

Chapter 4: Atomic Structure

Worksheet 1

1. Write the atomic number of the following elements.

- (i) Potassium
- (ii) Chlorine
- (iii) Neon
- (iv) Helium
- (v) Carbon

2. Write the valencies of the following elements.

- (i) Sodium
- (ii) Calcium
- (iii) Aluminium
- (iv) Iron(II) ion
- (v) Copper(I) ion

3. Give one word for the following.

- (i) Fixed circular paths around the nucleus in which electrons move
- (ii) The small, dense and hard central core of an atom
- (iii) Neutral particles found in an atom
- (iv) A negatively charged ion
- (v) Atoms of the same element having the same atomic number but different mass numbers

4. Answer these questions.

- (i) What is the sum of protons and neutrons present inside the nucleus of an atom called?
- (ii) Find the valency of H^+ ion.
- (iii) If sodium has atomic number 11, find the number of protons in it.
- (iv) What is the value of the maximum number of electrons present in 4th shell or N-shell?
- (v) What kind of bond is formed between a metal and a nonmetal by the transfer of one or more electrons.

Chapter 4: Atomic Structure

Worksheet 2

1. Tick the correct answer.

- (i) The helium atom is
(a) Diatomic (b) Polyatomic (c) Monatomic (d) Tetraatomic
- (ii) The maximum number of electrons in L-Shell can be
(a) 32 (b) 8 (c) 2 (d) 18
- (iii) The number of valence electrons of magnesium is
(a) 1 (b) 3 (c) 2 (d) 5
- (iv) The valency of sulphate ion is
(a) 2- (b) 3- (c) 4- (d) 5-
- (v) How many vertical columns called groups are there in periodic table?
(a) 18 (b) 17 (c) 19 (d) 20

2. Fill in the blanks.

- (i) John Dalton put forward his atomic theory in _____ .
- (ii) Electrons present in the outermost shell of an atom are called _____ electrons.
- (iii) A _____ is an atom or a group of atoms having a charge on it.
- (iv) The number of electrons lost, gained or shared by an atom of an element is called its _____ .
- (v) The group number of boron is _____ .

3. Write True or False against the following statements.

- (i) Nitrogen is a diatomic element.
- (ii) The valency of lithium ion is 2.
- (iii) Chlorine is a monovalent anion.
- (iv) The negative ion is called cation.
- (v) The group number of calcium is 2.

4. Answer the following questions.

- (i) Who discovered electron?
- (ii) Is a molecule of sulphur polyatomic?
- (iii) How do atoms of metals acquire stable electronic configuration?
- (iv) What is the period of boron in the modern periodic table?
- (v) What are the radicals having negative charge called?