



College of Engineering & Technology

Department: Mechanical Engineering
Lecturer: Dr. Rola Afify
Course Code: ME464

Marks: 20
Time: 8:30 - 10:00
Date: 12/5/2016

20

Name:

R.N.:

Answer the following questions:

Question one (10 marks)

a) For each valve of the following [choose type (Direction control - Pressure control - Flow control) - draw symbol - write function]:-

• **Counterbalance Valves (CBV)**

• **Check valve**

• **Unloading valve**

• **Relief valve**

• **Needle valve**

Question two (10 marks)

A) A vane pump has a rotor diameter of 50 mm, a cam ring diameter of 75 mm, and a vane width of 50 mm. If the eccentricity is 8 mm, determine the volumetric displacement.

B) Compare between Radial Piston Pump and Lobe Pump.