Q.26 What is pitot tube and how it is used to measure the fluid flow.

Q.27 Explain construction and Principle of Ball valve.

Q.28 Explain construction and working of Gear Pump.

Q.29 What is Reynolds number? Discuss its significance.

Q.30 Describe working of a reciprocating pump in detail.

Q.31 What is difference between laminar and turbulent flow?

Q.32 What is Froude's number? Discuss its significance.

Q.33 What is difference between steady & unsteady flow?

Q.34 Describe principle and working of venturi meter.

Q.35 Write short note on Dead weight pressure gauge.

SECTION-D

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

Q.36 Define reciprocating pump. Explain its main parts and working of the pump.

Q.37 What is equation of continuity ? Derive mathematical relation for it by selecting a pipe having tapered cross-section.

Q.38 Write short note on the following:

a) Flow control valve b) Butterfly valve

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Roll No. .....

3rd Sem.

Branch : Plastic Tech.

Sub: Flud Flow / Viscous flow of Fluids / Unit Op. – I

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

Q.1 Water is a viscous fluid.

a) True b) False

Q.2 When is the fluid called laminar?

a) Low viscosity

b) The density of the fluid is high

c) Reynolds number is greater than 2000

d) Reynolds number is less than 2000

Q.3 1. which one of the following is the unit of mass density?

a) Kg/m^3 b) Kg/m^2

c) Kg/m d) Kg/ms

Q.4 Which one of the following is a major loss?\

a) Frictional loss b) Shock loss

c) Entry loss d) Exit loss

Q.5 The value of viscosity of an ideal fluid is

a) Zero

b) Unity

c) Infinity

d) More than that of a real fluid

Q.6 Differential manometer gives the pressure reading with respect to atmospheric pressure.

a) True b) False

Q.7 Manometer is used for measuring_____.

a) Pressure b) Speed

c) Fathometer d) Density

Q.8 The manometric fluid density should be _____ than that of flowing fluid.

a) Greater b) Smaller

c) Equal d) Very small

Q.9 Are pumps and fans used for conveying gases?

a) True b) False

Q.10 Which principle is used in designing the wings of airplanes?

a) Archimedes principle

b) Pascal's principle

c) Bernoulli's Principle

d) Newton's second law of motion

SECTION-B

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

Q.11 What is laminar flow?

Q.12 Define Pump.

Q.13 What is compressible flow?

Q.14 Define vapour pressure.

Q.15 Define Viscosity.

Q.16 What is Turbulent flow?

Q.17 Define absolute pressure.

Q.18 Write unit of viscosity.

Q.19 Define Manometer.

Q.20 What is steady flow?

SECTION-C

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

Q.21 What is the difference between ideal fluid and real fluid?

Q.22 Explain Newton's law of viscosity.

Q.23 Define the principle of venturi meter?

Q.24 Explain the entrance and exit losses in a pipeline.

Q.25 What is difference between centrifugal and reciprocating pump.