ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

- **Subject- Physics Answers of Worksheet- -30 Class – IX**
- **Date -30.04.2020**

- **Chapter- Pressure in liquids and air(Elasticity)**

- **Answer the following questions (MCQ) : (1×15):**

Q1.Bernoulli 's equation cannot be applied when the flow is
(A) rotational

(B) turbulent

(C) unsteady

(D) all of the above

(Ans: D)

2-Streamline and equipotential lines in a flow field
(A) are parallel to each other

(B) are identical to each other

(C) are perpendicular to each other

(D) intersect at acute angles

(Ans: C)

3-Relative density of mercury is
(A) 1

(B) 9.8

(C) 13.6

(D) 1000

(Ans: C)

4-A 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

(Ans: C)

5-If the Reynolds number is less than 2000, the flow in a pipe is
(A) Turbulent

(B) Laminar

(C) Transition

(D) None of the above

(Ans: B)

6-A flow is called super-sonic if the
(A) velocity of flow is very high

(B) discharge is difficult to measure

(C) Mach number is between 1 and 5

(D) Mach number is less than 1

(Ans: C)

7-The unit of pressure one bar is
(A) 1 Pascal

(B) 1 kilo Pascal

(C) 100 kPascal

(D) 1000 kPascal

(Ans: C)

8-The dynamic viscosity of a liquid is 1.2×10^{-4} Ns/m^2, whereas, the density is 600 kg/m^3. The kinematic viscosity in m^2/s is
(A) 72×10^{-3}
(B) 20×10^{-8}
(C) 7.2×10^{3}
(D) 70×10^{6}

(Ans: B)

9-The location of the centre of pressure over a surface immersed in a liquid is
(A) always above the centroid

(B) will be at the centroid

(C) will be below the centroid

(D) for higher densities it will be above the centroid and for lower densities it will be below the centroid

(Ans: C)

10-The continuity equation is the result of application of the following law to the flow field
(A) First law of thermodynamics

(B) Conservation of energy

(C) Newtons second law of motion

(D) Conservation of mass

(Ans: D)

11-Reynolds number signifies the ratio of
(A) gravity forces top viscous forces

(B) inertial forces to viscous forces

(C) inertia forces to gravity forces

(D) buoyant forces to inertia forces

(Ans: B)

12-In pipe flow the critical Reynolds number is about
(A) 640

(B) 5×10^5
(C) 2000

(D) 64000

(Ans: C)

13-Anemometer is used to measure
(A) Velocity

(B) Pressure

(C) Viscosity

(D) Density

(Ans: A)

14-Property of fluid that describes its internal resistance is known as:
(A) Viscosity

(B) Friction

(C) Resistance

(D) Internal energy

(Ans: A)

15-Which fluid does not experience shearing stress during flow?
(A) Pseudoplastic

(B) Dilatant

(C) Newtonian

(D) Inviscid

(Ans: D)

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