



College of Engineering & Technology

Department: Mechanical Engineering
Lecturer: Dr. Rola Afify
Course Code: ME356

Marks: 15
Time: 11.00 - 12.00
Date: 25/11/2015

15

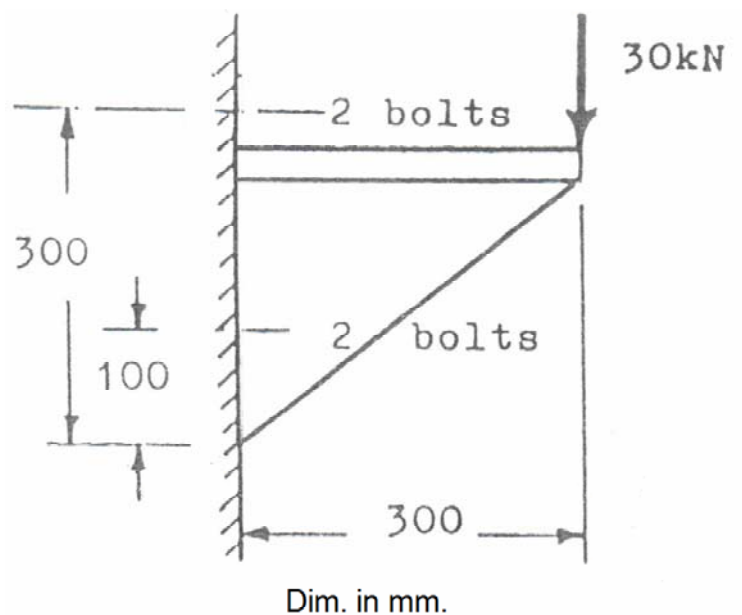
Name:

R.N.:

Answer the following questions: (one mark for good drawings)

Question one (7 marks)

Four bolts are used to secure the bracket, shown in figure, to the wall. If the bolts are made of steel having $S_y = 420$ MPa, determine their size using a factor of safety of 2.



Question two (7 marks)

A bracket is supported by means of 4 bolts of the same size. Determine the diameter of the bolts if the maximum shear stress is 140 MPa.

