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Total No. of Questions : 09] [Total No. of Pages : 03

Paper ID [CE305]

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Sem. - 5th)

STRUCTURAL ANALYSIS - II (CE - 305)

(Paper - I)

MAY 2008

Time : 03 Hours **Maximum Marks : 60**

Instruction to Candidates:

1 MAY 2008

1) Section - A is **Compulsory**.
2) Attempt any **Four** questions from Section - B.
3) Attempt any **Two** questions from Section - C.

Section - A

Q1) *(10 × 2 = 20)*

a) Distinguish between statically determinate and statically indeterminate structures.

b) State three moments theorems.

c) What is the difference between a fixed beam and a propped cantilever?

d) What are rigid frames?

e) Explain carry over factors.

f) What is rotation contribution factor?

g) What are the assumptions in portal method of analysis of frames?

h) What are equilibrium and stability conditions of space truss?

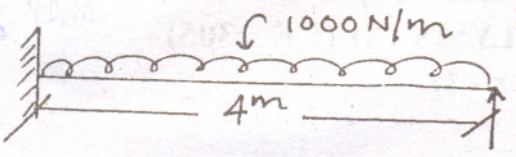
i) State Muller Breslau principle.

j) What is the effect of rotation of support in fixed beams?

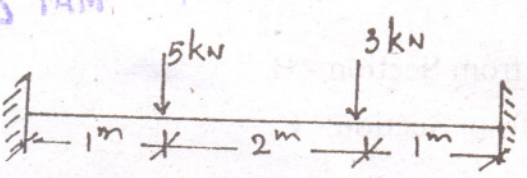
Section - B

(4 × 5 = 20)

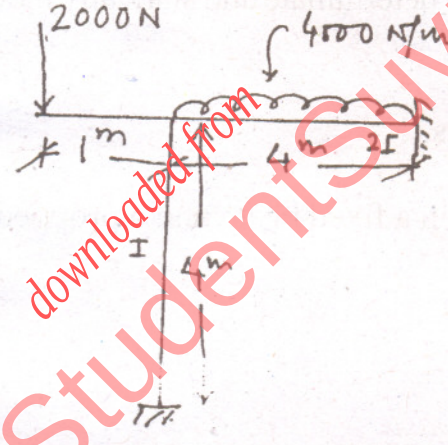
Q2) Draw the BMD of the propped cantilever by consistent deformation method. Take EI = 1×10^6 NM^2



Q3) Analyse the fixed beam using moment area theorem.

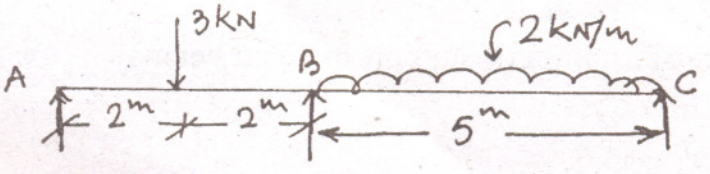


Q4) Analyze the frame by slope deflection method.



Q5) Explain the procedure for the analysis of space frames using tension coefficient method.

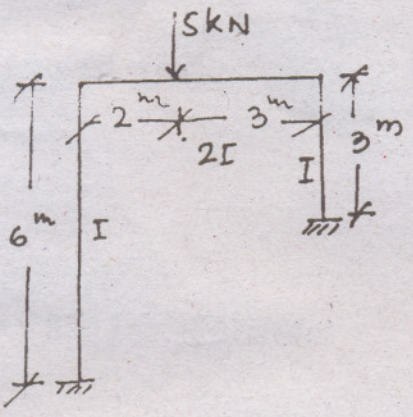
Q6) Find the support moments of continuous beam using three moments theorem. During loading support 'B' sinks by 1cm.



Section - C

(2 × 10 = 20)

Q7) Analyze the frame using Moment Distribution method.



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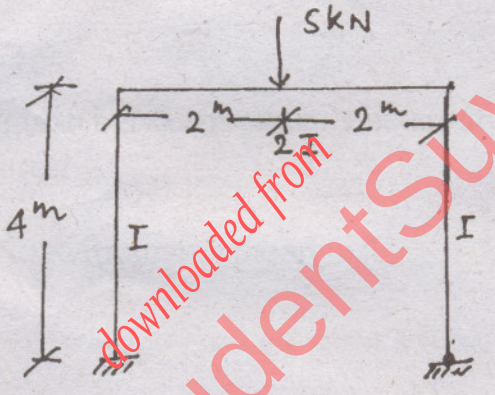
Q8) Analyse the frame by Kani's method.



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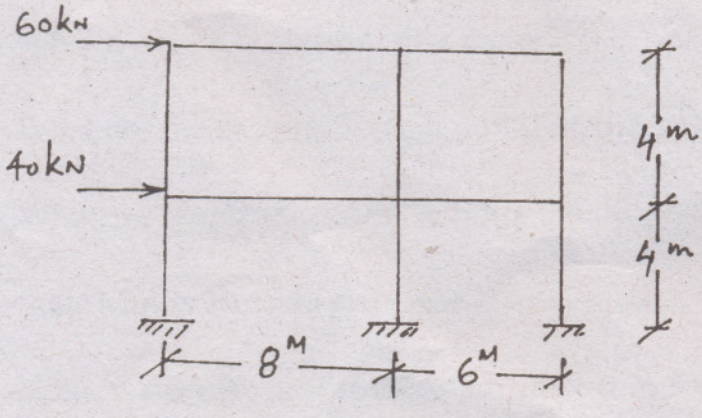
Q9) Analyse the frame by portal method. Area of each exterior column is half of the area of interior columns.



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