

- Q.27 Explain Bernoulli's theorem and its application.
 Q.28 Write continuity equation. Also give its significance.
 Q.29 Give advantage and limitations of manometers.
 Q.30 Explain manometer and its types
 Q.31 State Newton's law of viscosity.
 Q.32 Write difference between Newtonian and non Newtonian fluids.
 Q.33 Explain gauge pressure and absolute pressure.
 Q.34 Name various minor head losses in pipes.
 Q.35 A tank 10m x 10m contains water up to a height of 3m. Determine the total pressure at the base of tank.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Water is flowing through a non uniform pipe gradually tapering from 0.20m diameter to 0.10m diameter. If the average velocity of water at section 0.20m is found to be equal to 2.0m/s, find the discharge in liters per second and also the velocity of flow at 0.10m diameter section.
 Q.37 Differentiate between centrifugal and reciprocating pumps.
 Q.38 Explain:
 a) Bourdon's tube pressure gauge with neat sketch.
 b) Piston valve and butterfly valves.

No. of Printed Pages : 4 182233/122233/032232
 Roll No. /2234

Plastic Engineering
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 Pitot tube is used to measure
 a) discharge b) velocity at a point
 c) pressure d) density
 Q.2 Newtonian fluid is defined as the fluid which _____.
 a) obeys hook's law
 b) is compressible
 c) obeys Newton's law of viscosity
 d) is incompressible
 Q.3 For pipes, laminar flow occurs when Reynolds number is
 a) Less than 2000
 b) Between 2000 and 4000
 c) More than 4000
 d) Less than 4000
 Q.4 For small discharge at high pressure, which pump is preferred?

- a) Centrifugal b) reciprocating
 c) axial flow d) Propeller
- Q.5** A manometer is used to measure _____.
 a) Atmospheric pressure
 b) pressure in pipes and channels
 c) Pressure in Venturimeter
 d) Difference of pressures between two points in a pipe
- Q.6** Property of fluid that describes its internal resistance is known as _____.
 a) viscosity b) friction
 c) resistance d) internal energy
- Q.7** When a fluid is subjected to resistance, it undergoes a volumetric change due to _____.
 a) strain b) cohesian
 c) adhesion d) compressibility
- Q.8** What does NPSH stand for?
 a) Net positive suction head
 b) Net positive super head
 c) Net planar suction head
 d) Non-planar suction head
- Q.9** Poise is the unit of _____.
 a) mass b) density
 c) viscosity d) compressibility
- Q.10** Which among the following control the flow rate?
 a) Valve b) Pump
 c) Head d) Tank pipe

SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 The atmospheric pressure is _____ mm of mercury
 Q.12 The device which is used to increase the pressure of a fluid is called _____.
 Q.13 The atmospheric pressure decreases as the elevation above sea level _____.
 Q.14 Loss of head at entrance of a pipe is given by _____.
 Q.15 If the fluid particle moves in a zig-zag way, the flow is called _____.
 Q.16 Poise is the unit of _____.
 Q.17 An ideal fluid has _____ viscosity.
 Q.18 Pitot tube is used for the measurement of _____.
 Q.19 The inlet length of venturimeter is _____ the outlet length.
 Q.20 The ratio of inertial force to viscose force is known as _____.

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Name different types of flow in liquids.
 Q.22 Draw a neat sketch of venturimeter
 Q.23 Explain total head of a fluid with expression.
 Q.24 Explain loss of head due to sudden enlargement of pipe.
 Q.25 Write working principle of centrifugal pump.
 Q.26 Differentiate between a notch and a weir.