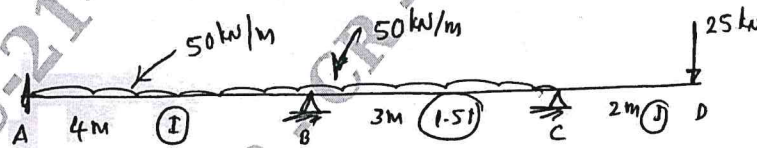


Fig.Q.5

OR

- 6 Analyze the frame shown in Fig.Q.6 by Kani's method. Take the advantage of symmetry.

(20 Marks)

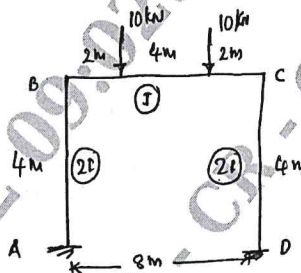


Fig.Q.6

CMRIT LIBRARY
BANGALORE - 560 037

Module-4

- 7 Analyze the continuous beam by flexibility matrix method (system approach). Draw BMD.

(20 Marks)

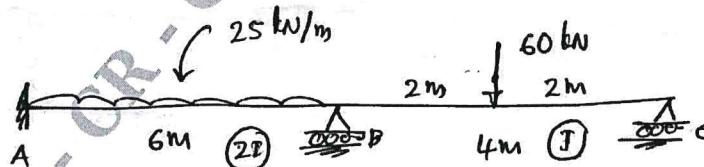


Fig.Q.7

OR

- 8 Analyze the L-frame shown in Fig.Q.8 by flexibility matrix method. Draw BMD (system approach). (20 Marks)

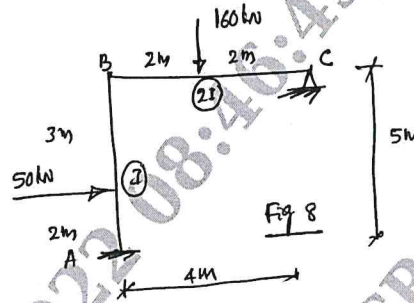


Fig.Q.8

Module-5

- 9 Analyze the continuous beam by stiffness matrix method (system approach) shown in Fig.Q.9. Draw BMD EI is constant. (20 Marks)

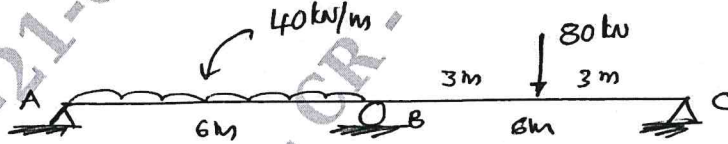


Fig.Q.9

OR

- 10 Find the forces in the members of a joint 'O' shown in Fig.Q.10 by stiffness matrix method. (system approach). (20 Marks)

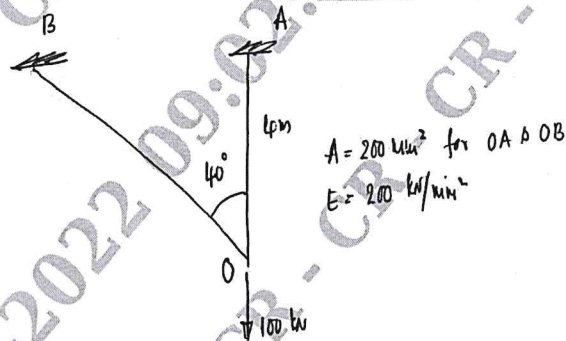


Fig.Q.10
