* S E - 6 7 4 9 / 1 0 0 *

SE-6749

B. E. - III (Sem. - V) (Civil) Examination

April / May – 2011

Structural Analysis - II

(Old Course)

Time : **3** Hours] [Total Marks : **100**

Instruction :

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **B. E. - 3 (SEM. - 5) (CIVIL)**

Name of the Subject :

☛ **STRUCTURAL ANALYSIS - 2 (OLD COURSE)**

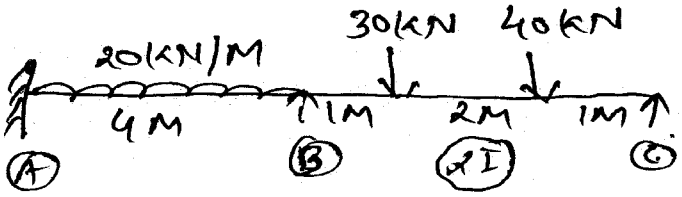
☛ Subject Code No. : **6 7 4 9** ☛ Section No. (1, 2,.....) : **Nil**

Seat No. :

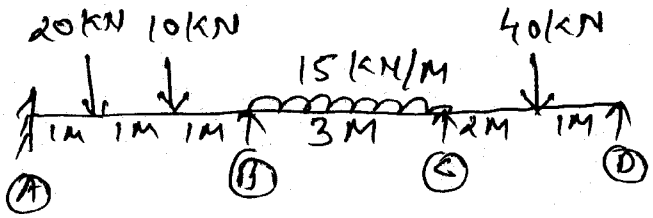
Student's Signature

1 (a) Define SI and KI of a structure with suitable example. **4**

(b) Analyse the beam shown in fig. by slope deflection method, and draw SF and BM. **14**

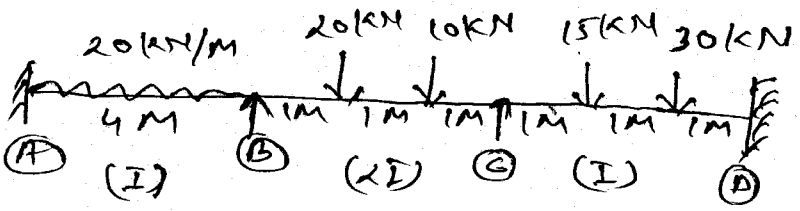


2 Analyse the Beam shown in fig. by moment distribution method and draw SF and BM diagram. **16**

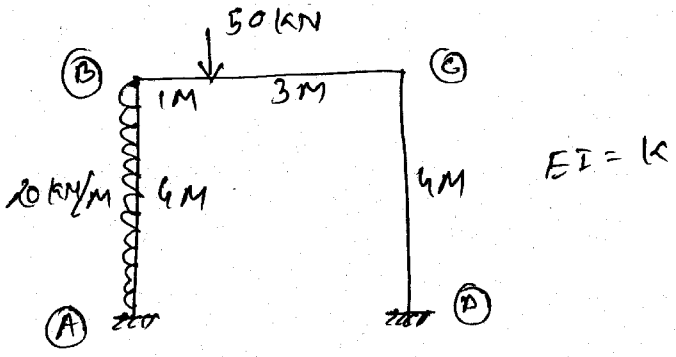


OR

2 Analyse the beam shown in fig. by moment distribution method and draw SF and Bending moment diagram. **16**

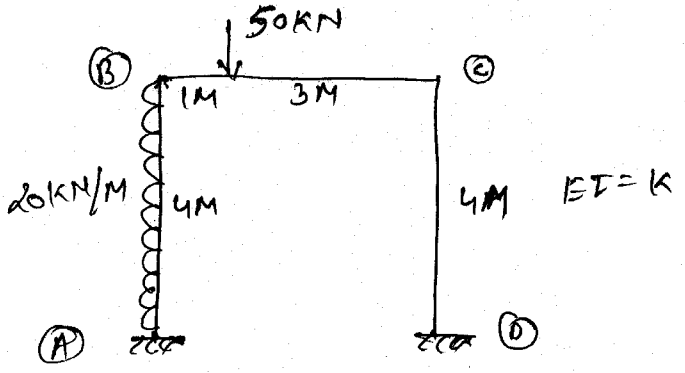


3 Solve the frame shown in fig. by slope deflection method and draw Bending Moment diagram. **16**



OR

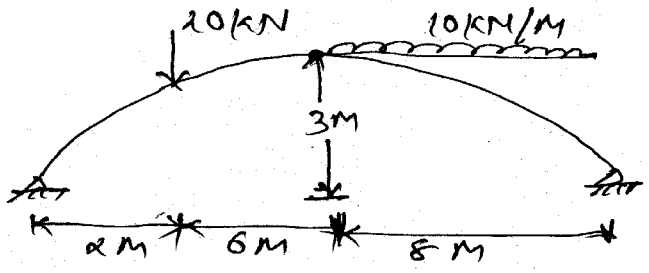
3 Solve the frame shown in fig. by moment distribution method and draw BM diagram. **16**



4 (a) Explain in short the consistant deformation method with suitable example. **4**

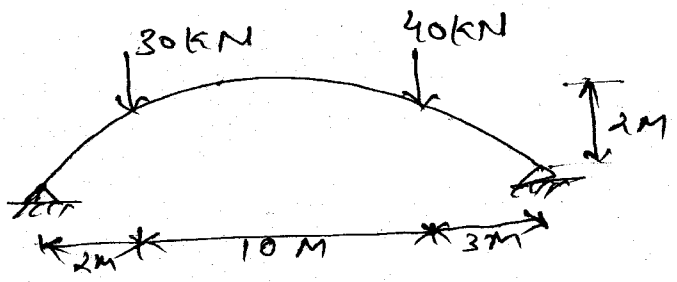
(b) For a three hinged parabolic arch of span '*l*' M and rise 'h' m subjected to u.d.l on entire span, prove that bending moment is zero. 8

5 Analyse the arch shown in fig. (parabolic arch) and find bending moment at important points. 16



OR

5 Solve the two hinged parabolic arch shown in fig. and find Bending moment under point load. 16



6 (a) Define structure and classify them based on resisting mechanism. 4

(b) Find out force in every member of the truss shown in fig. 18

AE = K