College of Engineering & Technology

Department: Mechanical Engineering   Marks: 10
Lecturer: Dr. Rola Afify   Time: 9:30 - 10.10
Course Code: ME356   Date: 23/10/2016

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Name: R.N.:

Answer the following questions:
Question one (6 marks)

A) Define:

   i) Machine design:

   ii) Brittleness:

   iii) Machinability:

B) What are the general procedures in Machine Design?

Question two (4 marks)

A 9 mm length of a 6 mm diameter steel wire is to be used in a hanger. It is noted that the wire stretched 18 mm when a tensile force P is applied. Knowing that E = 200 GPa, determine: a) the magnitude of the force P, b) the corresponding normal stress in the wire.

Dr. Rola Afify