

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- December 2017

M.Tech.- Ist Semester

COURSE CODE: 11M1WCE111

MAX. MARKS: 35

COURSE NAME: ADVANCED STRUCTURAL ANALYSIS

COURSE CREDITS: 03

MAX. TIME: 2Hrs

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q.1. Find the support reaction for the truss shown in Fig.1 by using stiffness method. $A = 0.0015 \text{ m}^2$ and $E = 200 \text{ GPa}$. (7)

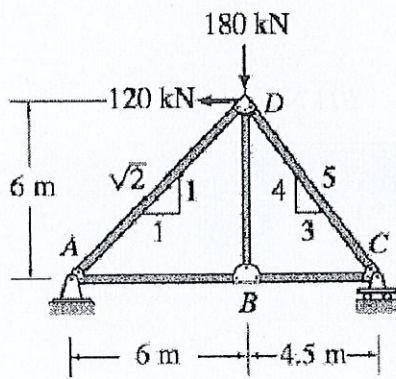


Fig.1.

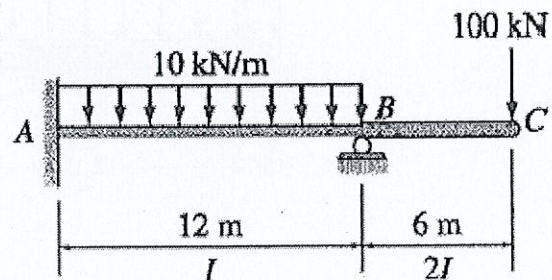
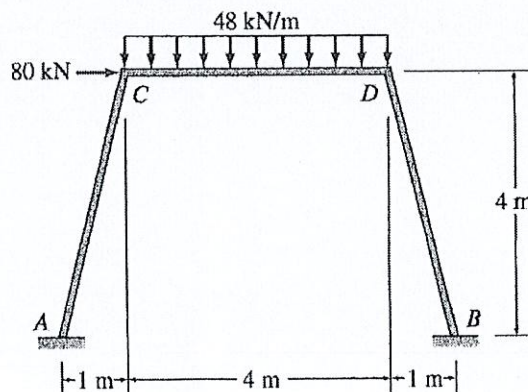


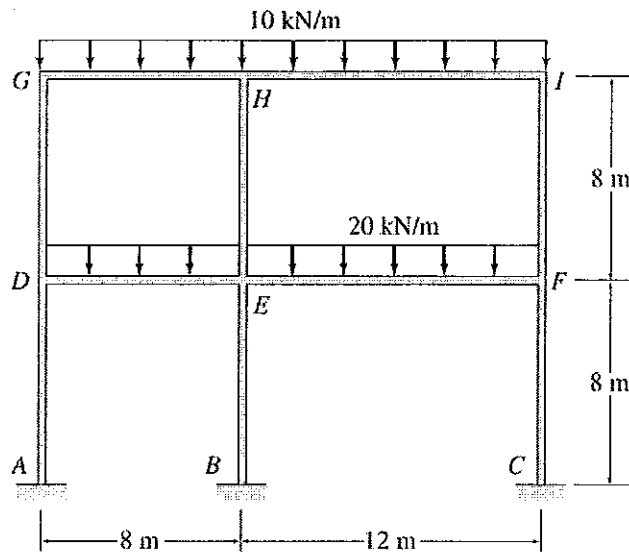
Fig.2

Q.3. Solve the given frame by Slope Deflection Method. $E = 200 \text{ GPa}$ and $I = 5 \times 10^6 \text{ mm}^4$. (7)



Q.4. Solve the given frame by approximate method.

(7)



Q.5. Solve the given beam by Stiffness Matrix Method. EI is constant for the beam.

(7)

