

Q.1 Choose the correct alternative and rewrite the following:

- 1) The real image formed by a concave mirror is larger than the object when the object is
a. at a distance equal to radius of curvature b. at a distance less than the focal length c. between focus and centre of curvature
d. at a distance greater than radius of curvature
- 2) One of the following is not an allotrope of carbon. This is
a. diamond b. graphite c. cumene d. buckminsterfullerene
- 3) Baking powder is in nature.
a. acidic b. basic c. neutral d. fuming
- 4) All the carbon bonds in a saturated hydrocarbon electrons.
a. share b. only give c. only take d. none of these

Q.2 State 'True' or 'False', if 'False' correct it:

- 1) Diamond does not dissolve in any solvent.
- 2) Fullerenes are soluble in organic solvents.

Q.3 Give scientific reason of the following: (ANY TWO)

- 1) Biogas is an eco-friendly fuel.
- 2) The particles of powder are given an electric charge while spraying them to form the powder coating.
- 3) The mirrors fitted on the outside of cars are convex.

Q.4 Answer the following: (ANY TWO)

- 1) Write the uses of anodizing.
- 2) Write the uses of diamond.
- 3) Write the harmful effects of deodorant.

Q.5 Answer the following: (ANY ONE)

- 1) State practical uses of CO_2 .
- 2) Write the harmful effects of radioactive substances.

Q.6 Solve the following: (ANY ONE)

- 1) A 10 cm long stick is kept in front of a concave mirror having focal length of 10 cm in such a way that the end of the stick closest to the pole is at a distance of 20 cm. What will be the length of the image?
- 2) An object of height 7 cm is kept at a distance of 25 cm in front of a concave mirror. The focal length of the mirror is 15 cm. At what distance from the mirror should a screen be kept so as to get a clear image? What will be the size and nature of the image?

Q.7 Answer the following in brief: (ANY ONE)

- 1) What is meant by water of crystallization? Give examples of salts with water of crystallization, and their uses.
- 2) Explain the properties of carbon.