

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- Oct 2017

B.Tech.IIIrd Semester

COURSE CODE: 10B11CE311

MAX. MARKS:25

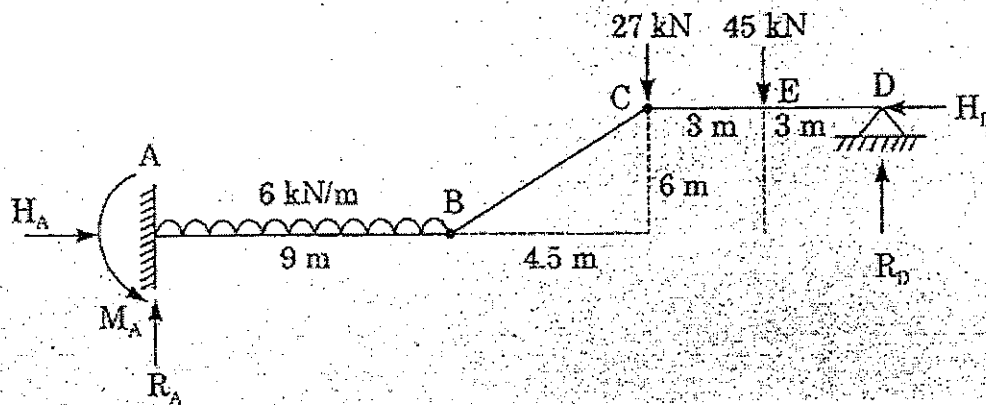
COURSE NAME: MECHANICS OF SOLIDS

COURSE CREDITS: 4

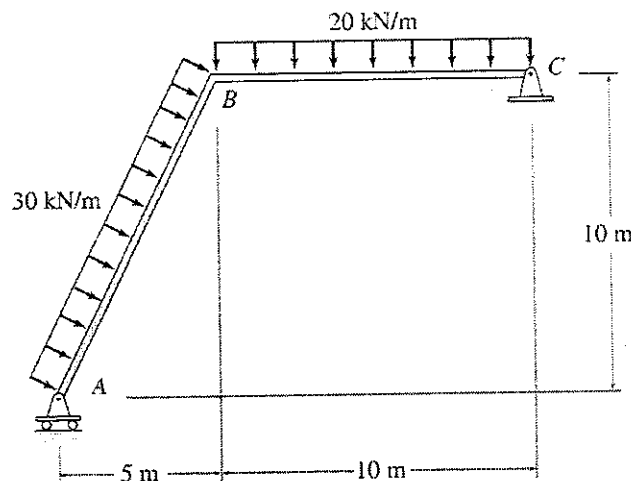
MAX. TIME: One Hour Thirty Minutes

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

Q.1 Draw the shear force, bending moment diagram & deflected pattern for the given structure. Joint B & C are internal hinges & member BC is a Link (can take only axial load). (8)



Q.2. Draw the axial force, shear force and bending moment diagram for the given frame. (6)



Q.3. Derive Transformation equation of stress along x direction, y direction and shear stress. Also derive the equation of principal stress. (5)

Q.4. For the given state of stress determine, (i) The Principle Stress (ii) The Principle Plane (iii) The Max. shearing stress and its plane. (iv) Normal stress corresponding to maximum shearing stress. (6)

