

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021 **Analysis of Indeterminate Structures**

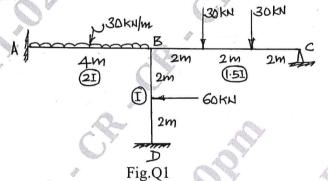
Time: 3 hrs.

Max. Marks: 80

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

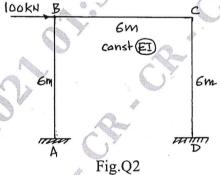
Module-1

Analyze the frame shown in Fig.Q1. Using slope deflection method. Also draw BMD and 1 sketch the elastic curve



(16 Marks)

Analyze the frame shown in Fig.Q2. Using slope deflection method. Also draw BMD and sketch the elastic curve.



Module-2 Analyze the frame shown in Fig.Q3 by the method of Moment Distribution. Draw BMD, 3 SFD and also sketch the elastic curve.

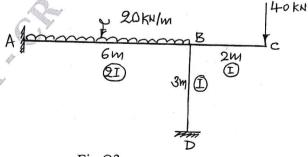


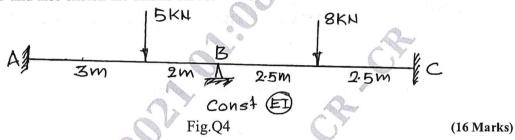
Fig.Q3

(16 Marks)

(16 Marks)

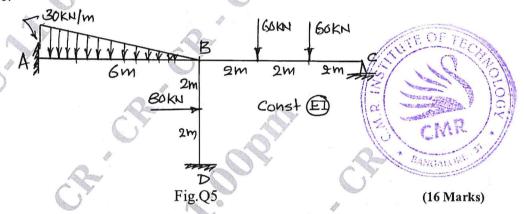
OR

Analyze the continuous beam shown in Fig.Q4 by the method of moment distribution. Draw BMD, SFD and also sketch the elastic curve.



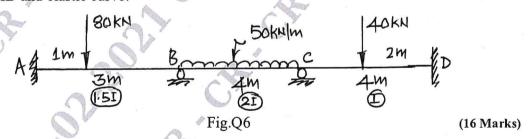
Module-3

Analyze the frame shown in Fig.Q5 by using Kani's method. Draw BMD and also sketch the elastic curve.



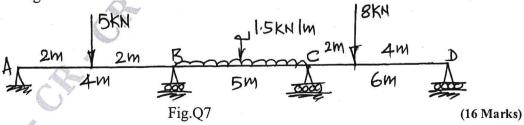
OR

6 Determine the support moments for the continuous beam shown in Fig.Q6 by Kani's method. The relative I values are indicated along the member in each span. E is constant. Draw BMD and elastic curve.



Module-4

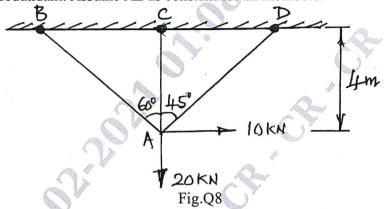
Analyze the continuous beam shown in Fig.Q7 by flexibility matrix method. Take EI constant throughout. Draw BMD.



(16 Marks)

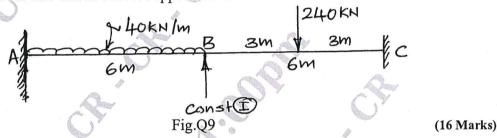
OR

Analyze the truss shown in Fig.Q8 by flexibility matrix method. Choosing the force in member AD as redundant. Assume AE as constant for all members.



Module-5

Analyze the continuous beam shown in Fig.Q9 by stiffness method, using system approach. Draw BMD, SFD and elastic curve. Supports A and C are fixed ends.



OR

Analyze the rigid jointed plane frame shown in Fig.Q10 by stiffness matrix method. Draw BMD.

