S. B. Roll. No.....

HYDRAULICS & PNEUMATICS
4th Exam/Mech./4853/Jun'2021
(For 2018 batch onwards)

Duration: 1.15Hrs. **M.Marks:25**

SECTION-A

Q1. Attempt any three questions. **3x5=15**

i. Define mass density, weight density and specific volume.
ii. What depth of oil with specific gravity 0.80 will produce a pressure intensity of 500 kPa?
iii. Define the specific speed of a turbine. Write the expression for specific speed.
iv. Define the term Cavitation.
v. Differentiate between reaction and impulse turbines.
vi. Explain with neat sketch Bourdon tube pressure gauge.
vii. What are the limitations of Bernoulli's equation?
viii. What do you mean by water hammering in pipes?

SECTION-B

Q2. Attempt any one question. **1x10=10**

a. Explain the basic working principle of a compressor and classify it.
b. A hydraulic press has a ram 30 cm diameter and a plunger of 5 cm diameter. Find the weight lifted by the hydraulic press when the force applied at the plunger is 400 N.
c. Explain with a neat sketch the working of hydraulic ram.
d. Explain the terms: - i) Gauge pressure ii) Vacuum pressure iii) Absolute pressure.