## JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT TEST -1 EXAMINATION- FEB-2023

COURSE CODE (CREDITS): 18B11CE612 (3)

MAX. MARKS: 15

COURSE NAME: DESIGN OF STEEL STRUCTURES

COURSE INSTRUCTORS: Mr. KAUSHAL KUMAR

MAX. TIME: 1 Hour

Note: All questions are compulsory. Marks are indicated against each question in square brackets. Codes: IS 800:2007 and IS 808 or Steel Table is allowed.

Q1. With the help of neat diagram, discuss the failures of bolts in bolted connections.

CO-1, CO-2 [2 Marks]

Q2. Explain with the help of diagram, the reason for using correction factors for long joint, large grip length and packing plate, while computing the shear strength of bolts.

CO-1, CO-2 [2 Marks]

Q3. Design a welded Lap Joint to join two plates of size 300x10 mm and 280x10 mm of Fe410 grade of steel to mobilize the tensile strength of the plate using field weld.

CO-1, CO-2 [5 Marks]

Q4 Figure given below shows a typical connection of different members (Member A, Member B and Member C) with the help of gusset plate. Service load carried by each member is given. Design the bolted connection of each member with gusset plate.

CO-1, CO-2 [6 Marks]

