

- No. of Printed Pages : 4  
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**Plastic Engineering**  
**Subject:- Fluid Flow/ Viscous Flow of Fluids /**  
**Unit OP-I**

M.M. : 100

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

- 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:
- Bourdon's tube pressure gauge with neat sketch.
  - Piston valve and butterfly valves.

- 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) cohesion  
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

(2) 182233/122233/032232  
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## 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 viscous 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.

(3) 182233/122233/032232  
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