

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2024

M.Tech (SE)-I Semester (CE)

COURSE CODE (CREDITS): 11M1WCE111

MAX. MARKS: 25

COURSE NAME: Advanced Structural Analysis

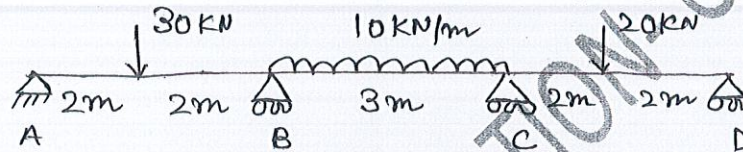
COURSE INSTRUCTORS: Mr. Chandra Pal Gautam

MAX. TIME: 1 Hour 30 Minutes

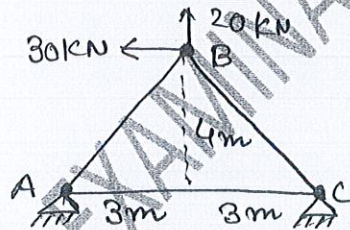
Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

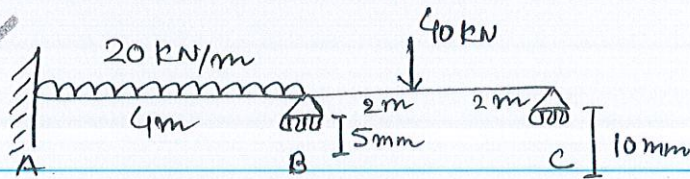
Q.1. Analyse the given beam and draw the bending pattern by using three moment equations. [5]



Q.2. Solve the given truss by using Force method. AE for all the members are same. [8]



Q.3. Solve the given beam by using Slope Deflection Equations. Take  $E=200\text{GPa}$ ,  $I = 200 \times 10^6 \text{mm}^4$ . [7]



Q.4. Finds the moments in given frame by using Slope Deflection Equations method. Take  $E=200\text{GPa}$ ,  $I = 200 \times 10^6 \text{mm}^4$ . [5]

