Dr Chander Pal

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- December-2018

M.Tech. - I[st] Semester

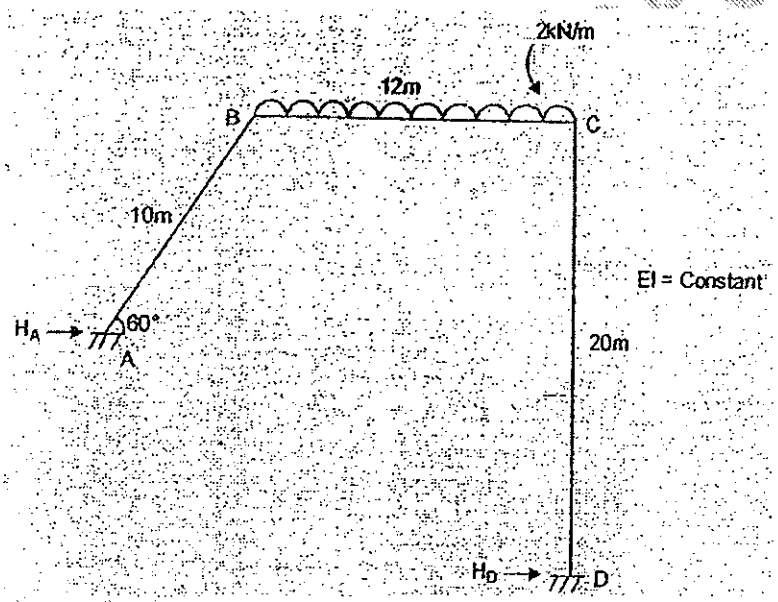
COURSE CODE: 11M1WCE111 MAX. MARKS:35

COURSE NAME: Advanced Structural Analysis

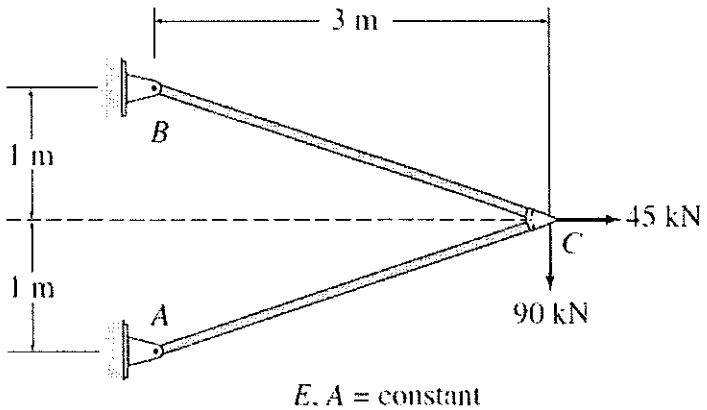
COURSE CREDITS: 03 MAX. TIME: Two Hours

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

Q.1. Solve the given frame by using Slope Deflection Equation. **(9)**



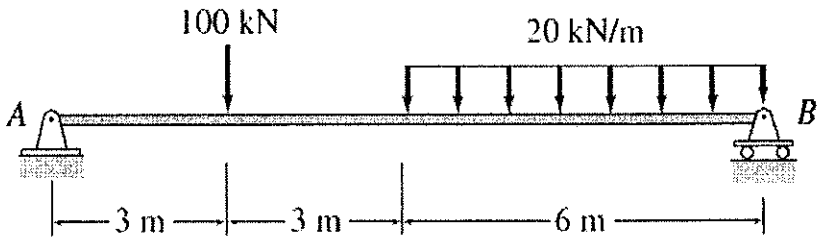
Q.2. Solve the given truss by using Stiffness Matrix Method. Find the force in both the members. Assume AE is constant for all members. **(8)**



E, *A* = constant

Q.3. Solve the given beam by using Stiffness Matrix Method. Find all support reaction and slopes at A and B. Find the slopes in term of EI assuming it constant.

(9)



Q.4. Find the collapse load for the portal frame shown below. **(9)**