



College of Engineering & Technology

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

Marks: 15
Time: 2.30 - 4.00
Date: 29/10/2013

Name:

Answer the following questions:

Question one (6 marks)

A) Define:

- i) Machine Design:
- ii) Creep:

B) What are the general considerations in Machine Design?

Question two (9 marks)

In the steel structure shown in Figure, a 6-mm diameter pin is used at C, and a 10 mm diameter pin is used at B and D. The ultimate shearing stress is 150 MPa at all connections, and the ultimate shearing stress is 400 MPa in link BD. Knowing that a factor of safety 3 is desired, determine the largest load P which may be applied at A.

