

## SECOND TERM EXAM -2022-23

Time-2.00 Hrs.)

Class- 9<sup>th</sup>

(Marks-40)

### Subject- Science & Technology - Part-I

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Note: 1) All questions are compulsory.

2) The numbers to the right of the question indicate full marks.

3) Use of calculator is not allowed.

Q. 1-A) Write the correct alternative.

05

1) 1 mole of any substance always contain \_\_\_\_ molecules

A)  $6.022 \times 10^{22}$

B)  $6.022 \times 10^{23}$

C)  $6.022 \times 10^{21}$

D)  $6.022 \times 10^{24}$

2) Sound does not travel through \_\_\_\_\_

A) Air

B) Water

C) Land

D) Vacuum

3) For spherical mirror = \_\_\_\_\_

A)  $f = \frac{R}{2}$

B)  $f = 2R$

C)  $f = R$

D)  $f = \frac{R}{4}$

4) Atomic number of carbon is \_\_\_\_\_

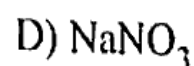
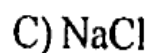
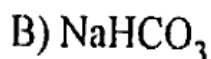
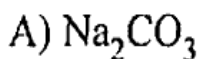
A) 4

B) 6

C) 8

D) 12

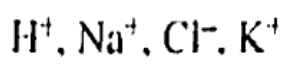
5) \_\_\_\_\_ is used to make the active substance  $\text{CO}_2$  in fire extinguisher



B) Answer the following sub questions.

05

1) State the odd one out



2) State true or false

~~A mirror is a reflecting surface~~

~~3) The compound used for disinfecting drinking water \_\_\_\_\_~~

4) Match the following.

Column 'A'

1) Infrasound

Column 'B'

a) frequency less than 20 Hz

b) frequency greater than 20000 Hz

c) frequency range 20 Hz–20000 Hz

~~5) Complete the correlation~~

Ethane : Saturated hydrocarbon :: Propene : \_\_\_\_\_

Q. 2–A) Give scientific reasons (Any two)

04

~~1) Lime water turns milky when  $\text{CO}_2$  is passed through it.~~

2) Concave mirrors are used in solar devices.

~~3) The intensity of reverberation is higher in a closed and empty house.~~

B) Answer the following sub questions. (Any three)

06

~~i) What should be the dimensions and the shape of classrooms so that no echo can be produced there ?~~

~~ii) Deduce the molecular masses of  $\text{H}_2\text{SO}_4$~~

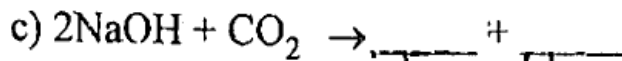
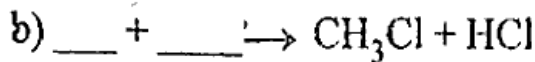
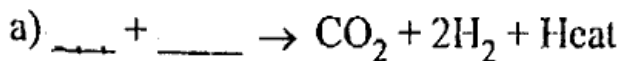
(Atomic masses : H = 1, S = 32, O = 16)

3) What are the laws of reflection of light ?

~~4) Write any two physical properties of diamond.~~

5) Write the uses of powder coating.

1) Complete the following chemical reaction



2) Distinguish between concave mirror and convex mirror.

3) Nita heard the sound of lightning after 4 seconds of seeing it. What was the distance of the lightning from her? (The velocity of sound in air is 340 m/s)

4) Write the harmful effects of deodorant

5) Write down the symbols for the following elements :- Iron, Gold, Silver, mercury, Lead, Sodium <https://www.maharashtrastudy.com>

6) Draw a neat labelled diagram to illustrate divergence of light rays by a convex mirror

7) Define : a) echo

b) wavelength

c) frequency

8) Write short note on 'Anodizing'

1) Read the following paragraph and answer the questions based on it.

In general, When light falls on a body, part of it is reflected, part is absorbed and the remaining part is transmitted, To what extent it is reflected/ absorbed / transmitted depends upon a number of factors such as the material, physical state (solid, liquid, gas), temperature of the body and frequency of the light. Part of light absorbed may be emitted by the body. Absorption of light also results in rise in temperature of the body. in general. A material that transmits most of the incident light is said to be transparent. For example. water is transparent. Lampblack absorbs most of the light falling on it. A mirror reflects most of the light falling on it.

- a) Suppose 10% of light incident on a body is reflected and 70% is absorbed. What can you say about the fraction transmitted ?
- b) State any two factors on which the extent of absorption of light depends.
- c) Give one example of material transparent to light.
- d) Give one example of material that absorbs most of the light falling on it
- e) What happens when light is absorbed by a body ?
- 2) Write the chemical formula for
- a) Bleaching powder
- b) common salt
- c) baking soda
- d) washing soda
- e) Slaked lime

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