Q.22 Water is flowing through a pipe of 100 mm diameter with an average velocity of 10 m/sec. Determine the rate of discharge in litres/sec

SECTION-D

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

Q.23 Discuss construction and working of orifice meter with a diagram.

Q.24 State and Explain Bernoulli's Law theorem. Write its limitations

Q.25 Explain construction and working of centrifugal pump with a diagram.

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220527

2nd Sem. / Chemical Engineering, Chem P & P /Chemical Engg.(PAP)

Subject : Fluid Flow

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 SI unit of density of fluid is

a) Kg/m^3 b) N/m^3

c) l/m d) None of these

Q.2 The mercury does not wet the glass. This is due to property of liquid known as

a) Cohesion b) Adhesion

c) Surface Tension d) Viscosity

Q.3 A manometer is used to measure

a) Positive pressure b) Gauge Pressure

c) Absolute pressure d) Both a and b

Q.4 The numerical value of 1 Pa of Pressure is equal to

a) $1\ N/m^2$ b) $1\ KN/m^2$

c) $1\ MN/m^2$ d) none of these

Q.5 A venturimeter is used to measure

a) Velocity of liquid b) Pressure of liquid

c) Discharge of liquid d) All of these

Q.6 The loss of head due to friction according to Darcy's formula is

a) $\frac{4f\ V^2\ell}{gd}$ b) $\frac{4f\ell V^2}{2gd}$

c) $\frac{4f\ell V}{gd}$ d) $\frac{4f\ell V}{2gd}$

SECTION-B

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

Q.7 Define laminar flow

Q.8 What is Newtonian fluid

Q.9 Define Viscosity of fluid

Q.10 Expand NPSH

Q.11 Expand BWG

Q.12 Write formula of specific gravity of liquid

SECTION-C

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

Q.13 Discuss hydrostatic law.

Q.14 Write short note on u tube manometer.

Q.15 Explain effect of roughness in pipes

Q.16 Define schedule number and BWG number

Q.17 Write function of Compressor

Q.18 Write short note on Gate Valve

Q.19 Explain construction and working of Pitot tube

Q.20 Differentiate Compressible and Incompressible fluids.

Q.21 Give classification of Pumps