Hall Ticket Number :										

R-11 / R-13

Code: 1G651

III B.Tech. I Semester Supplementary Examinations May 2019

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. Write a short note on
   a) Three hinged parabolic arch
   b) Three hinged circular arch
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 portal frame as shown in fig.1 by using Slope-Deflection method with uniform flexural rigidity?

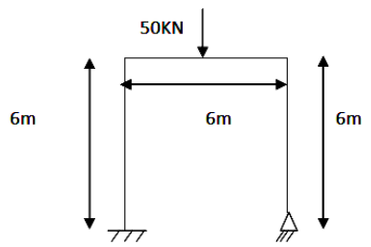

Fig .1

4. Analyze the given frame as shown in fig.2 by using Moment-Distribution Method method.

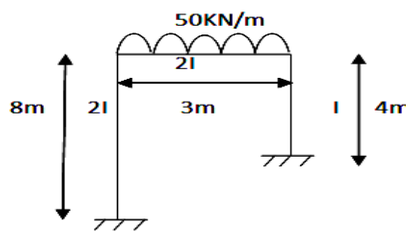

Fig .2

5. Detail the methodology of analysis by substitute frame method?
6. Analyze the given beam as shown in fig.3 by using Stiffness Method.

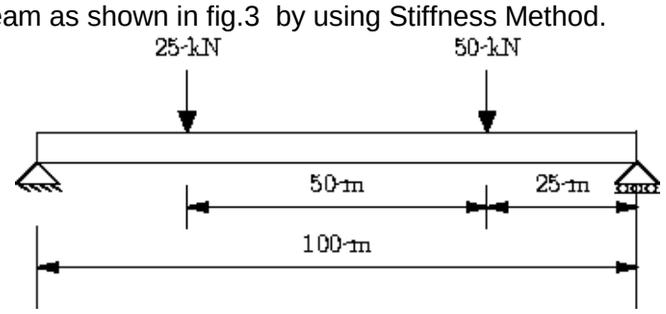

Fig .3

7. Analyze the given Continuous beam as shown in fig.4 by using Stiffness method if support "B" sinks by 10mm. Take EI = 6000KN/m^2

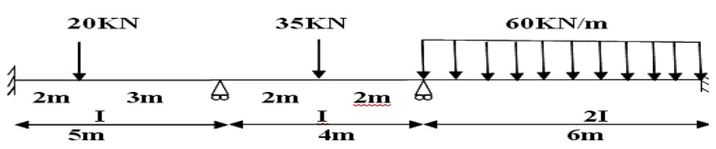

Fig .4

8. a) Define Shape factor?
   b) Develop the Shape factor for a Triangular section.

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