

GANPAT UNIVERSITY

B.Tech. Semester V (CIVIL), Regular Examination – November / December: 2011

C 501: Structure Analysis-II

Max.Time: 3 Hours

Max.Marks -70

Exam. No. of the candidate: _____ Supervisor's dated initial: _____

- Instructions:** -
- (1) Answer to the two sections must be written in **separate** answer books.
 - (2) Figures to the **right** indicate **full** marks.
 - (3) Assume suitable data if required.

Section - I

- 1 Analyze the beam shown in Fig-1 by slope deflection method. 12

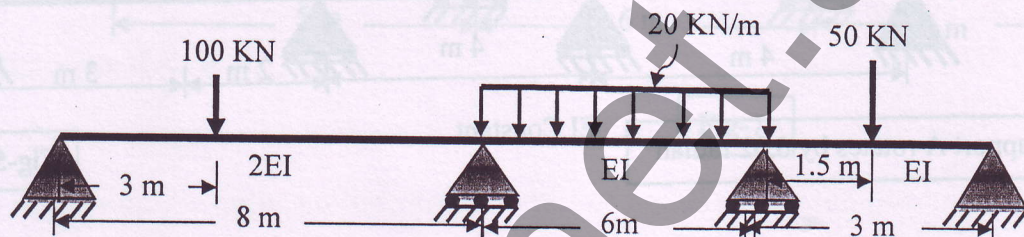


Fig-1

OR

- 1 Draw S.F. & B.M Diagram for Fig-2 by slope deflection method. 12

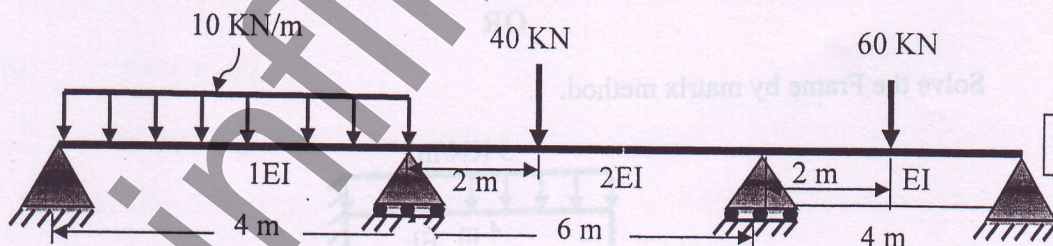


Fig-2

- 2 Analyze the beam shown in Fig-3 by Moment Distribution method. 11

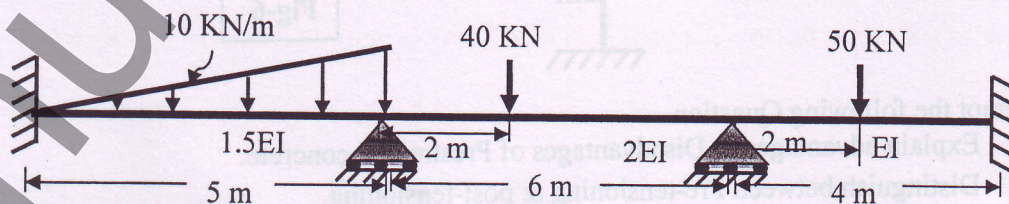
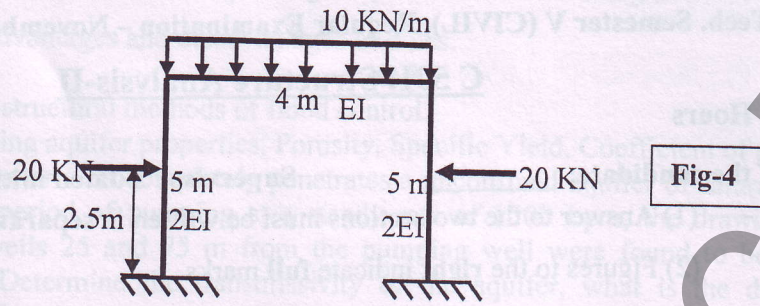


Fig-3

OR

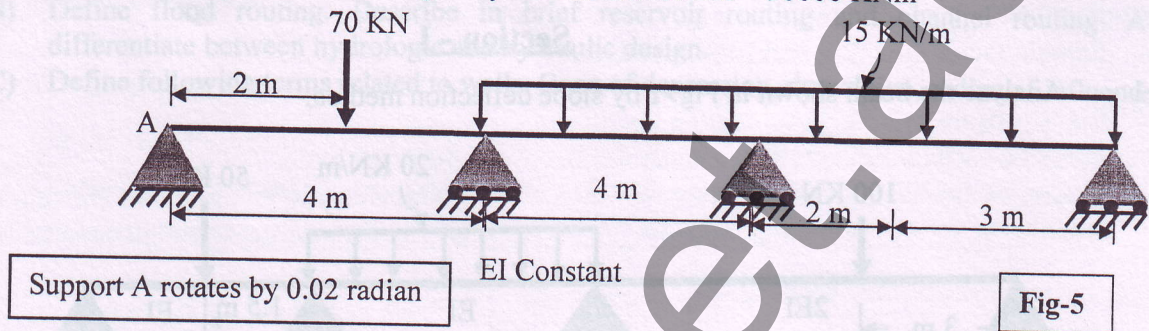
- 2 Analyze the frame shown in Fig -4 by Moment Distribution method.

11



- 3 Analyze the figure shown in Fig -5 by Matrix method. $EI = 90000 \text{ KNm}^2$

12



Section - II

- 4 Attempt the following Question.

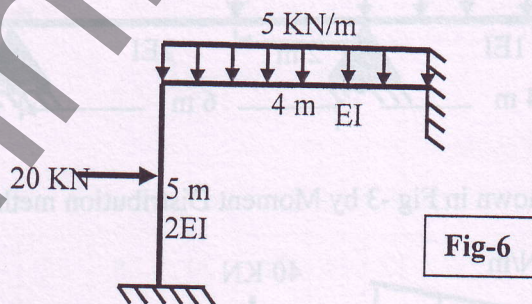
12

- (A) Define Following terms: Distribution factor, Carry over moment, Stiffness
(B) Find out S.I & K.I of figure- 1,4& 6.

OR

- 4 Solve the Frame by matrix method.

12



- 5 Attempt the following Question.

11

- (A) Explain advantages & Disadvantages of Prestressed concrete.
(B) Distinguish between Pre-tensioning & post-tensioning.

OR

- 5 Design a prestressed concrete slab to the following data.
 Span= 12m
 Safe stress in concrete = 14 N/mm^2
 Safe stress in steel = 900 N/mm^2
 Superimposed load = 20 KN/m^2
 Weight of PSC = 24 KN/m^3

- 6 Solve the beam shown in fig-7 by KANI's method

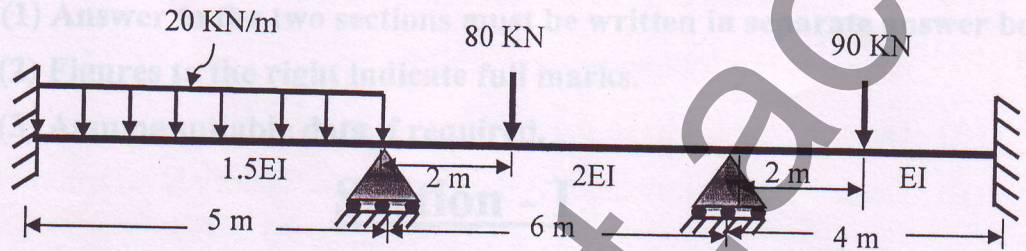


Fig-7

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