SUBJECT CODE NO: E-335
FACULTY OF ENGINEERING AND TECHNOLOGY
T.E.(CIVIL) Examination Nov/Dec 2017
Theory of Structure - II
(REVISED)

**[Time: Three Hours]**   **[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B
    i.   Q.No.1 and Q.No.6 are compulsory. Attempt any two from Section A and Section B.
    ii.   Assume suitable data if necessary state it clearly.
    iii.   Figures to the right indicate the maximum marks.
    iv.   Use of non-programmable calculator is allowed.
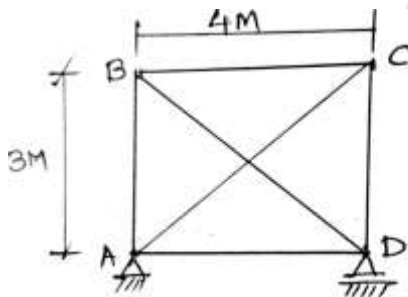
SECTION-A

Q.1   a) State and explain upper and lower bound theorem.   04
        b) Explain plastic modulus.   03
        c) Explain collapse load.   03

Q.2   Analyse the frame as shown below by column analogy method and draw bending moment diagram. 15
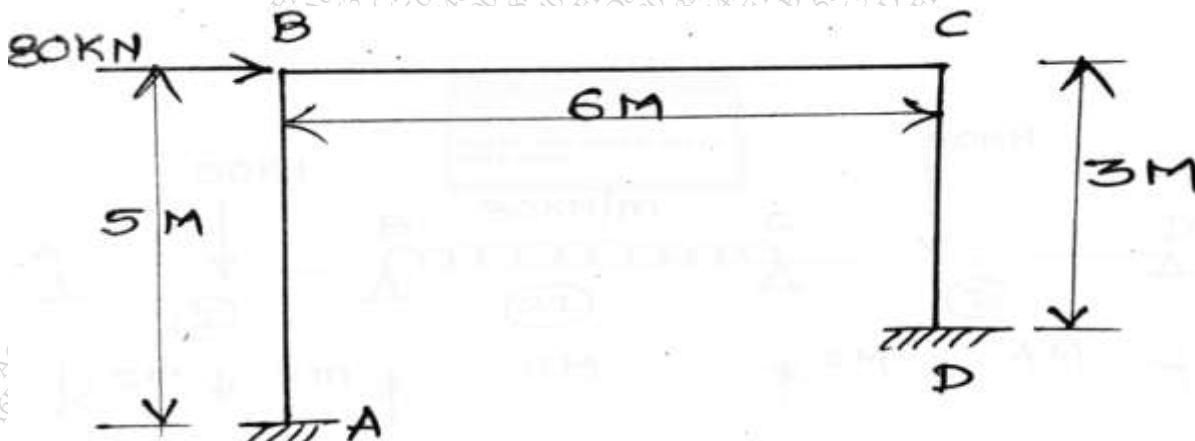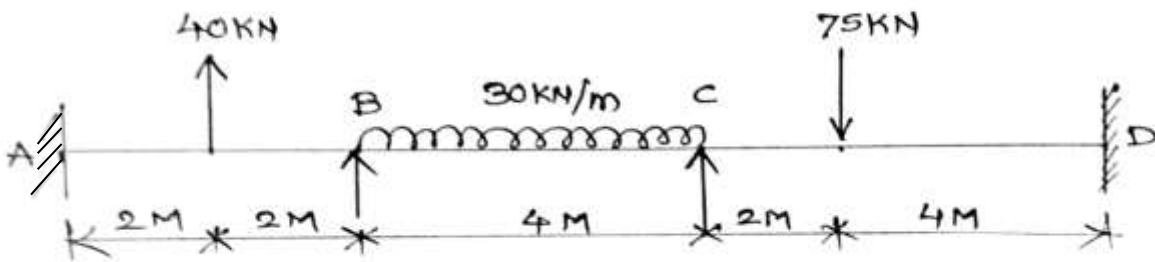
Q.3   Analyse the beam shown in fig. below by using slope deflection method draw BMD & SFD.   15
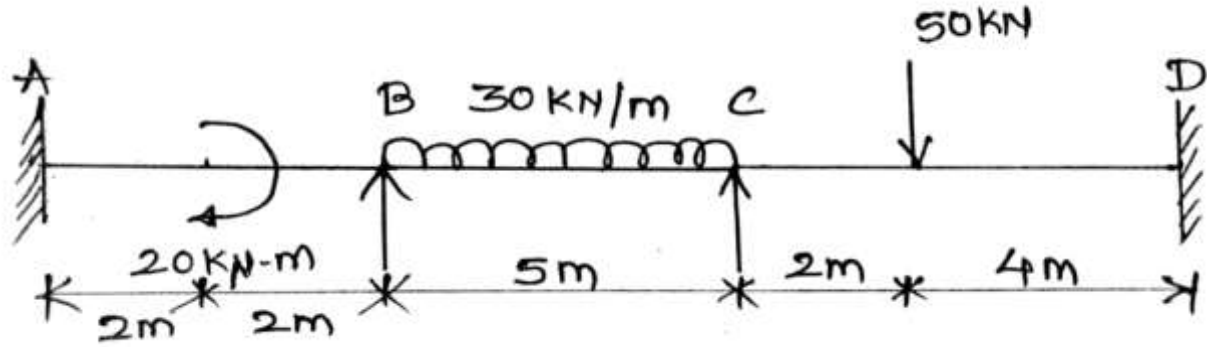
Q.4   A pin jointed truss as shown in fig. find the forces in the members. Cross sectional area is   15
1000MM^2, take E=2x10^5 MPa.
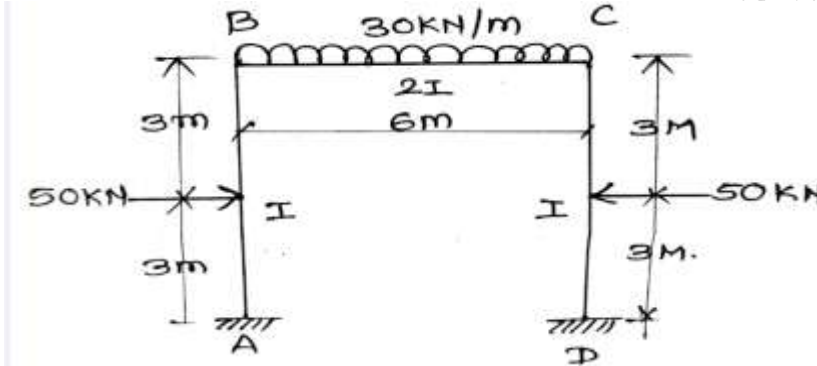

Q.5   Draw SFD, BMD for the beam shown in fig below by using SLOPE DEFLECTION METHOD. If   15
support B sinks by 2.50 mm. take I=3.5 x 10^7 mm^4 , E = 200 KN/M^2
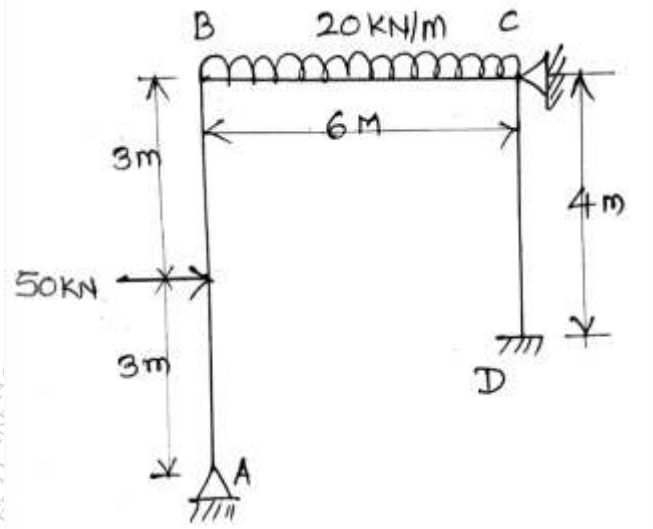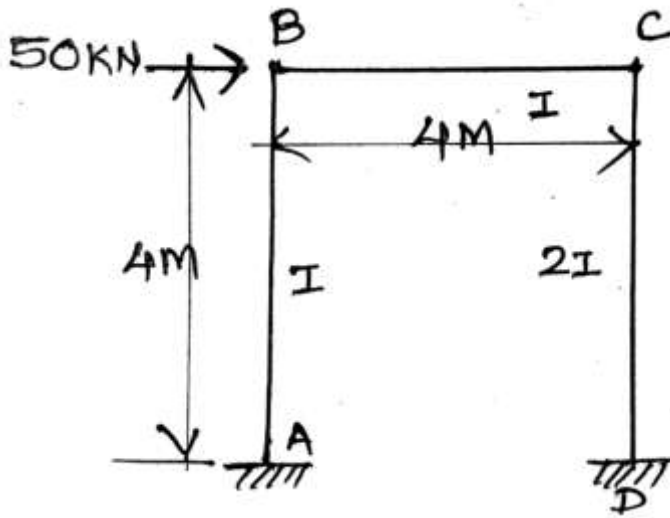
SECTION-B

Q.6   Find the end moments of the members of the portal frame as shown in fig by using MOMENT   10
       DISTRIBUTION METHOD.

Q.7   Find the end moments of the members of the portal frame as shown in fig by using MOMENT   15
       DISTRIBUTION METHOD.

Q.8 Analyse the portal frame as shown in fig. by using KANI'S METHOD. 15

Q.9 Two hinged parabolic arch of span 18M and rise 3.60M. Carries two concentrated loads of 30 KN 15 each at crown and left quarter span. Find the horizontal thrust & BMD.

Q.10 Analyse the continuous beam and draw BMD. 15