HYDRAULICS & PNEUMATICS
4th Exam/Mech./4853/Dec'22
(For 2018 Batch Onwards)

Duration: 3Hrs.   **M.Marks:75**

SECTION-A

Q1. a) Fill in the blanks.   **15x1=15**
    i. Laminar flow is also called_____.
    ii. Pelton turbine is _____turbine.
    iii. Vacuum pressure is also called _____
    iv. The loss of head due to sudden enlargement is attributed to _____of turbulent energy.
    v. FRL Unit means_____
    vi. Hydraulic press is used to lift _____Loads
    vii. Static seals are used when _____Occurs between the mating parts.
    viii. Pascal's law represents _____property of fluids.
    ix. An ideal fluid has _____viscosity.
    x. Lubricators follow the principle of_____

b) State True and False.
    xi. A foot valve is used in the case of centrifugal pump.
    xii. Buty1 rubber has very good shear strength.
    xiii. Capacity of hydraulic accumulator= P x A x L.
    xiv. Air compressors are used to rise the pressure.
    xv. Hydraulic breaks in automobiles use compressed air for their operation.

SECTION-B

Q2. Attempt any six questions.   **6x5=30**
    a. Distinguish between Centrifugal pump and reciprocating pump.
    b. Explain the working of hydraulic Press.
    c. What are the applications of air cylinders?
    d. Distinguish between laminar and turbulent flow.
    e. Write a short note on surge tank.
    f. What is the difference between an ideal fluid and a real fluid?
    g. Differentiate between reaction and impulse turbine.
    h. Explain the terms: gauge pressure, Vacuum pressure & absolute pressure.

SECTION-C

Q3. Attempt any three questions.   **3x10=30**
    i. What are the various properties of hydraulic fluids?
    ii. Explain single acting and double acting air cylinder.
    iii. Explain with neat sketch Bourden pressure gauge.
    iv. Discuss hydraulic break briefly.
    v. State and prove Bernoulli's theorem.