

Quarterly Examination 2017-2018

Std. : VII
Subject : Physics

Full Marks : 80
Time : 2hrs.+15min

(Section - A) (Attempt all the questions)

I. Define the following [10]

- (a) acceleration (b) echo (c) Timbre (d) relative density (e) frequency

II. Fill in the blanks [5]

- (1) The time period of a simple pendulum depend on its_____.
- (2) Sound needs a _____ for propagation.
- (3) The weight of a body can be zero when _____ acts on it.
- (4) Density of a liquid can be measured by using _____.
- (5) The to and fro motion of an object is called_____.

III. Write true or false. Rewrite the false statement. [10]

- (1) Velocity is the displacement per unit time.
- (2) The frequency of a second's pendulum is 1.0 Hz.
- (3) Speedometer is used to measure the distance travelled by a vehicle.
- (4) Displacement is a scalar quantity.
- (5) A hydrometer is a device specially designed to float on a liquid.
- (6) The motion of a body falling under gravity is called rectilinear motion.
- (7) Density of liquid and gases increases with the rise in temperature.
- (8) All humanbeings can hear sounds of frequencies upto 60,000 Hz.
- (9) Larger is the amplitude, lesser is the sound.
- (10) A motion that repeats itself after a fixed interval of time is called vibratory motion.

IV. Give the S.I. Unit [5]

- (1) Density (2) frequency (3) velocity (4) acceleration (5) loudness

V. Match the following and write the correct pair. [5]

- | A | B |
|-------------------------|-----------------------|
| (1) A shriller sound | change in density |
| (2) Density | Cm ³ |
| (3) Unit of time period | A sound of high pitch |
| (4) convection current | pitch |
| (5) volume | second |

VI. Give two example of each type of motion.

[5]

- (1) Linear motion.
- (2) Oscillatory motion
- (3) periodic motion
- (4) curvilinear motion
- (5) multiple motion

(Section - B)

(Answer any four questions only)

- VII.** (1) Why does convection current set in liquids and gases when heated ? [2]
(2) Why does ice float on water. [2]
(3) 3 litres of spirit has a mass of 6kg calculate the density of spirit in [3]
(1) gcm^{-3} (ii) density of spirit in kgm^{-3}
(4) Is speed a vector quantity. Give two example of vector quantity. [1+2]
- VII.** (1) Distinguish between speed and velocity. [3]
(2) Define SONAR and its uses. [2+2]
(3) Name the three characteristics of sound. [3]
- IX.** (1) Write the three equation of motion. [3]
(2) The frequency of sound wave is 500 Hz. Find its time period. [2]
(3) Distinguish between noise and music. [3]
(4) Define retardation. [2]
- X.** (1) What is a second's pendulum. What is its length. [3]
(2) Distinguish between scalar and vector quantities. [2]
(3) Define acceleration due to gravity. Give the numerical value of acceleration due to gravity on earth's surface. [3]
(4) A car starts from rest and is accelerated at the rate of 3ms^{-2} for 8 sec. Find the velocity of the car at the end of 8 sec. [2]
- XI.** (1) How does the time period of a pendulum depend on
a) length of pendulum b) mass of the bob. [4]
(2) What are the different measures to be taken to reduce noise pollution. [3]
(3) Draw a neat and labelled diagram to show the different positions of the bob of an oscillating pendulum. [3]