CARMEL CONVENT SCHOOL

UNIT TEST II (2022-23)

CLASS IX SCIENCE

Q.1 Which of the following has the same number of electrons as an oxide O^{2-}

(a) K^+ (b) Mg^{2+} (c) Ca^{2+} (d) B^{3+} 1

Q.2 An atom with 3 protons and 4 neutrons will have a valency of :

(a) 3 (b) 7 (c) 1 (d) 4 1

Q.3 Isotopes of an element have :

(a) Same physical property (b) Different chemical property

(c) Different Neutrons (d) Different atomic number . 1

Q.4 Rutherford's α - particle scattering experiment showed that :

(a) Electrons have negative charge

(b) The mass and positive charge of the atom is concentrated in the nucleus.

(c) Neutron exists in the nucleus.

(d) Most of the space in a atom is empty. 1

Q.5 An ion M3+ contains 10 electrons and 14 neutrons. What is the atomic number and mass number of the element M? Name the element . 2

Q.6 Give one example each :

(a) Polyatomic molecule.

(b) Polyatomic ion. 2

Q.7 For the symbol H,D,T tabulate three subatomic particles found in each of them 2

Q.8 Write the chemical symbols of two elements :

(i) Which are formed from first letter of element name .

(ii) Whose name has been taken from the names of element in Latin. 2

Q.9 Write down the formulae of : (Any two)

(a) Sodium Sulphide (b) Aluminium Sulphate (c) Potassium Nitrate 2

Q.10 If K and L shells of an atom are full, then what would be the total number of electrons in the atom. Identify the element. Find its valency. 2

Q.11 (a) Will ^{12}C and ^{14}C have different chemical properties ? Justify.

(b) Find the %age of $^{16}_{8}X$ and $^{18}_{8}X$ if the average mass is 16.2μ 3

Q12 Magnesium and oxygen combine in the ratio of 3:2 by mass to form magnesium oxide. What mass of oxygen would be required to react completely with 24 g of magnesium. State the law. 3

Q.13 *Note: Read the Assertion (A) and Reason (R) statements carefully and mark the correct option out of the following options:*

(a) Both (A) and (R) are true and (R) is correct explanation of the (A).

(b) Both (A) and (R) are true but (R) is not the correct explanation of the (A).

(c) (A) is true but (R) is false.

(d) (A) is false but (R) is true.

Q.1 Assertion A : Most of the space inside the atom is empty

Reason R : In Rutherford's experiment , most of the α- particles crossed the gold foil without getting deflected.

Q.2 Assertion A : Neils Bohr proposed that electrons are distributed in different shells with discrete energy around the nucleus .. 1

Reason R : Mass of an electron is about 1/2000 times the mass of a Hydrogen atom 1

Q.3 Assertion A : The Valency of phosphate radical is -4.

Reason R : The Ratio by mass of hydrogen and oxygen in water is 1:8. 1

Q.4 Assertion A : In a chemical substance , the elements are always present in definite proportion by mass.

Reason R : Atoms of different elements have different masses and chemical properties. 1