

1. Tick (✓) the most appropriate answer.
  1. Which of the following has a fixed volume but not a fixed shape?  
(a) A book                      (b) A brick                      (c) Oxygen                      (d) Milk
  2. In which of the following are the intermolecular forces maximum?  
(a) Nitrogen                      (b) Ice                      (c) Water                      (d) Water vapour
  3. Which of the following statements is true?  
(a) According to Dalton, atoms are divisible in nature.  
(b) Atoms do not take part in a chemical reaction.  
(c) The atoms of an element are different from those of other elements.  
(d) Atoms can be broken down into molecules.
  4. The molecules of which of the following substances will contain the same kind of atoms?  
(a) Oxygen                      (b) Water                      (c) Carbon dioxide                      (d) Sulphur dioxide
  5. The molecules of which of the following substances will contain atoms of more than one kind?  
(a) Hydrogen                      (b) Nitrogen                      (c) Oxygen                      (d) Water
  6. Which of the following formulae represents a molecule of ozone?  
(a)  $O_2$                       (b)  $O_3$                       (c)  $H_2O_2$                       (d)  $H_3PO_4$
  7. The intermolecular spaces are negligible in  
(a) liquids                      (b) glycerine                      (c) solids                      (d) gases
  8. The intermolecular forces of attraction are almost negligible in  
(a) water                      (b) wood                      (c) a gas                      (d) a solid
  9. Which one of these undergoes sublimation?  
(a) Milk                      (b) Cement                      (c) Naphthalene                      (d) Honey
  10. Which one of these can be compressed easily?  
(a) Egg                      (b) Soda                      (c) Hydrogen                      (d) Milk
2. Statements given below are incorrect. Write correct statements:
  1. Non-metals are generally solids and good conductors of electricity.
  2. Elements can be divided into three classes, i.e., metals, non-metals and gases.
  3. A gas can have any number of free surfaces.
  4. The intermolecular forces are very small in case of solids. Solids can flow and liquids can be heaped.
3. State whether the following statements are true or false.
  1. A gas can have any number of free surfaces.
  2. The intermolecular forces in solids are very large

3. Liquids can flow but solids can be heaped.
  4. The weakest intermolecular forces are in the case of gases.
  5. Liquids are fairly compressible.
  6. All normal elements give out radioactive radiations.
  7. Two or more atoms of different elements combine in a definite ratio to form a compound.
  8. Noble gases can react with each other.
  9.  $H_2$  represents one molecule of hydrogen.
  10.  $2N_2$  represents two molecules of nitrogen.
4. Find the odd one out. Give a reason for your answer.
    1. Solid, vapour, liquid, gas
    2. Air, smoke, mercury, hydrogen, nitrogen
    3. Oxygen, honey, nitrogen, iron, water
    4. Condensation, evaporation, sublimation, solidification
  5. (i) Define the term compound.  
 (ii) Define the term chemical formula.  
 (iii) What does a chemical formula represent
  6. (i) What do you understand by the following terms?  
 (a) Atom (b) Molecule  
 (ii) Write the symbols for the molecules of the following nonmetals:  
 (a) Hydrogen (b) Oxygen (c) Ozone (d) Phosphorus (e) Sulphur (f) Iodine
  7. What does each of the following formulae represent?  
 (i)  $2H$  (ii)  $O_2$  (iii)  $4H_2O$  (iv)  $CuSO_4$
  8. (i) Define gas.  
 (ii) On the basis of molecular theory, explain why gases have neither definite shape nor definite volume.
  9. Complete the following table:

Formula of compounds	Elements present in the compound
$CO_2$	Carbon and Oxygen .
$CaO$	..... and .....
$PbO$	..... and .....
$PbS$	..... and .....
$CuS$	..... and .....
$FeS$	..... and .....

10. How do molecules of compounds differ from molecules of elements?