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18CV52

## Fifth Semester B.E. Degree Examination, June/July 2024 Analysis of Indeterminate Structures

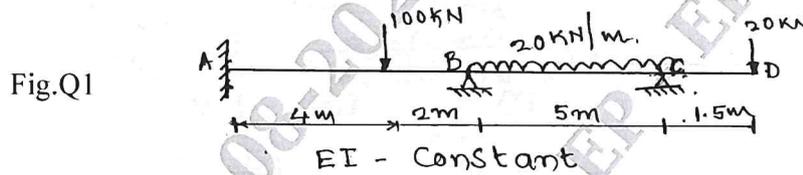
Time: 3 hrs.

Max. Marks: 100

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

### Module-1

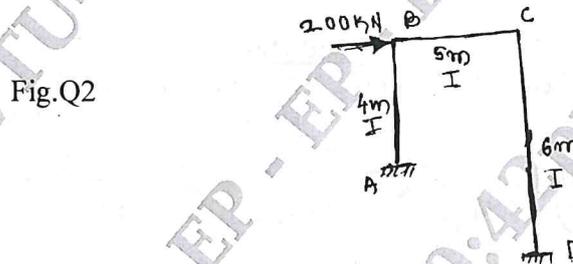
- 1 Analyze continuous beam ABCD by slope deflection method. Construct SFD and BMD.



(20 Marks)

OR

- 2 Analyze the frame shown in Fig.Q2 by slope deflection method and draw BMD.



(20 Marks)

### Module-2

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

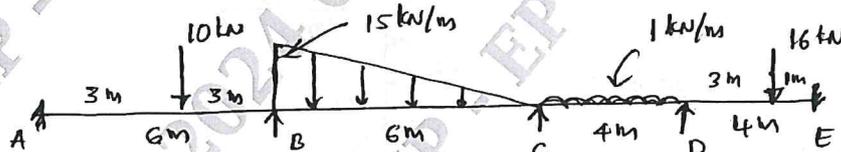
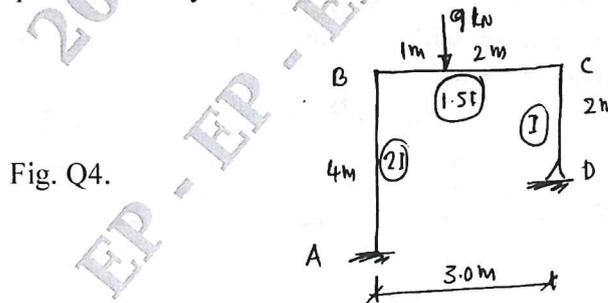


Fig.Q.3.

OR

- 4 Analyze the portal frame by moment-distribution method draw BMD. (20 Marks)

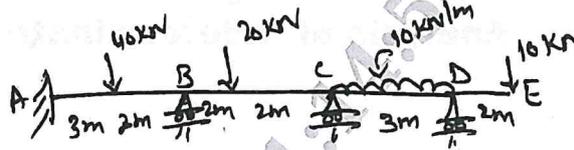


Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

**Module-3**

- 5 Analyse the continuous beam shown in Fig Q5 by moment distribution method and draw BMD.

Fig. Q5.

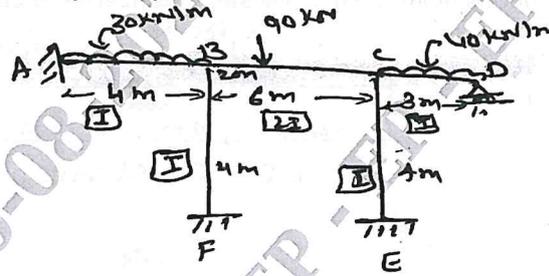


(20 Marks)

OR

- 6 Analyse the frame shown in Fig Q6 by moment distribution method and draw BMD and SFD.

Fig. Q6.

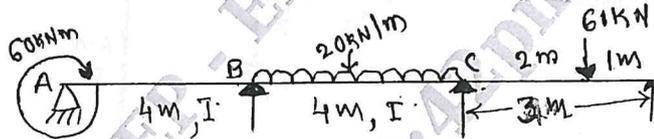


(20 Marks)

**Module-4**

- 7 Analyze the continuous beam shown in Fig.Q7 by flexibility method. Draw BMD.

Fig.Q7

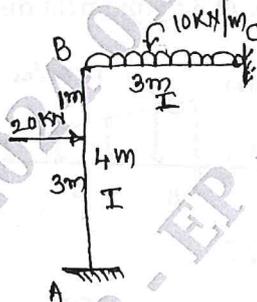


(20 Marks)

OR

- 8 Analyze frame shown in Fig.Q8 by flexibility matrix approach. Draw BMD.

Fig.Q8

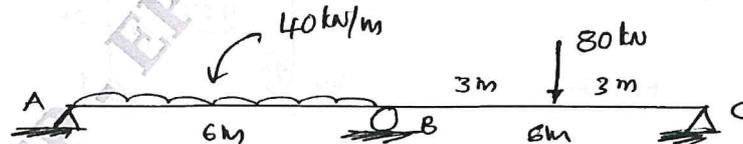


(20 Marks)

**Module-5**

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

Fig. Q9.

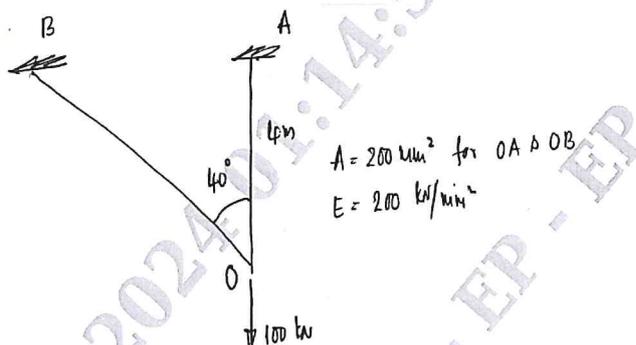


(20 Marks)

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. Q10.



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