

# GURU HAR RAI ACADEMY

CHEMISTRY PRACTICE SHEET [2018-2019]

CLASS : IX

## WORKSHEET-1

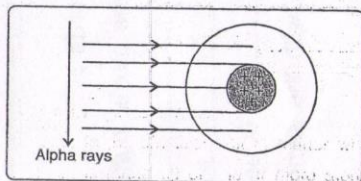
Q.1. Fill in the blanks with suitable words :

- ..... is the smallest unit of matter which takes part in chemical reactions.
- ..... is made up of one or more atoms which may be same or different.
- ..... is a fundamental particle of an atom having mass almost equal to hydrogen atom.
- Cathode rays cause ..... on zinc sulphide screen.
- Neutrons were discovered by .....

Q.2. Complete the following table :

| S. No. | Particle | Symbol | Charge | Mass |
|--------|----------|--------|--------|------|
| 1.     | Electron |        |        |      |
| 2.     | Proton   |        |        |      |
| 3.     | Neutron  |        |        |      |

Q.3. Complete the ray diagram :



Q.4. Give reasons for the following :

- An atom is electrically neutral as  
.....
- Most of the alpha particles passed straight because  
.....
- Very few alpha particles retraced their path because  
.....

## WORKSHEET-2

Q.1. Give one word answer for the following :-

- The central, heavy part of the atom containing neutrons and protons.
- The number of protons present in the nucleus of an atom.
- The total number of protons and electrons present in the nucleus of an atom.
- Elements having 1, 2 or 3 electrons in their outermost orbit.
- Elements having 4, 5, 6, 7 or 8 electrons are known as.

Q.2. Fill in the blanks with suitable words :

- An atom of an element is represented by a .....
- The energy levels or energy shells are filled in order of increasing .....
- The electrons present in K and L shell are known as .....
- Element with atomic number 16 is .....
- The maximum number of electrons in any shell is given by the formula .....

Q.3. Please help Sanjam to complete the following table :

| S. No. | Symbol                            | Atomic number | Mass number | Protons | Neutrons | Electrons | Electronic configuration |
|--------|-----------------------------------|---------------|-------------|---------|----------|-----------|--------------------------|
| 1.     | Beryllium ${}^4_2\text{Be}$       | 4             |             |         |          |           |                          |
| 2.     | Boron ${}^{11}_5\text{B}$         |               | 11          |         |          |           | 2, 8, 1                  |
| 3.     | Oxygen ${}^{16}_8\text{O}$        |               |             | 8       |          |           |                          |
| 4.     | Potassium ${}^{39}_{19}\text{K}$  |               |             |         | 20       |           |                          |
| 5.     | Sulphur ${}^{32}_{16}\text{S}$    |               |             |         |          | 16        |                          |
| 6.     | Chlorine ${}^{35}_{17}\text{Cl}$  |               |             |         |          | 17        |                          |
| 7.     | Magnesium ${}^{24}_{12}\text{Mg}$ |               |             |         | 12       |           |                          |
| 8.     | Argon ${}^{40}_{18}\text{Ar}$     |               |             |         |          |           |                          |
| 9.     | Lithium ${}^7_3\text{Li}$         |               | 7           |         |          |           |                          |
| 10.    | Nitride $\text{N}^{3-}$           | 7             | 14          |         |          |           |                          |

## WORKSHEET-3

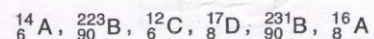
Q.1. Fill in the blanks with suitable words :

1. Atoms of an element having same atomic number but different mass number are known as .....
2. Isotopes occupy the same ..... in the periodic table.
3. Hydrogen has ..... isotopes.
4. Radioactive ..... is used for determining the age of fossil fuels.
5. The atoms of different elements with the same mass number, but different atomic numbers are called .....

Q.2. Please help Sanjam to complete the following table :

| S. No. | Isotopes of Hydrogen | No. of protons | No. of electrons | No. of neutrons |
|--------|----------------------|----------------|------------------|-----------------|
| 1.     | ${}^1_1\text{H}$     | 1              |                  |                 |
| 2.     | ${}^2_1\text{H}$     |                | 1                |                 |
| 3.     | ${}^3_1\text{H}$     |                |                  | 1               |

Q.3. Identify the pairs of isotopes in the following species. The letters do not represent the actual symbols :



Q.4. The atom of an element has 20 protons, 20 electrons and 20 neutrons :

1. What is the atomic number of the element ?
2. What is the mass number of the element ?
3. Name the element.
4. Write the electronic configuration of the element.

Q.5. Give reasons for the following :

1. Isotopes have similar chemical properties.  
.....
2. Isotopes occupy the same position in the periodic table.  
.....
3. Aluminium has positive valency.  
.....
4. Sulphur exhibits negative valency.  
.....