

End Semester Examination (Odd Semester_2017-18)
B.Tech. V Semester (Civil Engineering)
Subject: Structural Analysis-II (AM-1501)

Time: 3 Hrs.

M.M.- 60

Note: Attempt all the questions. Assume missing data suitably, if any. Questions 1-4 are of 12 marks each and questions 5-6 are of 6 marks each.

1. Analyze the beam shown in Fig.-1 using a suitable method and draw AFD, SFD & BMD.
2. Analyze the frame shown in Fig.-2 using Moment Distribution Method and draw AFD, SFD & BMD.
3. Determine the horizontal reaction of the supports for the frame shown in Fig.-3 using Energy method.
4. Analyze the truss shown in Fig.-4 using Stiffness method.
5. Determine the shape factor and fully plastic moment for the beam section shown in Fig.-5 having yield point stress 250 MPa.
6. Analyze the beam for a 15 mm settlement of support B shown in Fig.-6 using slope deflection method

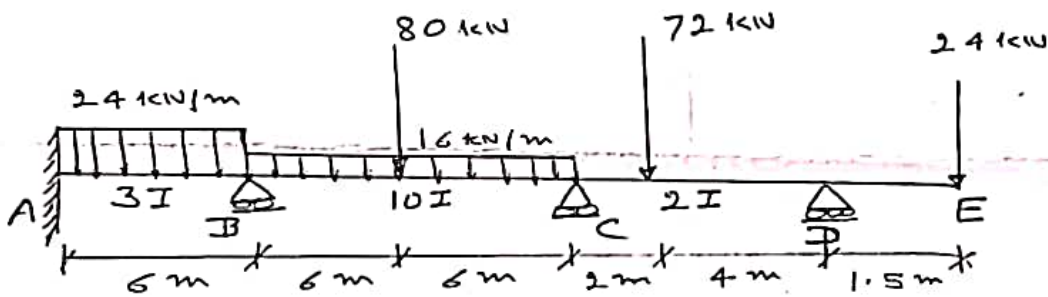


Fig.-1

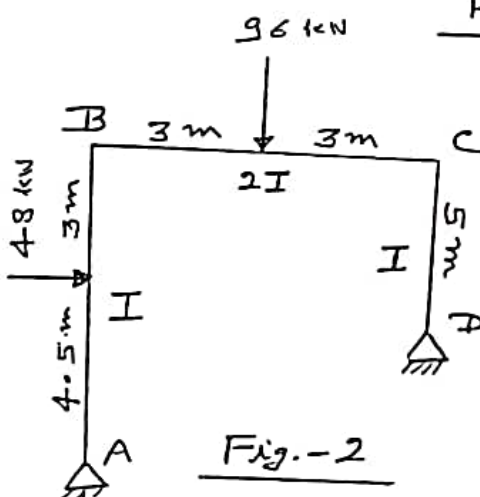


Fig.-2

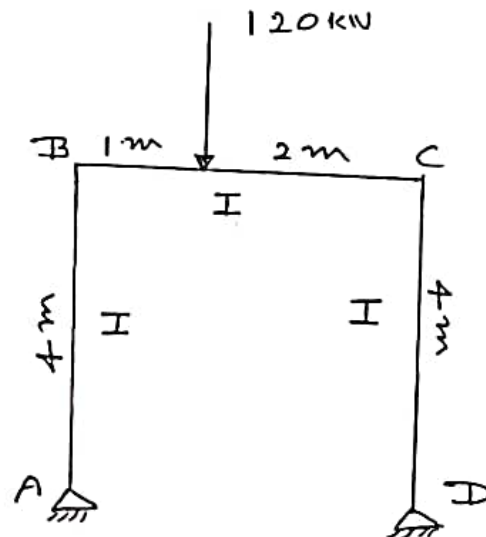


Fig.-3

P.T.O

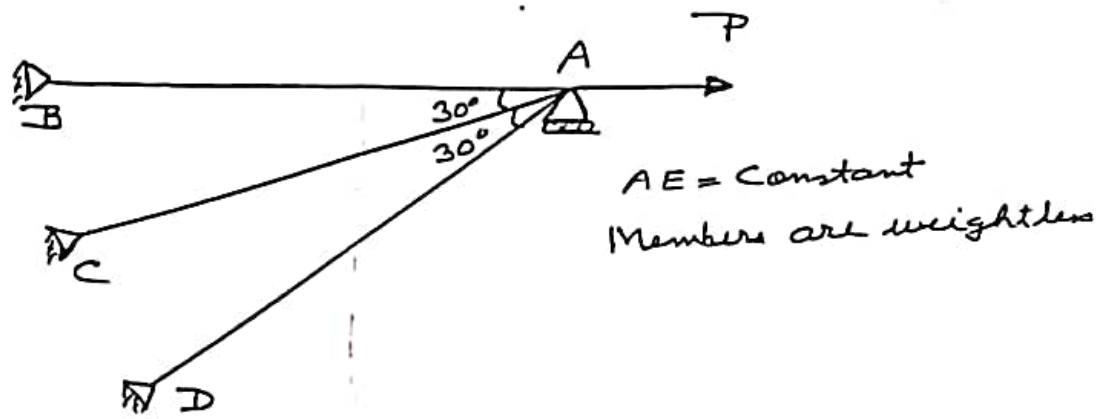


Fig. - 4

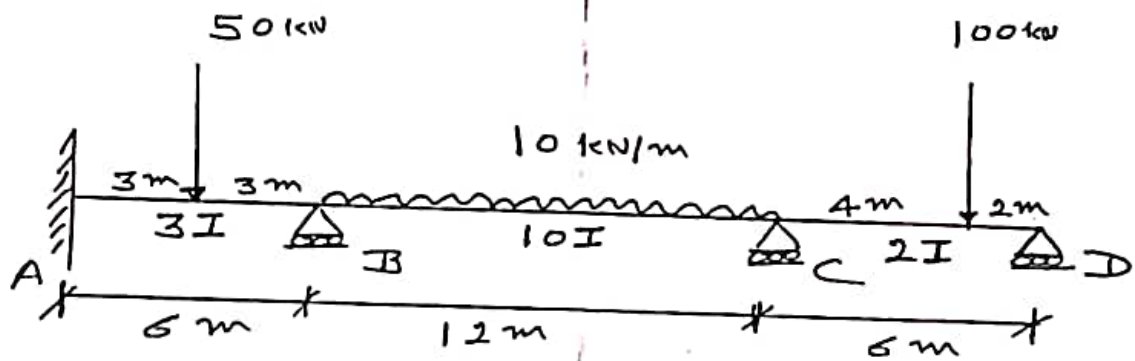


Fig. - 6

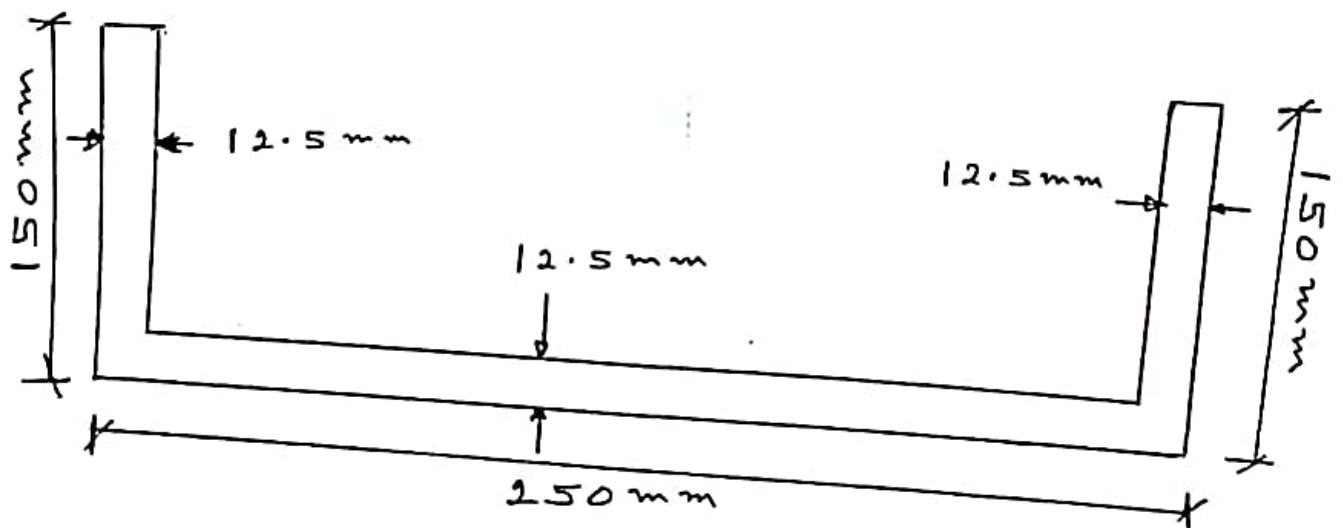


Fig. - 5