Dr Chudhapal

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION-December-2021

B.Tech. - III[rd] Semester

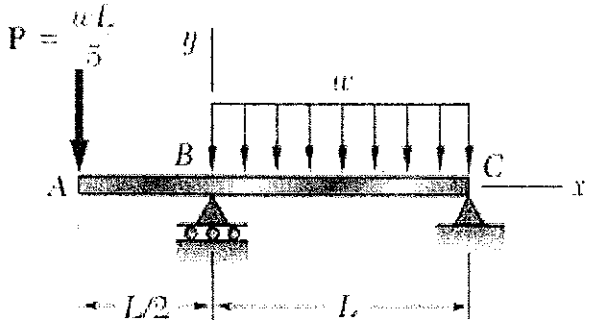
COURSE CODE:10B11CE311 MAX. MARKS:35

COURSE NAME: Mechanics of Solids

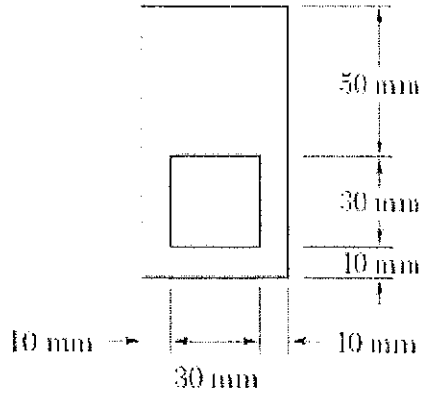
COURSE CREDITS: 04 MAX. TIME: Two Hours

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

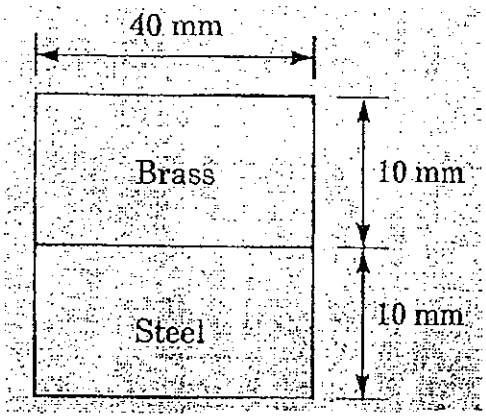
Q.1. Find the deflection at A and slope at B of the given beam by using double Integration Method. Find the deflection and slope in term of EI. **(7)**



Q.2. Find the section modulus of the given section of a beam. **(6)**



Q.3. Draw the bending stress diagram of the given composite section if the section can take maximum moment of 100kNm. E_{STEEL} = 2.05 X 10^5 N/mm^2, E_{BRASS} = 0.82 X 10^5 N/mm^2. **(8)**



Q.4. Derive the general shear stress formula along the depth of the beam. Also derive the shear stress formula for a rectangular section having width b and depth d. (7)

Q.5. Find the deflection at B and slope at Eof the given beam by using conjugate beam method. Find the deflection and slope in term of EI.(7)