

13/20

SAKUNTALA SUDARSHAN INSTITUTE OF
TECHNOLOGY (POLYTECHNIC) ESTD-2016

4th Sem Internal Examination 20.24

Name: Muna Munda

Roll No: F22156047048

Subject: Fluid Mechanics

Date: 08/01/2024

Signature: [Signature]

Mechanical (I.I) Engineering

Ques

Density :-

(a) Density of a fluid is ~~denoted by~~ the ~~ratio~~ ratio of the mass of a fluid to its vacuum. It is denoted by ρ . The density of ~~liquid~~ liquid ~~is~~ are considered as constant while that of gases ~~change~~ changes with pressure & temperature variation.

Weight Density (w) :-

Weight Density of a fluid is the ratio of the fluid's ~~weight~~ weight to its weight in vacuum.

⑥) Surface tension:-

The force per unit length perpendicular to a line drawn on the surface of the liquid is known as surface tension.

It is denoted by σ .

Its S.I. unit is N/m

C.G.S. = $Dyne/cm$

M.K.S. = Kgf/m

⑦) Pascal law

It states that pressure at any point in a body of fluid is the same in every direction exerting equal force on equal areas. This works for gases and liquids (both are fluids).

⑧) Viscosity:-

Viscosity is defined as the property of a fluid which offers resistance to the movement of one layer of fluid over another adjacent of the fluid.

Mathematically, $\tau = \mu \frac{du}{dy}$

$$\tau = \mu \frac{du}{dy}$$

Its S.I. unit is N/m^2

⑨) Single column manometer

Manometers are defined as the device used for measuring the pressure at a point in a fluid by balancing in the column of fluid by the same another column of the fluid.

1/9/2

(C) Pressure measurement device :-

→ Pressure measurement device which is a device ~~measured~~ measures the pressure in ~~the~~ ~~who~~ many of pressure in store.

Classification of

- Pressure meter
- Vacuum meter

Pressure meter :-

→ Pressure meter is a device which is ~~measured~~ measurement of a pressure in the ~~who~~ many ~~press~~ pressure discharge and its speed, measured the meter.

Vacuum meter :-

→ Vacuum meter is a device which is measured the one cylinder ~~who~~ many of gas discharge in second.