Sanjay Ghodawat University, Kolhapur

2020-21

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

EXM/P/09/00

Year and Program: TY B.Tech.	School of Technology	Department: Civil Engg.
Course Code: CET309R1	Course Title: Analysis of Indeterminate Structures	Semester : VI
Day and Date:	RE End Semester Examination	Time : 2 Hrs. Max Marks : 50

Instructions: 1) All Questions are compulsory. 2) Assume suitable data if necessary.

		Marks	Bloom's Level	CO
Q.1	**Solve the following (any Two)**			
a)	Describe in detail with example of static indeterminacy and kinematic indeterminacy of structures.	8	2	CO1
b)	The propped cantilever beam AB of 10m span, fixed at A and propped at B when subjected to a point load of 20KN at 4 m from left end A. Analyze by consistent deformation method. Also, draw SFD and BMD	8	3	CO1
c)	Analyse the two span continuous beam shown in Fig. 1(c) by slope deflection method and draw bending moment, shear force diagrams and elastic curve.(EI is constant Throughout**)**	8	3	CO2

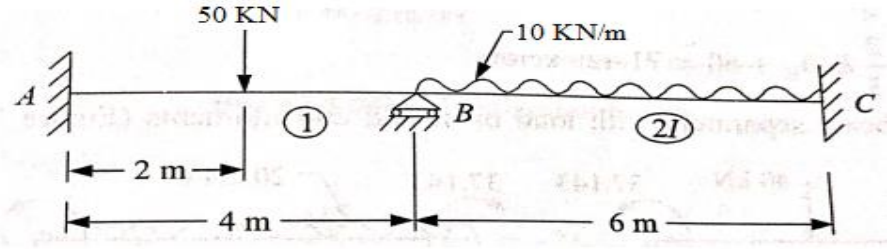


Fig. 1(c)

Q.2	**Answer/Solve the following (any two)**			
a)	Analyse the continuous beam shown in figure 2 (a) by moment distribution method and draw bending moment and shear force diagram. Draw the elastic curve also.	8	3	CO3

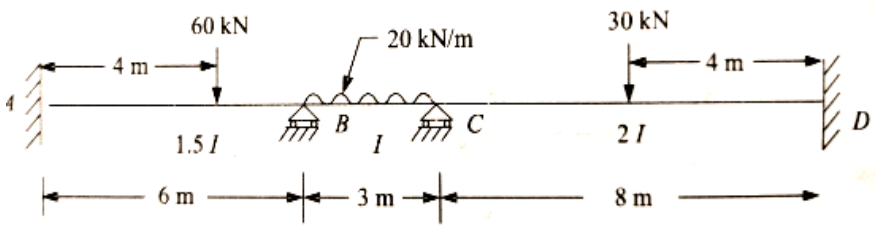


Fig.2 (a)

b)	Analyse the continuous beam shown in Fig.2(b) by flexibility matrix method	8	3	CO4

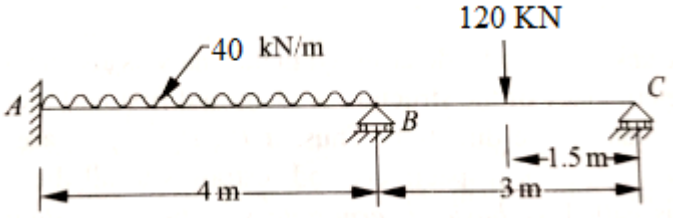


Fig.2(b)

c) Analyse the continuous beam shown in Fig.2(c) by stiffness matrix method 8 3 CO4

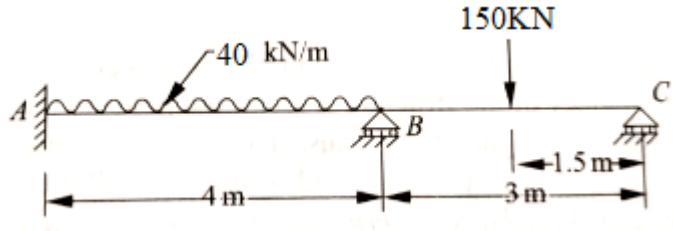


Fig.2(c)

Q.3 Answer/Solve the following (any two)

a) Analyse the continuous beam shown in Fig.3 (a) by the three moment equitation and also draw SFD and BMD. 9 3 CO5

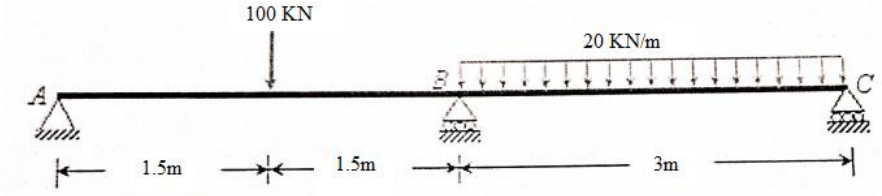


Fig.3 (a)

b) Analysis of frame by cantilever method as shown in Fig.3 (b). Assume all columns have same area of C/S that is 2. 9 3 CO6

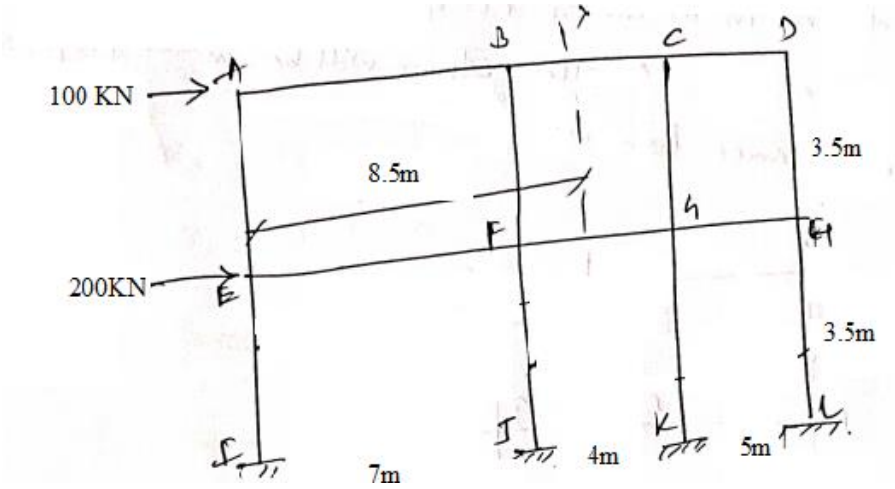


Fig.3 (b)

c) Analysis of frame by cantilever method as shown in Fig.3 (c). Assume all columns have same area of C/S that is 2. 9 3 CO6

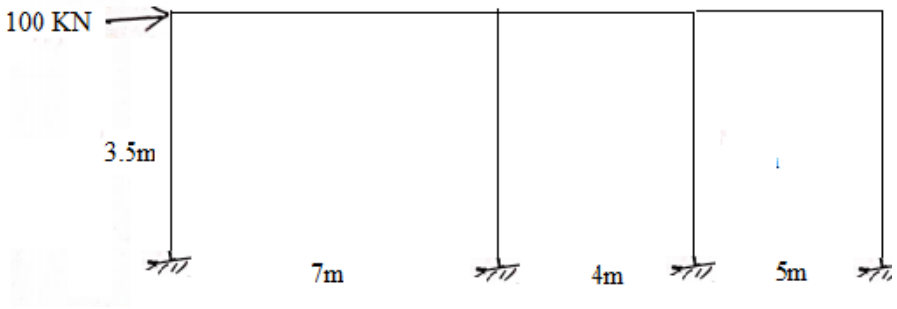


Fig.3 (c)

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