**+1 CHEMISTRY EXAMINATION**

**CH: CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES**

**Time: 1 hour** **Test ID: 543**

1. In the modern long form of periodic table, elements are arranged in the increasing

order of

(a) atomic mass (b) atomic number (c) mass number (d) metallic character

2. What is the name and symbol of the element with atomic number 112?

(a) Ununbium, Uub (b) Unnilbium, Unb (c) Ununnillum, Uun (d) Ununtrium, Uut

3. The first periodic law stated by Mendeleev was

(a) There is no correlation in the properties and atomic weights of the elements

(b) The properties of the elements are a periodic function of their atomic numbers

(c) The properties of the elements are a periodic function of their atomic weights

(d) The properties of the elements are a periodic function of their empirical formula

4. The period to which an element belongs to in the long form of periodic table represents

(a) atomic mass (b) atomic number

(c) principal quantum number (d) azimuthal quantum number

5. Which of the following elements shown as pairs with their atomic numbers belong to the same period?

(a) Z = 19 and Z = 38 (b) Z = 12 and Z = 17

(c) Z=11 and Z=21 (d) Z = 16 and Z = 35

6. An element has atomic number 79. Predict the group and period in which the element is placed.

(a) 2nd group, 7th period (b) 11th group,6th period

(c) 13th group, 6th period (d) 12th group, 6th period

7. To which group, an element with atomic number 88 will belong?

(a) Group 12 (b) Group 17 (c) Group 10 (d) Group 2

8. The electronic configuration of few elements is given below. Mark the statement which is not correct about these elements.

(i) 1s2 2s² 2p6 3s¹ (ii) 1s2 2s2 2p5 (iii) 1s2 2s2 2p6 (iv) 1s2 2s2 2p3

(a) (i) is an alkali metal. (b) (iii) is a noble metal.

(c) (i) and (ii) form ionic compounds. (d) (iv) has high ionisation enthalpy.

9. When we go from left to right in a period,

(a) the basic nature of the oxides increases

(b) the basic nature of the oxides decreases

(c) there is no regular trend in the nature of oxides

(d) oxides of only first two groups are basic in nature

10. Ionisation enthalpy of nitrogen is more than oxygen because of

(a) extra stability of half filled orbitals (b) more number of energy levels

(c) less number of valence electrons (d) smaller size.

11. Which of the following arrangements represents the correct order of electron gain enthalpy?

(a) O <S < F < Cl (b) Cl <F < S < O (c) S <O < Cl <F (d) F <Cl < O < S

12. What is the decreasing order of basicity of hydroxides of the alkaline earth metals?

(a) Be(OH)2 > Mg(OH)2 > Sr(OH)2 > Ba(OH)2 (b) Mg(OH)2 > Be(OH)2 > Ba(OH)2 > Sr(OH)2

(c) Ba(OH)2 > Sr(OH)2 > Mg(OH)2 > Be(OH)2 (d) Sr(OH)2 > Be(OH)2 > Mg(OH)2 > Ba(OH)2

13. What is the common property of the oxides CO, NO and N₂O?

(a) All are acidic oxides. (b) All are basic oxides.

(c) All are neutral oxides (d) All are amphoteric oxides

14. What is common between given cations and anions, O²-, F-, Na+, Mg2+, Al3+?

(a) All have same ionic radii. (b) All are isoelectronic species having 10 electrons.

(c) All of them belong to the third period. (d) The nature of oxides of all the ions is basic

15. Which of the following groups contains metals, non- metals and metalloids?

(a) Group 17 (b) Group 14 (c) Group 13 (d) Group 12

16. Which is the most electropositive element?

(a) Na (b) Cu (c) Cs (d) Ca

17. Which of the following is not a periodic property for the elements?

(a) Electronegativity (b) Atomic size

(c) Occurrence in nature (d) Ionization energy

18. Predict the formula of a compound formed by aluminium and sulphur.

(a) Al₂S₂ (b) Al3S2 (c) Al2S3 (d) AlS

19. Predict the formula of stable compound formed by an element with atomic number 114 and fluorine.

(a) AF3 (b) AF2 (c) AF (d) AF4

20. The main reason for showing anomalous properties of the first member of a group in *s* or *p*-block is

(a) Maximum chemical reactivity

(b) Maximum electronegativity and different configurations

(c) Small size, large charge/radius ratio (d) tendency to form multiple bonds

21. The periodic table of today owes its development to two chemists namely

(a) Rutherford and Moseley (b) Alexander Newlands and Dobereiner

(c) Dmitri Mendeleev and Lothar Meyer (d) de Broglie and Neil Bohr.

22. Anything that influences the valence electrons will affect the chemistry of the element. Which one of the following factors does not affect the valence shell?

(a) Valence principal quantum number (b) Nuclear charge

(c) Nuclear mass (d) Number of core electrons

23. Which block of the periodic table contains elements with the general electronic configuration

*(n-2) f 1-14 (n-1) d 0-1 ns²*?

(a) *s*-block (b) *p*-block (c) *d*-block (d) *f*-block

24. Atomic numbers of few elements are given below. Which of the pairs belongs to *s*-block?

(a) 7, 14 (b) 3, 20 (c) 8, 15 (d) 9, 17

25. In the long form of periodic table, the non-metals are placed in

(a) *s*-block (b) *p*-block (c) *d*-block (d) *f*-block