Q.21 Explain principle of Pitot tube with neat sketch. (CO1)

Q.22 What is U-tube manometer? How will you measure vacuum pressure? (CO1)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Briefly explain 2nd law of thermodynamics with neat sketch. (CO1)

Q.24 Explain Diesel Cycle with P-V and T-S diagrams. (CO1)

Q.25 Explain the Construction and Working of Reciprocating pump with the help of neat sketch. (CO1)

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3rd Sem / Automobile
Subject : Basics of Thermodynamics, Hydraulics and Pneumatics

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Manometer is used to measure (CO1)

a) Velocity at a point in a fluid

b) Discharge of liquid

c) Pressure at a point in a fluid

d) all of the above

Q.2 If the fluid particle moves in a straight line the flow is (CO2)

a) Laminar flow b) Turbulent flow

c) Steady flow d) Uniform flow

Q.3 Bomb calorimeter is an example of - (CO1)

a) Closed system

b) Open system

c) Isolated system

d) Homogeneous system

Q.4 Poise is the unit of - (CO3)

a) Surface tension b) Density

c) Viscosity d) Capillarity

Q.5 Bernoulli's theorem deals with the law of conservation of- (CO3)

a) Mass b) Energy

c) Momentum d) None of above

Q.6 If the fluid particle moves in zig-zag way, the flow is (CO1)

a) Laminar flow b) Turbulent flow

c) Steady flow d) All of the above

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Explain Charle's law. (CO1)

Q.8 Define unsteady flow (CO2)

Q.9 The first law of thermodynamics is based upon law of conservation of energy. (True/False) (CO2)

Q.10 Specific gravity is also known as _____ (CO2)

Q.11 Centrifugal pump is also called rotodynamic pump. (True/False) (CO2)

Q.12 Boyle's law is applicable when pressure is kept constant. (True/False) (CO3)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain second law of thermodynamics. (CO1)

Q.14 Define Gauge pressure and Vacuum pressure (CO1)

Q.15 Give classification of air compressors. (CO1)

Q.16 Explain characteristics gas equation. (CO1)

Q.17 Differentiate between heat and work. (CO1)

Q.18 Differentiate between Centrifugal pump and Reciprocating pump. (CO1)

Q.19 Explain Mass density and Specific weight. (CO1)

Q.20 Differentiate between Screw pump and gear pump. (CO1)