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School of University Polytechnic

Diploma in Mechanical Engineering

Mid Term Examination - May 2024

Duration : 90 Minutes

Max Marks : 50

Sem IV - N1DL402B - Hydraulics and Hydraulic MachinesGeneral Instructions*Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

- 1) Explain Intensity of Pressure. K2 (2)
- 2) Relate hydraulics with fluid mechanics. K1 (3)
- 3) Explain Compressibility. K2 (4)
- 4) Explain compressible and incompressible flow. K2 (8)
- 5) Identify the uses of simple manometer. K3 (6)
- 6) Calculate the density, specific weight and weight of one litre of petrol of specific gravity 0.7. K3 (9)
- 7) State and Explain Newtons Law of viscosity. K4 (8)
- 8) Obtain an expression for the pressure intensity at a point in a fluid. K4 (12)

OR

A pipe, through which water is flowing, is having diameters, 20 cm and 10 cm at the cross-sections 1 and 2 respectively. The velocity of water at section 1 is given 4.0 m/s. Find the velocity head at sections 1 and 2 and also rate of discharge. K4 (12)