TEST PAPER: CHEMISTRY

Time: 40 Minutes **Class:** CBSE 9th

Max. Marks: 30 Marks **Date:** 24th October, 2018

Marking Scheme: *Questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.*

Question: 1

A. Define the following terms:
   a. Atomic number
   b. Mass number
   c. Isotopes

B. Give the number of valence electrons in following ions:
   Cl^-, S^{2-}, Na^+, N^{3-}, Mg^{2+}, Ca^{2+}

C. Two isotopes of bromine Br (Z=35, A=79) and Br (Z=35, A=81) are present in 49.7% and 50.3% respectively. Calculate the average atomic mass of bromine atom.

Question: 2

A. Al^{3+} and Na^{+1} have completely filled K and L shells. Explain.

B. Name the following:
   a. Combining capacity of an element
   b. Isotope of metal used as a fuel in nuclear reactor.
   c. Isotope of non-metal used in the treatment of goiter.

C. Solve the following:
   a. The average atomic mass of an element X is 16.2 u. What are the percentages of isotopes X (Z=8, A=16) and X (Z=8, A=18) in the sample?
   b. The average atomic mass of an element is 35.5 u. What are the percentages of isotopes Cl (Z=17, A=35) and Cl (Z=17, A=37) in the sample?

Question: 3

A. Give the atomicity of following elements:
   Helium, sodium, ozone, Sulphur, phosphorus, oxygen, chlorine

B. Explain the observations of Rutherford model of an atom. Draw conclusions made by him.

C. Give the atomic structural diagram of following elements:
   a. Potassium b. fluorine