Hall Ticket Number :										

R-13

Code: 1G651

III B.Tech. I Semester Supplementary Examinations February 2021

Structural Analysis-II

(Civil Engineering)

Max. Marks: 70 Time: 3 Hours

Answer any **five** questions
All Questions carry equal marks (**14 Marks each**)

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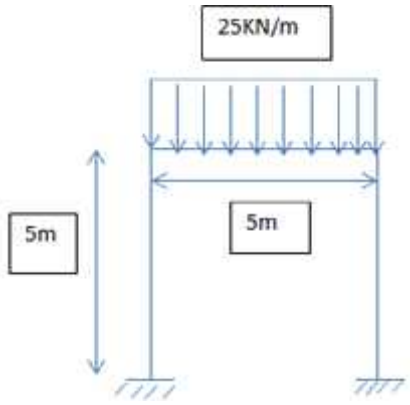
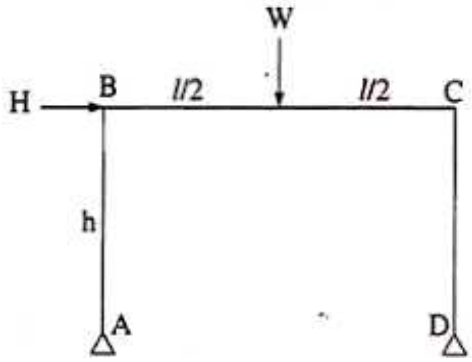
1. A three hinged parabolic arch hinged at the crown has a span of 40m and a central rise of 5m. It carries a concentrated load of 60KN at 8.5m from the right support and a uniformly distributed load of 40KN/m over the left half of the portion. Determine the moment, normal thrust and radial shear at a section of 10m from the left support.
2. Determine the horizontal thrust in a semi-circular two hinged arch, when a concentrated load "W" acts at crown. Assume uniform flexural rigidity.
3. Analyze the given frame as shown in fig by using Slope-Deflection method and assume uniform flexural rigidity.



Fig

4. Analyze the given portal frame as shown in fig by using Moment-Distribution Method method.



Fig

5. Illustrate the methodology of analysis beams without relative displacements at ends?
6. Explain the Kinematic indeterminancy?
7. Explain the flexibility method of matrix analysis?
8. Illustrate the theorems of plastic collapse? Explain the idealized stress strain diagram in plastic analysis?

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