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0712E953

Candidate's Seat No :_____

B.Sc (F&S) Sem.-3 (NEP) Examination

MDC-(F&S)-234-T

Hydraulics & Pumps

December-2024

Time : 1-00 Hour] **[Max. Marks : 25**

Note: Each question carries 5 marks.

Q.No1(a) What are the six basic rules governing the characteristics of pressure in liquid.

Q,No,1(b)The water level of tank in a fire fighting system is 70 meters above the pressure gauge ,what is the pressure in bars in formula L= 2/3d2√P what is L ?

OR

Q.No1(a)What is friction ,loss of pressure due to friction and what are the laws governing the loss of pressure due to friction.

Q.No1(b)Calculate loss of pressure due to friction ,given that Hose dia 90mm, length of hose 500 mtrs, velocity of water 2mtrs/sec Friction factor 0.007, use the formula pf = 20f lv2/d

Q.No2(a)Write down the names of parts of centrifugal pump and thereby draw the fig, of centrifugal pump.

Q.No2(b)Explain working principle of Rotary gear pump with the help of figure.

OR

Q.No2(a)Write down advantages and disadvantages of positive displacement pump and negative displacement pump.

Q.No2(b)Explain Bernoulli Equation ,what are the three energies taken into consideration.

Q.No3 MCQ, each carries one mark.

1.The word Hydraulics came from which country

Italy, France, Greece, U.S,A

(P.T.O)

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2.Pressure is ---------- to any surface on which it acts,

horizontal, perpendicular, angular, circular

3.A vertical one meter of water exerts a pressure of approximately

100N/M2, 1000N/M2, 10000N/M2, 500N/M2

4.Pumps having a solid piston (plunger) is known as

lift pump, Bucket pump, Rotary pump, Force pump

5.This pump will function even if delivery valve is closed

Rotary pump, plunger pump, centrifugal pump, Lift pump