NAAHAR PUBLIC SCHOOL (CBSE) SENIOR SECONDARY
ACADEMIC YEAR(2022-2023)

CLASS:XI **DATE:31.10.22**
SUBJECT: CHEMISTRY **MARKS:25**
TEACHER'S INITIAL: Mrs.UMA **DUR:40 Mins**

I.MULTIPLE CHOICE QUESTIONS 3x1=3

1) Isotopes of an element have ————————

(a) Different chemical and physical properties

(b) Similar chemical and physical properties

(c) Similar chemical but different physical properties

(d) Similar physical but different chemical properties

2)The electronic configuration of chromium (Z=24) is:

(a) [Ne] $3s^2$ $3p^6$ $3d^4$ $4s^2$ (b) [Ne] $3s^2$ $3p^6$ $3d^5$ $4s^1$

(c) [Ne] $3s^2$ $3p^6$ $3d^1$ $4s^2$ (d) [Ne] $3s^2$ $3p^6$ $4s^2$ $4p^4$

3)Which of the following pairs represents isobars?

(a) $^{3}He_2$ and $^{4}He_2$ (b) $^{24}Mg_{12}$ and $^{25}Mg_{12}$

(c) $^{40}K_{19}$ and $^{40}Ca_{20}$ (d) $^{40}K_{19}$ and $^{39}K_{19}$

II.ASSERTION REASONING 2x1=2

Directions : Each of these questions contain two statements, Assertion and Reason. Each of these questions also has four alternative choices, only one of which is the correct answer. You have to select one of the codes (a), (b), (c) and (d) given below.
(a) Assertion is correct, reason is correct; reason is a correct explanation for assertion.
(b) Assertion is correct, reason is correct; reason is not a correct explanation for assertion
(c)Assertion is correct, reason is incorrect
(d) Assertion is incorrect, reason is correct.
1.Assertion : All isotopes of a given element show the same type of chemical behaviour.
Reason : The chemical properties of an atom are controlled by the number of electrons in the atom.
2. Assertion : It is impossible to determine the exact position and exact momentum of an electron simultaneously.
Reason : The path of an electron in an atom is clearly defined.

III.ANSWER THE FOLLOWING IN SHORT 2x2=4

1)An atom having atomic mass number 13 has 7 neutrons. What is the atomic number of the atom?
2) State Aufbau principle

IV)ANSWER THE FOLLOWING IN BRIEF 2x3=6

1) Show the distribution of electrons in an oxygen atom (atomic number 8) using an orbital diagram.

2) State paulis exclusion principle and Hund's rule

V) ANSWER THE FOLLOWING IN DETAIL 2x5=10

1) Write the postulates of Bohr’s model of hydrogen atom.
2) What information do the Quantum numbers provide?