

## State Purpose of Worksheet - III Term Examination [2018 - 2019]

[KG Class work/Home Assignment/Alternate Class work/Internal Assessment/Continuous Assessment/Unit Test/Cycle Test/Revision Test/Mid Term Examination/Term Examination/Preboard]

| Name: | Std: VII | Subject: Physics |
| :--- | ---: | :--- |
| Date: | Term: III | Topic: NA |
| Maximum Marks: 60 | Time Duration: $1 \mathbb{1} / 2 \mathrm{hr}$ | Type of Assessment (if internal assessment):NA |

## General Instructions

Answers to this paper must be written on the paper provided separately You will not be allowed to write during the first 10 minutes.

This time is to be spent in reading the question paper.
The time given at the head of this paper is the time allowed for writing the answers.

Attempt all questions from Part I (Compulsory). A total of three questions are to be attempted from Part II, The intended marks for questions or parts of questions are given in brackets [ ].

## Section A [30 Marks] <br> Attempt all questions

## Question 1

a) Fill in the blanks.
i) Vibrations with frequencies above $20,000 \mathrm{~Hz}$ are called $\qquad$ .
ii) A car travels for 2 hours at a constant speed of $60 \mathrm{~km} \mathrm{~h}^{-1}$. The distance travelled by the car is $\qquad$ .
iii) Our ear can hear two sounds distinctly if they reach us after a gap of $\qquad$ . second(s)
iv) The SI unit of electric current is $\qquad$
b) State Whether the given statements are true or false and correct the false statement.
i) All states of matter occupy space and have volume.
ii) The motion of spinning top and gaint wheel is an example of rotatory motion.
iii) A light ray incident normally on a mirror retraces its path.
iv) When sound is reflected, angle of incidence is twice the angle of reflection.

## Question 2

## a) Apply your learning:

i) Nidhi has four identical metallic bars on her table. Three out of the four bars are magnet. One of the magnetic bar has north and south poles marked on it. How will she find out which of the three remaining bars are magnet?
ii) You must have seen the electrician wearing rubber gloves while handling the electric equipment. Can you think why does he do this?
iii) Kritika's brother bought a powerful music system capable of playing loud music. He placed it on a table and kept a mud showpiece on its speaker. After some time of playing the music, the mud piece fell off the speaker. Why do you think it happened?
iv) Raghav was going to school with his father. On the way he saw an ambulance, on which AMBULANCE was printed in the reverse order. He told his father that the word is printed wrong on the vehicle. Is it true or is there any other reason behind it? Explain.
v) While performing an experiment, you are supposed to take 52 mL alcohol in measuring cylinder to complete the reaction. While reading the volume of alcohol, you were looking at the upper level of meniscus. What will happen? Will the reaction take place?
b) Observe the given diagram and answer the following questions:
i) What is the angle of incidence and angle of reflection for light ray marked ' 1 ' ?

ii) A very long metal strip is fixed at one end (o), and its other end (A) is free as shown in the given figure. OA is the rest position of the strip. When end $A$ is pressed down to position $c$ and then released, the metal strip vibrates. While vibrating it moves from $A$ to $C$, then $C$ to $b$ and then $B$ to $A$ completing one full oscillation. In moving from $C$ to $B$ it takes 0.5 s .
a) What is the frequency of the vibrating strip?
b) Find whether the sound wave produced is ultrasonic or infrasonic.
c) If the distance between points $C$ and $B$ is 30 cm , then find the amplitude.
iii) Choose the correct match.
1)

2)

i) a- Uniform motion , b- non uniform motion
ii) b- uniform motion, a- non-uniform motion
iv) Locate the position of image in the following figures.

v) Identify the components of electric circuit.
a)

b)


## Question 3

i) State the type of motion in each of the following.
a) Swinging of a hand fan
b) Train moving on a straight rail track
c) The motion of strings in musical instruments
ii) Three incandescent bulbs $X, Y$ and $Z$ connected to a battery. If bulb $Y$ gets fused, which of the two remaining bulbs will keep on glowing? Justify your answer.


## Section B [30 Marks] <br> Attempt any three questions

## Question 4

i) A car moving at an average speed of $50 \mathrm{~km} \mathrm{~h}^{-1}$ starts from city at 11:00 a.m. When will it reach city $B$ which is 200 km away from $A$ ?
ii) Give the two laws of reflection with ray diagram.
iii) An electric bell:

a) What happens when the switch of electric bell is ON? Explain in detail.
b) How can you alter the frequency of the ringing of an electric bell?

## Question 5

i) Write two differences each
a) Scalar and vector quantity.
[2]
b) Direct current and Alternating current.
ii) Sohail hung an object $A$ on a spring as shown in the diagram given below. He placed an electromagnet below $A$ and recorded the length of the spring. He repeated the experiment with object B.


The table below shows the length of the spring when the switch was ON and OFF.

| Object | Length of spring when the <br> switch was ON | Length of spring when the <br> switch was OFF |
| :--- | :--- | :--- |
| A | 15 | 12 |
| B | 15 | 15 |

Which of the two objects is definitely a magnetic material? Give reason for your answer.
iii) a) Draw a ray diagram to show the image formation of a point object with a plane mirror.
b) White light is passed through a piece of cloth that absorbs only green colour and reflects blue and red. In what colour will the cloth appear?

## Question 6

i) Write a note on secondary cells.
ii) Longitudinal wave of a sound is given. Draw the corresponding transverse wave and mention the following terms i) Amplitude
ii) Wavelength
iii) crest and trough.

iii) Three persons $P 1, P 2$ and $P 3$ are at different points $A, B$ and $C$, respectively as shown in the diagram. Two person P1 and P3 claps at the same time. Which among the following can be the minimum distance between P2 and P3 to hear the clap sound distinctly by P2? (Given : Speed of sound in air is $330 \mathrm{~ms}^{-1}$

a) 330 m
b) 384 m
c) 363 m
d) 660 m
iv) Label the parts of a dry cell.
[2]


## Question 7

i) A piece of metal has a mass of 50 g and volume of $30 \mathrm{~cm}^{3}$. Find its density.
ii) a) Rest and motion are relative. Explain.
b) Explain in detail about periodic and motion and non-periodic motion.
iii) What happens to the speed of the sound when the temperature of the medium increases?
iv) What is solenoid ? How can you find the poles of a solenoid?

