Examination October 2020

B.Sc. F.Y (Sem-I)

2141 Chemistry Paper-I (Inorganic Chemistry)

Time: One Hour   **Max. Marks: 25**

Instruction:

- Solve any 25 questions

1   Graphite is the allot rope of------
(A)N   (B)C   (C)O   (D)P

2   The two electrons present in an orbital are distinguished by
(A)Principal quantum number   (B)Azimuthal quantum number   (C)Magnetic quantum number   (D)Spin quantum number

3   The dry ice is------
(A)Size of orbital   (B)Shape of orbital   (C)solid carbon dioxide   (D)Nuclear stability

4   Heisenberg`s uncertainty principle rules out the exact simultaneous measurement of
(A)Probability and intensity (B)Energy and velocity   (C)Charge and density   (D)Position and momentum

5   The shape of orbital with l = 1 and m = 0 is
(A)Spherical   (B)Dumb bell   (C)Clover leaf   (D)Dough nut

6   The ground state electronic configuration for chromium atom (Z=24) is
(A)[Ar] 3d5 4s1   (B)[Ar] 3d4 4s2   (C)[Ar] 3d6 4s0   (D)[Ar] 4s1 4d5

7   Hund`s rule deals with distribution of electrons in
(A)A principal shell   (B)Different subshells   (C)Orbital's with slightly different energies   (D)Degenerate orbital's

8   Bohr`s model failed because of the advent of
(A)Planks quantum theory   (B)Electromagnetic wave theory   (C)Heisenberg's uncertainty principle   (D)Photoelectric effect

9   The total energy of an electron in an atom is
(A)Less than zero   (B)Greater than zero   (C)Zero   (D)Less or more than zero

10 The total number of orbital's in fifth energy level is
(A)5   (B)10   (C)20   (D)25

11 The atomic radii in case of inert gases is
(A)Ionic radii   (B)Covalent radii   (C)van der Waals radii   (D)None of the above

12 Which out of the following has largest size
(A)Mg2+   (B)Rb+   (C)Li+   (D)Na+

13 An atom of an electronegative element becomes an ion by
(A)Gain of electron   (B)Loss of electron   (C)Loss of its radius   (D)Serving as a reductant

14 In any period of the periodic table the electronegativity of elements, as we move from left to right
(A)Increases   (B)Decreases   (C)Remains same   (D)None

15 Group number and valency has no relation in
(A)First group   (B)Second group   (C)Group 14   (D)Zero group

16 In the periodic table, on moving along a period, the ionization potential
(A)Increases from left to right   (B)Remains unchanged   (C)First increases and then decreases   (D)Decreases from left to right

17 The most electron affinity element is
(A)F   (B)Cl   (C)Br   (D)I

18 Which element has the greatest tendency to lose electrons
(A)Fr   (B)F   (C)S   (D)Be

19 The smallest alkali meal cation is
(A)Li+   (B)Na+   (C)K+   (D)Fr+

20 Diagonal element of carbon is
(A)P   (B)Al   (C)Na   (D)Si

21 Sodium metal cannot be stored under
(A)Benzene   (B)Alcohol   (C)Toluene   (D)Kerosene oil

22 In comparison to alkali metals, alkaline earth metals are
(A)Less reactive   (B)Less reducing   (C)Less basic   (D)All of the above

23 Barium burns in air to form
(A)BaO   (B)BaO2   (C)Ba2O2   (D)Ba(OH)2

24 AX3 type of interhalogen compounds have ………………………hybridization
(A)sp   (B)sp2   (C)sp3   (D)sp3d

25 The shapes of tetrahalides of group14 element is
(A)Square planar   (B)Tetrahedral   (C)Trigonal bipyramid   (D)Octahedral

26 The most stable hydride is
(A)NH3   (B)PH3   (C)AsH3   (D)SbH3

27 The number of sigma bond in P_4O_{10} is

(A)6　　　　(B)7　　　　(C)16　　　　(D)20

28 The oxidation state of oxygen in O_2F_2

(A)+1　　　　(B)+2　　　　(C)+4　　　　(D)-2

29 $B(OH)_3$

(A)Mono basic acid　　　　(B)Di basic acid　　　　(C)Tri basic acid　　　　(D)Tetra basic acid

30 Three centered bond is present in

(A)NH_3　　　　(B)B_2H_6　　　　(C)BCl_3　　　　(D)$AlCl_3$