

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- December-2024

M.Tech. – 1st Semester

COURSE CODE: 11M1WCE111 (3)

MAX. MARKS:35

COURSE NAME: Advanced Structural Analysis

COURSE INSTRUCTOR: Chandrapal Gautam

MAX. TIME: 2Hours

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

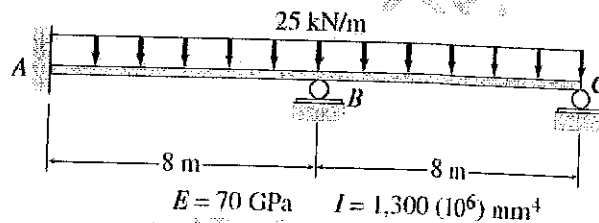
Q.1. (i) Differentiate between flexibility and Stiffness of a member.

(ii) Why flexibility matrix method is not used in any software.

(iii) Explain why flexibility matrix and stiffness matrix is symmetric and square.

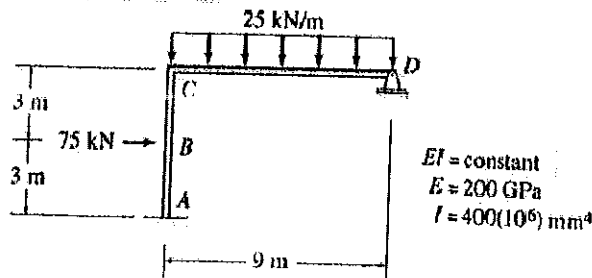
Q.2. Solve the given beam by using Moment Distribution Method if support B settles by 20mm and support C settles by 15mm. (2+1+2 = 5)

(10)



Q.3. Solve the given frame by using flexibility matrix.

(10)



Q.4. Solve the given truss by using stiffness matrix method.

(10)

