

- Q.25 Describe flow through sudden enlargement.
- Q.26 Explain loss of head due to friction in a viscous flow.
- Q.27 Explain simple manometer with diagram.
- Q.28 Explain Dead weight pressure gauge.
- Q.29 Explain butterfly valve with diagram.
- Q.30 Explain poppet valve with diagram.
- Q.31 Explain Gear pump with diagram.
- Q.32 Define gauge pressure, absolute pressure & atmospheric pressure.
- Q.33 Define dynamic viscosity & Kinematics viscosity.
- Q.34 Explain working of piezometer tube with diagram.
- Q.35 Explain working of piston pump with diagram.

#### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain centrifugal pump with neat sketch.
- Q.37 Explain solenoid valve & gate valve with diagram.
- Q.38 Find out expression for Bernoulli's equation & write down its application.

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**3rd Sem / Branch : plastics Technology**

**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 Ideal Fluid has:
- a) Zero viscosity      b) Both a & b
- c) In compressible      d) None
- Q.2 Turbulent flow has Reynolds number.
- a) Less than 2000      b) Greater than 4000
- c) b/w 2000-4000      d) None
- Q.3 Venturimeter is used to measure:
- a) Rate of flow      b) Velocity of flow
- c) Both      d) None
- Q.4 The velocity at which flow changes from laminar to turbulent is called
- a) Supersonic velocity      b) Velocity of flow
- c) Both a & b      d) None

Q.5 Loss of head at entrance of a pipe is given by :

- a)  $(V^1-V^2)^2/2g$       b)  $0.5V^2/2g$
- c)  $4flv^2/2gd$       d) None

Q.6 Standard value of atmospheric pressure is :

- a) 760 mm of mercury      b) 10.34 m of water
- c) 1.01325 bar      d) All of the above

Q.7 piezometer measure :

- a) Gauge pressure      b) Absolute pressure
- c) Both      d) None

Q.8 For small discharge at high pressure, which pump is preferred:

- a) Axial flow pump      b) Reciprocating pump
- c) Centrifugal pump      d) None

Q.9 In a centrifugal pump , regulating valve is provided on:

- a) Suction pipe      b) casing
- c) delivery pipe      d) None

Q.10 N/M is the unit of :

- a) Viscosity
- b) Surface tension
- c) capillarity
- d) None

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## SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Define mass density of third.

Q.12 Define viscosity.

Q.13 Write continuity equation.

Q.14 Define critical velocity.

Q.15 Give the expression for Reynolds's Number.

Q.16 Define manometer.

Q.17 Define atmospheric pressure.

Q.18 Write an example of valve which works automatically.

Q.19 What is the value of coefficient of discharge for venturi meter?

Q.20 Define laminar flow.

## SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Differentiate b/w Newtonian & Non-Newtonian fluid.

Q.22 differentiate steady & unsteady flow.

Q.23 Explain continuity equation.

Q.24 Explain pitot tube.

(3)

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