



## INDIAN SCHOOL DARSAIT DEPARTMENT OF CHEMISTRY

Subject : CHEMISTRY      Topic : Structure Of Atom      Date of Worksheet : 07.01.2019

Resource Person: Mrs Sandhya Jitheesh

Date :

Name of the Student : \_\_\_\_\_ Class & Division : IX---- Roll Number : \_\_\_\_

- 1    What is meant by the atomic number of an element? 1
- 2    How was it shown that an atom has a lot of space within it? 1
- 3    State one drawback of Rutherford's model of an atom? 1
- 4    Name the particles which actually determine the mass of an atom. 1
- 5    What are valence electrons? 1
- 6    Fill in the following blanks.

Atomic number	Mass number	Protons	Neutrons	Electrons	Symbol
11	23	-----	-----	-----	-----
-----	32	16	-----	-----	-----

- 7    What is the general name of the elements having 8 electrons in the valence shell of their atom? 1
- 8    If both K and L shell of an atom are full, what is the total number of electrons contained in them? 1
- 9    Name the particles used by Rutherford in his experiment on the discovery of nucleus. Also state the charge on these particles. 2
- 10    The mass number of an element is 23 and it contains 11 electrons. What is the number of protons and neutrons in it? What is the atomic number of the element? 2
- 11    An atom contains 3 protons, 3 electrons and 4 neutrons: 2  
  
(a)What is its atomic number?    (b)What is its mass number?

- 12 What is the number of valence electrons in the atom of an element having the atomic number 9? Name the valence shell of this atom? 2
- 13 Define the valency of an element. What valency will be shown by an element having atomic number 14? 2
- 14 The atomic number of an element is 7.  
 (a) Write down its electronic configuration. (b) What is its valency? 2
- 15 Distinguish between isotopes and isobars. 2
- 16 What is the relationship between an atom containing 11 protons, 11 electrons and 11 neutrons and other atom containing 11 protons, 11 electrons and 12 neutrons? 2
- 17 Why do isotopes have similar chemical properties? 2
- 18 An element has an atomic number of 12 and mass number of 26. 2  
 (a) Write its electronic configuration and draw a diagram to show the distribution of electrons in various orbits.  
 (b) Calculate the number of neutral fundamental particles present in the nucleus.
- 19 How did Neils Bohr explain the stability of an atom? 2
- 20 An atom of an element X may be written as  ${}^{14}_{7}\text{X}$  2½  
 (a) What does the figure 7 indicate? (b) What does the figure 14 indicate?  
 (c) What is the number of protons in atom X? (d) What is the number of neutrons in atom X?  
 (e) What is the number of electrons in atom X?
- 21 Which sub atomic particle was discovered by 3  
 i. J. Chadwick ii. J.J Thomson iii. E. Goldstein