ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

Subject- Physics   **Worksheet- 24**   **Class – IX**
Date -24.04.2020

- **Chapter- Pressure in solid, liquids and gases**

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

1.A pitot tube is used to measure
A.density
B. Pressure
C.viscosity
D. Tension
E.force

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2. The thickness of a sharp crested weir is kept less than

   A.   one-third of the height of water on the sill

   B.   one-half of the height of water on the sill

   C.   one-fourth of the height of water on the sill

   D.   two-third of the height of water on the sill

   E.   none of these.

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3 . The maximum vacuum created at the summit of a syphon is

   A.   2.7 m of water

   B.   7.4 m of water

C. 5.5 m of water

D. none.

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4. If the atmospheric pressure on the surface of an oil tank (sp. gr. 0.8) is 0.1 kg/cm², the pressure at a depth of 2.5 m, is

A. 1 metre of water

B. 2 metres of water

C. 3 metres of water

D. 3.5 metres of water

E. 4.0 metres of water.

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5.

.A water tank partially filled with water is being carried on a truck moving with a constant horizontal acceleration. The level of the water

A. rises on the front side of the tank

B. falls on the back side of the tank

C. remains the same at both sides of the tank

D. rises on the back side and falls on the front side

E. none of these.

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6. A rectangular channel 6 m wide and 3 m deep and having a bed slope as 1 in 2000 is running full. If Chezy's constant C = 54.8, pick up the correct specification of the channel from the following :

    A. hydraulic mean depth = 1.5 m

    B. Velocity of flow = 1.5 m/sec

    C. Rate of flow = 27 m³/sec

    D. All the above.

7.. Non-over flow double curvature concrete arch, is provided in

    A. Bhakra dam

    B. Hirakund dam

    C. Nagarjuna Sagar dam

    D. Idukki dam.

8..Atmospheric pressure varies with

    A. altitude

    B. temperature

    C. weather conditions

    D. all of the above.

9. The magnitude of water hammer in a pipe depends upon

    A. speed at which value is closed

B. length of the pipe line

C. elastic properties of the pipe material

D. elastic properties of the following liquid

E. all the above.

10. If velocities of fluid particles vary from point to point in magnitude and direction, as well as from instant to instant, the flow is said to be

A. laminar

B. turbulent flow

C. uniform flow

D. non-uniform flow.

11. The rise of the liquid along the walls of a revolving cylinder above the initial level, is

A. greater than the depression of the liquid at the axis of rotation

B. lesser than the depression of the liquid at the axis of rotation

C. the same as the depression of the liquid at the axis of rotation

D. none of these.

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12. Fluids change the volume under external presssure due to

A. plasticity

B. viscosity

C. compressibility

D. none of these.

13.
In flowing liquids pitot tubes are used measure

A. discharge

B. pressure

C. velocity

D. depth.

14. Capillary rise of water is

A. directly proportional to surface tension

B. inversely proportional to water density

C. inversely proportional to diameter of the tube

D. All of these.

15. The dimensional formula of force is

A. MLT^{-2}

B. $M^{-1}LT^{2}$

C. $ML^{-2}T$

D. $M^{-1}L^2T^{-2}$

E. none of these.

Teacher- Piyali Halder