

- Q.28 Explain effect of temperature of viscosity.
 Q.29 What is priming? Why it is necessary?
 Q.30 Explain various head losses in the pipe.
 Q.31 Explain working principle of reciprocating pump.
 Q.32 Sketch and describe Pitot tube.
 Q.33 Explain principle and working of U-Tube manometer.
 Q.34 Differentiate between simple and differential manometer.
 Q.35 How will you determine loss of head due to friction in pipes using Chezy's formula?

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 The head of water over the centre of an orifice of diameter 20mm is 1m. The actual discharge through the orifice is 0.85 liters/sec. Find the co-efficient of discharge.
 Q.37 Explain the construction and working of Centrifugal pump with neat sketch.
 Q.38 Derive an expression for rate of flow or discharge through venturimeter.

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3rd Sem / Plastic Tech.
Subject:- Fluid Flow / Viscous Flow of Fluids /
Unit OP-I

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Piezometer measures _____.
 a) Gauge pressure b) Absolute pressure
 c) vacuum pressure d) None of the above
 Q.2 Manometer is used to measure
 a) Velocity at a point in a fluid
 b) Pressure at a point in a fluid
 c) Discharge of fluid
 d) None of these
 Q.3 Reynolds number signifies the ratio of _____.
 a) gravity forces top viscous forces
 b) inertial forces to viscous forces
 c) inertia forces of gravity forces
 d) buoyant forces to inertia forces
 Q.4 The centrifugal pump has varying flow depending on the _____.
 a) Pressure b) Static lift
 c) Volume d) Flow rate

- Q.5 When the flow in an open channel is gradually varied, the flow is said to be
 a) Net Steady uniform flow
 b) Net Steady non-uniform flow
 c) Unsteady uniform flow
 d) Unsteady non-uniform flow
- Q.6 Reciprocating pump is a _____
 a) Negative displacement pump
 b) Positive displacement pump
 c) Diaphragm pump
 d) Emulsion pump
- Q.7 When the velocity of flow increases, the pressure _____.
 a) Decreases b) increases
 c) remain constant d) Cannot be predicted
- Q.8 The flow of liquid is said to be _____ when the path of individual particles do not cross on another.
 a) Laminar b) turbulent
 c) steady d) unsteady
- Q.9 Bernoulli's theorem may be applied to _____.
 a) Pitot tube b) Orifice meter
 c) Venturimeter d) All of these
- Q.10 Venturimeter is used to measure
 a) Discharge b) velocity at a point
 c) Viscosity d) average velocity

SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Differential manometer measures _____ two points.
- Q.12 Barometer is used to measure _____.
- Q.13 An ideal fluid is a fluid which is _____.
- Q.14 The flow in a pipe is laminar if Reynold's number is _____ then 2000.
- Q.15 Venturimeter is used to measure _____.
- Q.16 Notch is device used in measuring _____ through small channel.
- Q.17 Continuity equation deals with the law of conservation of _____.
- Q.18 Reynold's number is given by _____.
- Q.19 Bernoulli's theorem is based on _____ principle.
- Q.20 For small discharge at high pressure _____ pump is preferred.

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 State difference between laminar and turbulent flow
- Q.22 State Newton's law of viscosity.
- Q.23 State and prove continuity equation.
- Q.24 Explain various types of losses in pipes
- Q.25 Explain basic principle of venturimeter working
- Q.26 State Bernoulli's theorem and its limitations.
- Q.27 Define pumps and how are they classified?