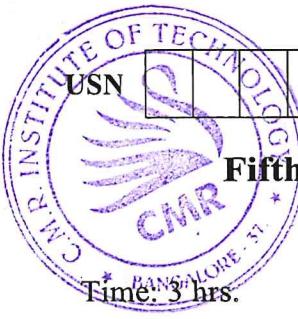


# CBCS SCHEME



18CV52

## 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)

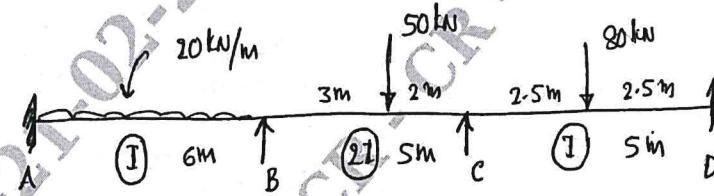


Fig.Q.1

**OR**

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

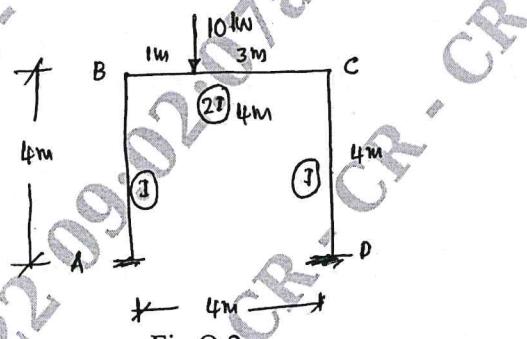


Fig.Q.2

#### Module-2

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

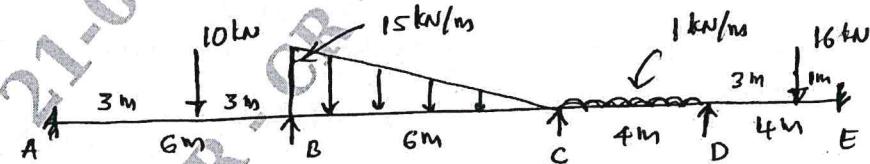


Fig.Q.3

**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.

**OR**

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

(20 Marks)

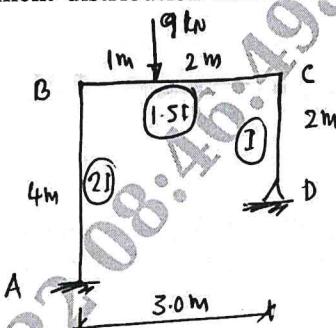


Fig.Q.4

**Module-3**

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

(20 Marks)

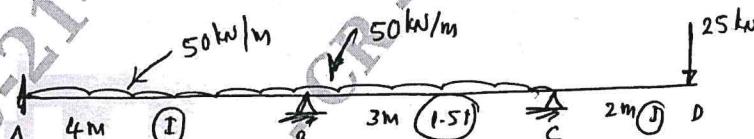


Fig.Q.5

**OR**

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

(20 Marks)

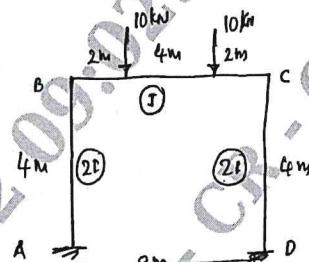


Fig.Q.6

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**Module-4**

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

(20 Marks)

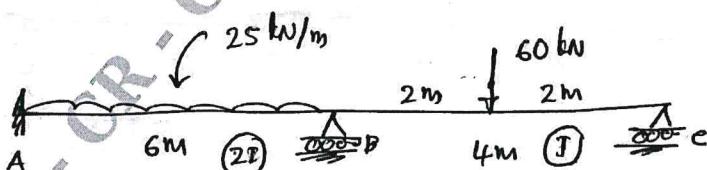
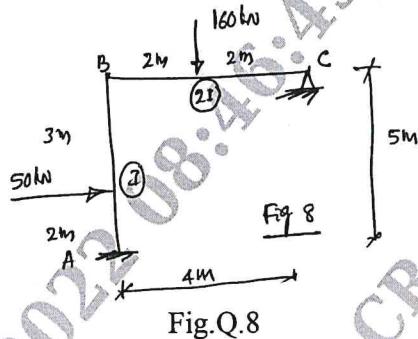


Fig.Q.7

**OR**

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

**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)



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**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)

