ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

Subject- Physics **Answers of Worksheet- 28** **Class – IX**
Date -28.04.2020

Chapter- surface tension

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

QUESTION: 1

The angle of contact for liquid on a solid surface is the angle between:

- A.

the tangent to the liquid surface at the point of contact and the solid surface

QUESTION: 2

When impurity is added to a liquid, its surface tension

- C.

increases

QUESTION: 3

If drops and bubbles do not collapse under the effect of gravity, it indicates that

- A.

pressure inside the drop is greater than outside

QUESTION: 4

By which phenomenon does the water rise from roots to leaves of plants?

- A.

Capillary action

QUESTION: 5

SI unit of surface tension is

- D.

  N/m^2

QUESTION: 6

When an air bubble of radius R lies at a depth h below the free surface of a liquid of density ρ and surface tension S_{la}, then the excess pressure inside the bubble will be

- A.

$$P = \frac{2S_{la}}{R} - h\rho g$$

.

QUESTION: 7.

Water rises to a height of 20 mm in a capillary. If the radius of the capillary is made 1/3 rd of its previous value, to what height will the water now rise in the tube?

- B.

  80 mm

QUESTION: 8

The excess pressure inside a soap bubble is (Here, S_{la} is the surace tension between the liquid-air interface).

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- C.

$$P_i - P_o = \frac{4S_{la}}{r}$$

Question 9.
The angle of contact for liquid on a solid surface is the angle between:

A.the tangent to the liquid surface at the point of contact and the solid surface

Question 10

When impurity is added to a liquid, its surface tension

C.increases

Question 11.

Which of the following is true about water?

D. All answers are correct

Question 12.

A bug is able to walk on the surface of water because which of the following?

- Surface tension

Question13.

Capillary action is the result of which of the following?

- Cohesion

question 14.

What is surface tension?

B.The cohesion between molecules at the air-liquid surface.

Question 15.

Which surface would hold more weight: hot or cold water? Why?

- Cold: since intermolecular forces are stronger at lower temperatures surface tension is higher so more weight can be held.

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