

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-2022

B.Tech. -VIth Semester (Civil)

COURSE CODE: 18B11CE612

MAX. MARKS: 25

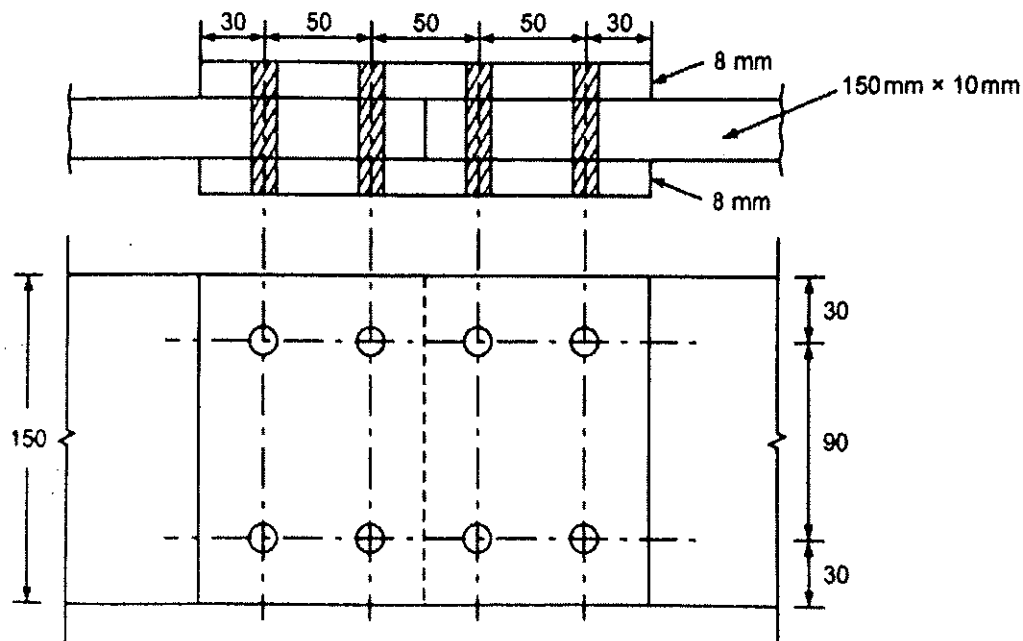
COURSE NAME: Design of Steel Structures

COURSE CREDITS: 03

MAX. TIME: 1 Hour 30 Min

Note: All questions are compulsory. Marks are indicated against each question in square brackets. IS-800:2000 and IS-808:1989 are allowed. (Sharing of codes is strictly prohibited)

- Q1. (a). With the help of the neat diagram, Discuss the failure of Bolts [2 Marks]
- (b). Explain 'Shear Lag' with the help of neat Diagram. [2 Marks]
- (c). Write five merits and three demerits of a welded connection. [2 Marks]
- Q2. Find the Efficiency of the Butt joint as shown in figure below. Bolts are of 16 mm diameter of grade 4.6, Cover plates are 8 mm thick. Each plate is of grade 410. [6 Marks]



- Q3. A tie member of roof truss consists of two *ISA 100x75x8 mm*. The angles are connected to either side of a 10 mm thick gusset plate and member is subjected to a factored pull of 450 KN. Design a welded connection (shop welded) [6 Marks]

- [7 Marks]**

