



College of Engineering & Technology

Department: Mechanical Engineering

Marks: 15

Lecturer: Dr. Rola Afify

Time: 11:15 – 12:00

Course Code: ME276

Date: 29/10/2014

Answer the following questions:

Question one (6 marks)

A round shaft of length 20 cm and diameter 3 cm has a modulus of elasticity 200 GPa is elongated by an axial load of 80 kN. Calculate the tensile stress and strain.

Question two (9 marks)

A circular steel rod of length 19 cm and diameter 3 cm loaded as shown in the figure. Calculate the extension in the 10 cm length part, if the modulus of elasticity 210 GPa. Draw the Normal Force Diagram (N.F.D).

