

Std. 9

Instructions :

- ▲ The first 15 minutes of cool - off time.
- ▲ This time is to be spent for reading the question paper.
- ▲ You are not supposed to write anything during the cool - off time.
- ▲ Read the instructions carefully and attempt the questions.

1. When heat is supplied to a solid it becomes liquid. What are the changes occurs in the following properties when solid is changes in to liquid.
- i. molecular motion
  - ii. shape
  - iii. intermolecular distance (3)

2. Find out relationship and fill up following
- i. capillarity rise : water ; capillarity depression : .....
  - ii. Same types of molecule : force of cohesion ; different types of molecules : ..... (2)

3. Write any two methods to separate components from a mixture of powdered iron and sulphur? (2)

4. If you are given a mixture of water and acetone
- a. What is the boiling point of water? (1)
  - b. Boiling point of acetone is 56°C. Write procedure to separate components from the given mixture. (2)

5. Two compounds are given
- (i) Sugar (ii) Water
- Find out component element present in these compounds. (2)

6. Melting point and density of some metals are given.

Metals	Melting point	Density
Sodium	98°C	0.97 g/cm <sup>3</sup>
Silver	962°C	10.5 g/cm <sup>3</sup>
Pottassium	64°C	0.86 g/cm <sup>3</sup>

- a. Identify soft metals from the table? (1)
  - b. Which above metal/ metals is / are not react with water? (1)
  - c. Which above metals are react with dilute acid? Which gas is formed from these reaction? (1)
7. Names of two scientist involved in the classification of elements are given
- (i) Doboreiner (ii) Newsland

Write a brief note on the contribution of these scientists in the classification of elements. (2)

8. Two elements and their atomic number are given below  
 Sodium - 11  
 Fluorine - 9
- Write electronic configuration of each element? (1)
  - Find out group number of these element? (1)
  - Write common name of each group? (1)
9. Water has surface tension. Write procedure of any two experiment to show water has surface tension? (4)
10. Two situations in our daily life are given below
- rain drops fall on a new umbrella
  - water drops fall on tora leaf
- Which changes occurs in each situation? (1)
  - Write reason for each changes? (1)
11. Important components of air and their boiling points are given
- |        |        |          |
|--------|--------|----------|
| Oxygen | Argon  | Nitrogen |
| -183°C | -186°C | -196°C   |
- Which component of air is present in highest perecentage? (1)
  - How liquid air is produced from air? (1)
  - Write procedure to separate these components from liquid air (2)
12. Write a short note on merits and demerits of Mendaleev's periodic table? (3)
13. Electronic configuration of some elements are given
- Mangesium - 2, 8, 2  
 Aluminium - 2, 8, 3  
 Chlorine - 2, 8, 7
- Find out valence electrons of these elements? (1)
  - Find out group of these element? (2)
  - Which above element receive one electron during the chemical reaction? Why? (1)
14. Write procedure of an experiment of separate components of ink? (3)