http://www.newsexam.com

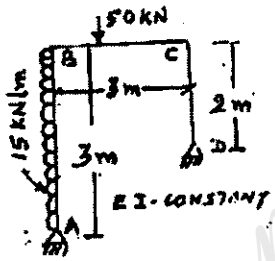
B.Tech. Degree V Semester Examination, November 2005

CE (A/B) 503 ANALYSIS OF STRUCTURES II

(2002 Admissions)

Time: 3 Hours | Maximum Marks: 100

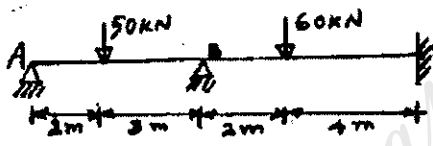
I Analyse the portal frame shown in figure by using the method of strain energy and sketch the Bending Moment Diagram.



(20)

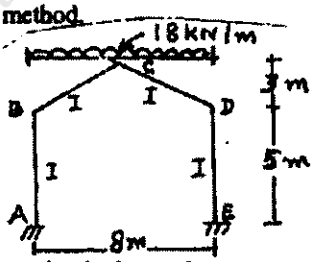
OR

II The figure shows a continuous beam. Using theorem of three moments find the fixed end moments at B and C and sketch the S.F and B.M diagrams. EI constant.



(20)

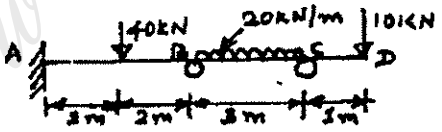
III Analyse the frame shown in figure by the slope deflection method.



(20)

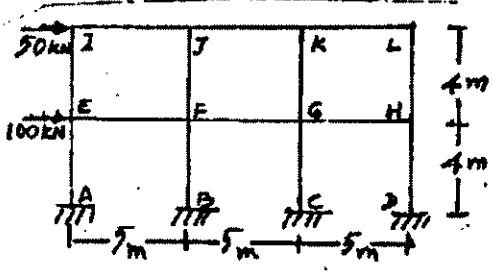
OR

IV Using moment distribution method, find the support moments for the beam shown in figure. EI constant.



(20)

V Analyse the frame shown in figure by portal method. All members have the same A and I.



(20)

OR

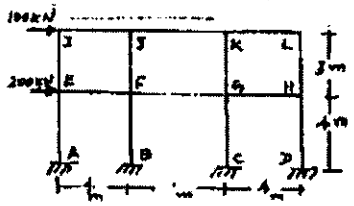
(Turn Over)

SCHOOL OF ENGINEERING, KOCHI-682 022 ★ COCHIN UNIVERSITY OF SCIENCE & TECHNOLOGY ★ LIBRARY

Download latest university exam question paper, model paper and sample papers

http://www.howtoexam.com

VI Determine end shears and moments in the beams and the axial forces in the columns for the multistoreyed building frame with rigid joints shown in figure by the cantilever method.

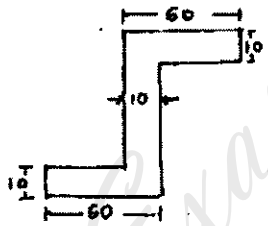


(20)

VII A circular beam is supported on three supports spaced equally along the circumference. A load W acts at a point which when joined to centre makes 30° with the line joining one support to the centre. Determine the reactions at the three supports. Further draw the S.F, B.M and torque diagrams of the beam. (20)

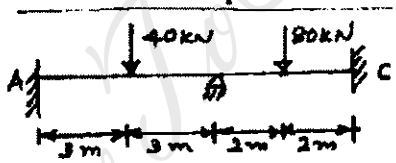
OR

VIII For the area shown in figure find the inclination of the principal axes to the 'x' and 'y' axes through the centroid of the area and the maximum and minimum moments of inertia. All dimensions are in mm. (20)



IX (i) Discuss plastic moment of a rectangular section of a cantilever beam. (5)

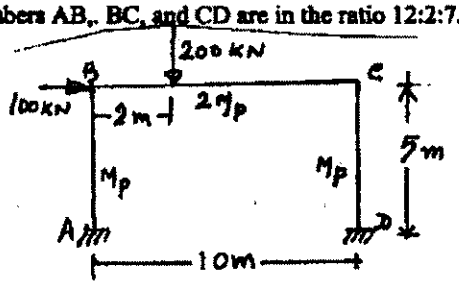
(ii) Determine the collapse load factor for the continuous beam shown in figure. Both the spans have the same value of plastic moment M_p.



(15)

OR

X Analyse the [portal frame ABCD shown in figure by plastic theory and sketch the BMD at collapse stage, after determining the plastic moment capacity M_p. Relative plastic moment capacities of the members AB, BC, and CD are in the ratio 12:2:7. Supports 'A' and 'D' are fixed.



(20)

***

Download latest university exam question paper, model paper and sample papers