KENDRIYA VIDYALAYA BHU CAMPUS (FS)

Class- XI/MONTHLY TEST

SUBJECT – CHEMISTRY **M.M -40**

Section A contains 8 questions of 1 marks each. **Section B contains 5 questions of 2 marks each.**

Section C contains 4 questions of 3 marks each. **Section D contains 2 question of 5 mark**

SECTION A

1.In the modern periodic table the period indicates the value of

(a) Atomic number (b)Atomic mass

©principal quantum number (d) Azimuthial quantum number.

2. Considering the element B, Al, Mg and K the correct order of their metallic character

(a)B >Al>Mg >K (b) Al >Mg>B>k © Mg>Al>K>B (d) K>Mg>Al>B

3. Which of the following is the correct order of size of given species

(a) I>I>I+ (b) I+>I->I © I>I>I- (d) I->I>I+

4. Which of the following oxides is amphoteric in nature?

(a) SnO_2 (b) CO_2 © SiO_2 (d) CaO

5 .Which molecule has odd number of electrons:

(a) B2H6 (b) O2 (c) CO (d) NO

In the following questions , two statements are given _ one labelled assertion (A) and Reason(r).Select the correct answer to these questions from the codes (a),(b),(c) and (d) as given below;

(a) Both assertion (A) and reason® are correct statements and reason(R) is correct explanation of the Assertion(A).

(b) Both assertion (A) and reason(R) are correct statements ,but Reason (R) is not correct explanation of of the assertion (A).

(c) Assertion (A) is correct but Reason (R) is incorrect statement

(d) Assertion (A) is incorrect but Reason (R) is correct statement.

6. Assertion (A): though the central atom of both NH_3 and H_2O molecules are sp^3 hybridised yet H-N-H bond angle is greater than that of H-O-H.

Reason (R):This is because nitrogen atom has one lone pair and oxygen atom has two lone pair.

7. Assertion (A): Among the two O-H bond in H_2O molecule the energy require to break the first O-H bond and the other O-H bond is the same.

Reason (R) : this is because the electronic environment around oxygen is different after breakage of one O-H bond.

8. Assertion (A):Hydrogen can be place in group I .

Reason (R): Hydrogen can gain an electron to achieve a noble gas arrangement.

SECTION B

9. Write the general outer electronic configuration of s, p d and f block elements.

10. Draw the Lewis structure of CO_2 and HNO_3.

11. Write the favourable factors for the formation of ionic bond.

12. Write the structure of following molecules according to VSEPR theory

BF_3 and PCl_5

13. Write the shape and geometry of following molecule according to VSEPR theory

ClF_3 and SF_4

SECTION C

14. Write the resonance structure of SO_3 , NO_2 and NO_3^{--}

15. What is dipole moment and their unit . Explain with example.

16. What are the causes of diagonal relationship.

17. Why do elements in the same group has similar physical and chemical properties

SECTION D

18. How would you explain the fact that the first ionisation enthalpy of sodium is lower than that of Magnesium but its second ionisation enthalpy is higher than that of Magnesium?

19. Which out of NH_3 and NF_3 has higher dipole moment and why? Explain.