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

HYDRAULICS AND PNEUMATICS
4th Exam/MECH/4853/Jan'2022
(FOR BATCH 2018 ONWARDS)

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

SECTION-A

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

   i. Differentiate between steady and unsteady flow and uniform and non-uniform flow?
   ii. Explain the working of hydraulic press?
   iii. State and prove continuity equation?
   iv. Write Darcy – Weisbach formula used for calculation of loss of head due tofriction.
   v. What do you mean by Syphon? How does it work?
   vi. Differentiate between Impulse and Reaction turbine
   vii. Define hydraulic system. Name the basic component of hydraulic system?

SECTION-B

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

   a. State and prove Bernoulli's theorem?
   b. A crude oil of kinematic viscosity 0.4 stoke is flowing through a pipe of diameter 30cm at the rate of 300 litres per second. Find the head lost due to friction for a length of 50 meter of pipe.
   c. A 30cm x 15 cm venturimeter is inserted in vertical pipe carrying water flowing in upward direction. a differential mercury manometer connected to inlet at throat give a reading of 20cm. Find the discharge. Take co-efficient of discharge 0.98
   d. Explain with neat sketch the construction and working of Pelton turbine.