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Class → VIII

Sec → A

Subject → physics

Physics

C.W.

Revision - 5

Q) Define moment of force. write its S.I. unit. 1

Q) Define pressure. state its S.I. unit. 1/2 + 1/2

Q) Define atmospheric pressure. 1

Q) why are we not crushed under atmospheric pressure? 1

Q) when we go to high altitudes, we experience nasal bleeding. why? 1

Q)

Answer

Q)(ans):- The moment of a force is equal to the product of the magnitude of the force and the perpendicular distance of the force from the pivoted point. 1

Q)(ans)=) pressure is defined as the thrust per unit area. S.I. unit of newton/metre or pascal. 1

Q)(ans)=) The weight of air exerts a thrust on Earth. The thrust on unit area of the Earth surface due to the column of air is called the atmospheric pressure. (1)

Q)(ans)=) we are not crushed under atmospheric pressure because our blood pressure is equal to atmospheric pressure and cancel the ~~por~~ outside pressure. (1)

Q)(Ans)=) As altitude increase the availability of oxygen decreases, making the air thinner and drier, we experience nasal bleeding. (1)

Q)(ans)=) F = 100 N
D = 25m
moment of force = F x D
= 100 x 25
= 2500 Nm (1)

Q) F = 50 N

(ans) ⇒ Moment of force = 10 Nm

perpendicular distance = $\frac{\text{Moment of force}}{\text{force}}$

(2)

$= \frac{10}{50} = 0.2\ m$

Q) (ans) ⇒ Diametre = 2 m

Radius = 1 m

Distance = 1 m

moment of force = 2.0 Nm

F X D = Moment of force

= F X 1 = 2.0

(2) F = $\frac{2}{1}$ = 2 N

10/10

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a) The solid are :-

(ans) => 1) More dense ☑

b) The intermolecular forces in liquids are :-

(ans) => 3) weaker than in solids ☑

c) what is state of motion :-

(ans) => 2) position of motion ☑

d) The strength of force is expressed by ?

(ans) => 2) Mass ☑

e) The force between two charged bodies is called a, muscular force.

(ans) =>

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Short answer type questions (3 marks)

1) How do the solids, liquids and gases differ in their following properties ?

a) size
b) Shape
c) Density

(ans) =

	size	Shape	Density
Solid	They have a definite size	They have a definite shape.	They are highly dense.
Liquid	Indefinite	Indefinite	Less denser than solid
Gas	Indefinite	Indefinite	least denser than solid and liquid.

2) Describe a simple experiment to illustrate that molecules are not at rest but they constantly move.

(ans)⇒ Take a beaker. Fill it partly with water. Add some lycopodium ~~powder~~ powder in the beaker containing water. Stir the contents of the beaker with a glass rod. Take out few drops of this suspension on a glass plate. place it on the table and illuminate it with a table lamp. observe the glass plate through a microscope. It is found that the fine particles of lycopodium powder move rapidly in a random manner their path is zig zag. ~~as shown in~~

3) Distinguish between the three states of matter - solid, liquid and gas on the basis of their molecular models.

Solid

(ans)⇒ Here the molecules are ~~very~~ tightly

Q3)

Solid	liquid	Gas
a) A solid has a definite shape and a definite volume.	a) A liquid has a definite volume but not a definite shape	a) A gas has neither a definite volume nor a definite shape.
b) The molecules in a solid are rigid.	b) The molecules in a liquid are non-rigid.	b) The molecules in a gas are rigid, homogeneous and perfectly elastic.
c) The molecules remain fixed at their position.	c) The molecules do not remain fixed at their positions.	c) The molecules do not remain fixed at their positions.
d) The inter-molecular forces are very strong	d) The inter-molecular forces are less strong.	d) The inter-molecular forces are weak.
e) The molecules in a solid are closely packed	e) The molecules in a liquid are loosely packed.	e) The molecules in a gas are wide apart.

4) How does the density of a liquid or gas vary with temprature?

(ans) ⇒ As the temprature increases, volumes of most of the liquids also increases and when the volume increases density decreases. similarly, when temprature decreases, the volume of most liquids decreases which increases the density.

5) ~~A given quantity of liquid is heated, which of the following quantity will vary and how?~~

~~(a) (b) (c) (d)~~

6) Two object of same mass are moving with velocities v and 4v respectively. Find the ratio of their kinetic energy.

(ans) ⇒ The ratio of their kinetic energy is 1 : 16.

7) Define kinetic energy and potential energy.

(ans)=)

potential energy	kinetic energy
a) It is the energy possessed by a body due to its state of rest or position	a) It is the energy possessed by a body due to its state of motion
b) It is the work done on the body to bring it to that state of rest or positions	b) It is equal to the work done in moving the body ~~int~~ initially from rest.
c) It can change only in form of kinetic energy.	c) It can change in any form of energy.

8) Define pressure. write it's SI unit.

(ans)=) pressure is defined as the thrust per unit area. The SI unit of pressure is pascal or newton/metre^2

9) Find the amount of work done if a force of 60N moves an object through a distance of 5m in the direaction of force.

(ans) ⇒ $F = 60\,N$

$S = 5\,m$

work done = $W = F \times S = 60 \times 5 = 300\,j$

10) Define moment of force?

(ans) ⇒ The moment of force is also called as torque. It is equal to the product of the magnitude of the force from the pivoted point.