

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- May 2018

B-Tech VIIIth Semester

COURSE CODE: 10M1WCE212

MAX. MARKS: 25

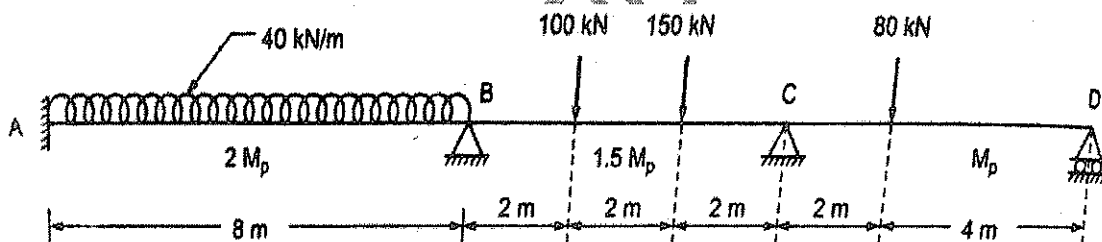
COURSE NAME: Design of Steel Structures

COURSE CREDITS: 4

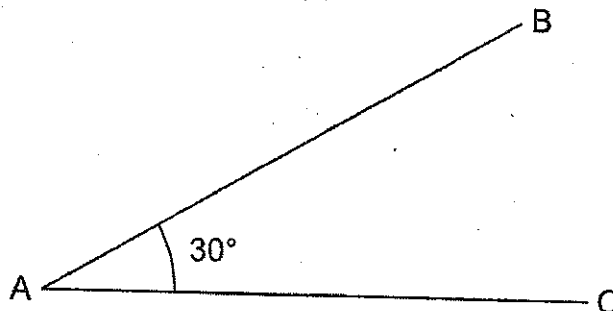
MAX. TIME: 1.5 Hrs

Note: (i) All questions are compulsory.**(ii) Carrying of mobile phone during examinations will be treated as case of unfair means.****(iii) IS-800:2000 and IS-808:1989 are allowed. (Sharing of codes is strictly prohibited)****Q1. Define in respect to the plastic collapse of structures:****CO-1 [5 Marks]**

- Lower Bound or Static Theorem
- Upper Bound or Kinematic Theorem
- Uniqueness Theorem

Q2. Determine plastic moment capacity for beam as shown below.**CO-1, CO-2 [10 Marks]**

Q3. Design the members AB, AC and Joint A of a truss, part of which is shown in figure below, for the following data.

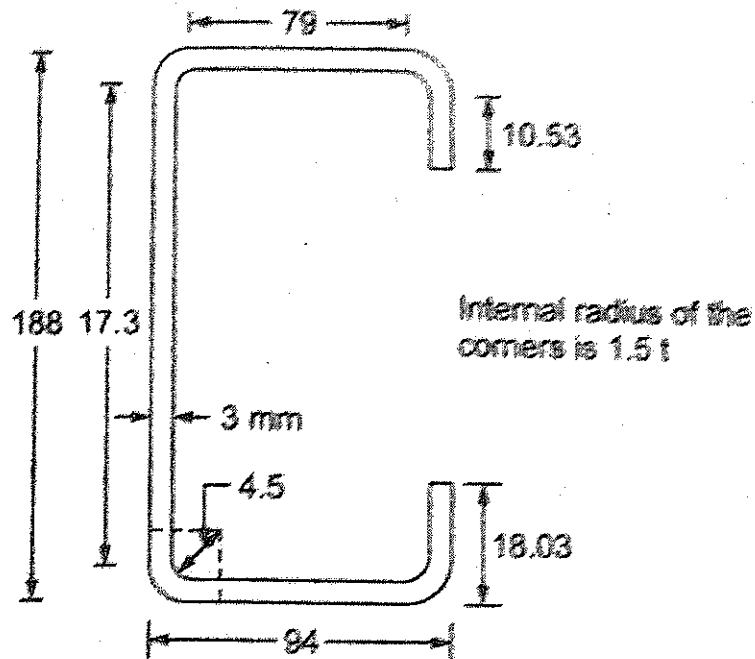


Use welded connection for joints.

CO-2, CO-3 [10 Marks]

Roll No.....

- Q4. Differentiate between Hot Rolled Section and Cold Formed Section? Find the section properties and compressive load carrying capacity for the section as shown in figure below under axial compression load. CO-4 [3 + 7 Marks]



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