CBCS SCHEME

USN

18CV52

Fifth Semester B.E. Degree Examination, June/July 2023
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. Missing data, if any, may be suitably assumed.

Module-1

1 Analyse and draw BMD and SFD for the continuous beam shown in Fig.Q1 by slope deflection method.

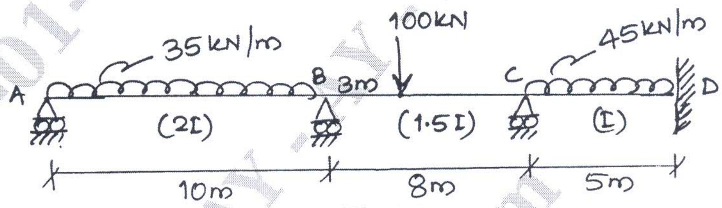

Fig.Q1 **(20 Marks)**

OR

2 Analyse and draw BMD for the rigid frame shown in Fig.Q2 by slope deflection method.

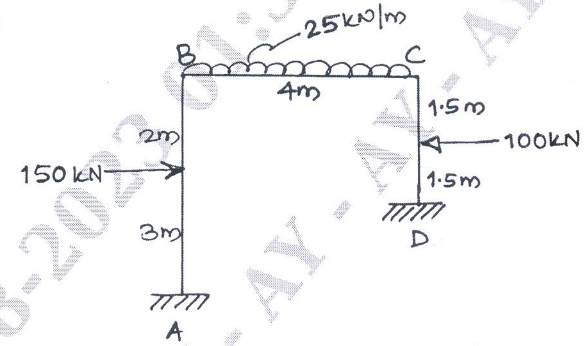

Fig.Q2 **(20 Marks)**

Module-2

3 Analyse and draw BMD and SFD for the continuous beam shown in Fig.Q3 by moment distribution method.

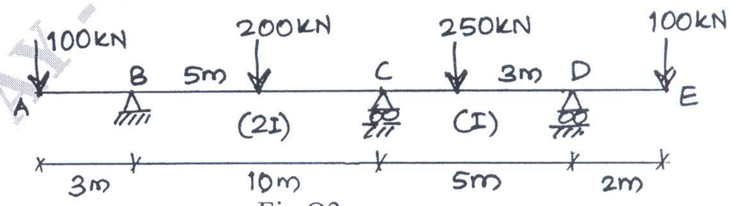

Fig.Q3 **(20 Marks)**

OR

4 Analyse the portal frame shown in Fig.Q4 by moment distribution method and draw BMD.

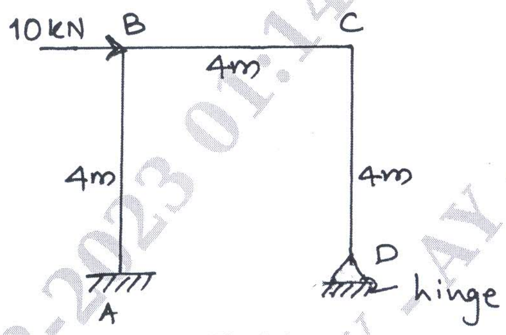

Fig.Q4

(20 Marks)

Module-3

5 Anlayse the continuous beam shown in Fig.Q5 by Kani's method and draw BMD.

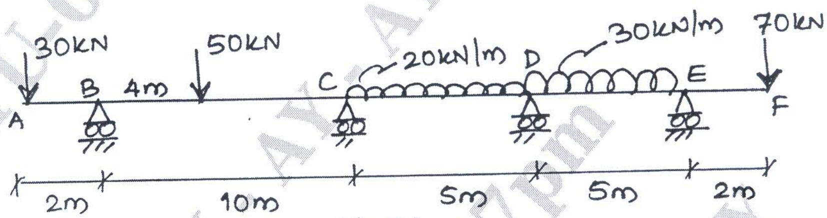

Fig.Q5

(20 Marks)

OR

6 Analyse the portal frame shown in Fig.Q6 by Kanis method and draw BMD.

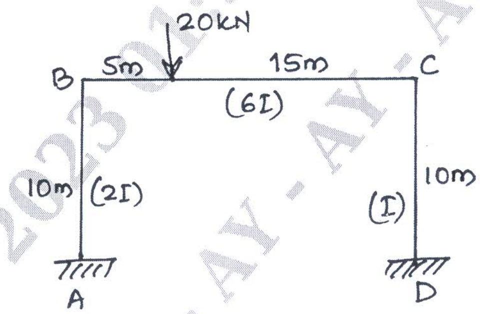

Fig.Q6

(20 Marks)

Module-4

7 Analyse the continuous beam shown in Fig.Q7 by matrix flexibility method and draw BMD and SFD. Take moments as redundant. (Use system approach).

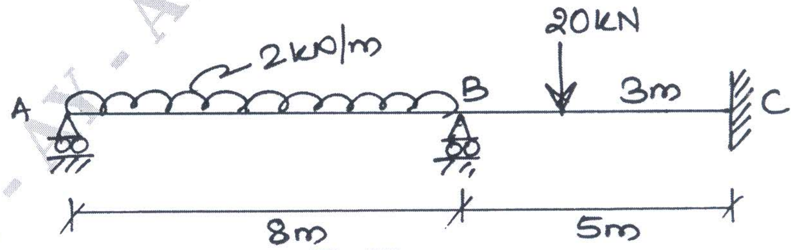

Fig.Q7

OR

8 Analyse the rigid frame shown in Fig.Q8 by matrix flexibility method using system approach. Take reaction at 'D' as redundant.

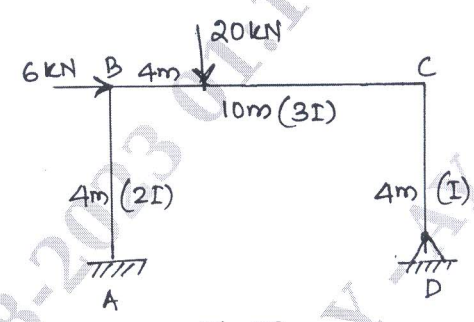

Fig.Q8 **(20 Marks)**

Module-5

9 Analyse the continuous beam shown in Fig.Q9 by matrix stiffness method using system approach and draw BMD.

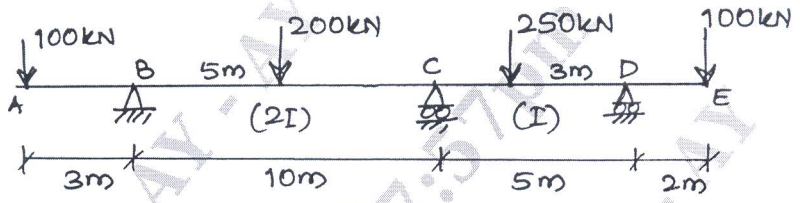

Fig.Q9 **(20 Marks)**

OR

10 Analyse the pin-jointed truss shown in Fig.Q10, by matrix stiffness method using system approach. Take E = constant for all members. The values in parenthesis indicates c/s area of members.

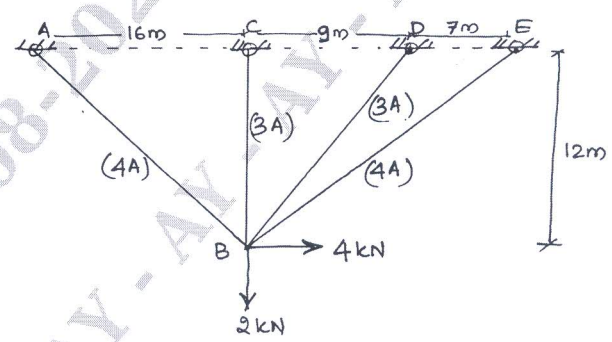

Fig.Q10 **(20 Marks)**

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