NEET : CHAPTER WISE TEST-3

SUBJECT :- CHEMISTRY **DATE.....**

CLASS :- 11th **NAME.....**

CHAPTER :- PREODIC TABLE **SECTION.....**

(SECTION-A)

1. The period number in the long form of the periodic table is equal to :
(A) magnetic quantum number of any element of the period.
(B) atomic number of any element of the period.
(C) maximum Principal quantum number of any element of the period.
(D) maximum Azimuthal quantum number of any element of the period.

2. Which one of the following statements related to the modern periodic table is **incorrect** :
(A) The p-block has 6 columns, because a maximum of 6 electrons can occupy all the orbitals in a p-subshell.
(B) The d-block has 8 columns, because a maximum of 8 electrons can occupy all the orbitals in a d-subshell.
(C) Each block contains a number of columns equal to the number of electrons that can occupy that subshell.
(D) The block indicates value of Azimuthal quantum number (ℓ) for the last subshell that received electrons in building up the electronic configuration.

3. Which of the following electronic configuration represent noble gas ?
(A) ns^2np^6 (B) ns^2np^5
(C) ns^2np^4 (D) ns^2np^3

4. Which of the following group of transition metals is called coinage metals ?
(A) Cu, Ag, Au (B) Ru, Rn, Pd
(C) Fe, Co, Ni (D) Os, IR, Pt

5. What is the characteristic valence shell electron configuration of 11th group metals ?
(A) $ns^2\ np^6$ (B) $(n-1)d^2\ ns^2$
(C) $nd^9\ ns^2$ (D) $(n-1)d^{10}\ ns^1$

6. Pt, Ni, Au and Ti belongs to :
(A) f-block (B) d-block
(C) p-block (D) s-block

7. Which of the following is generally true regarding effective nuclear charge (Z_{eff}) :
(A) It increases on moving left to right in a period.
(B) It remains almost constant on moving top to bottom in a group.
(C) For isoelectronic species, as Z increases, Z_{eff} decreases.
(D) Both (A) and (B).

8. From the given set of species, point out the species from each set having highest Z_{eff}
(a) O^{2-}, F^-, Na^+ (b) Li, Be, C
(c) He, Li^+, H^-

	a	b	c
(A)	Na^+	C	Li^+
(B)	O^{2-}	Li	H^-
(C)	F^-	Na	He
(D)	Na^+	Be	He

9. The atom larger in size as compared to oxygen is :
(A) F (B) He
(C) Ne (D) none of these

10. Which of the following has the largest ionic radius ?
(A) Na^+ (B) Cs^+
(C) Ca^+ (D) Mg^+

11. Which has smallest size ?
(A) Na^+ (B) Mg^{2+}
(C) Ne (D) O^{2-}

12. Which of the following order of radii is correct ?
(A) Li < Be < Mg (B) $O^+ < O^{2-} < N^{3-}$
(C) O < F < Ne (D) $Na^+ > F^- > O^{2-}$

13. The size of isoelectronic species O^{-2} , F^- and Na^+ is affected by :
(A) nuclear charge (Z)
(B) valence principal quantum number (n)
(C) electron-electron interaction in the outer orbitals
(D) none of the factors because their size is the same.

14. Atomic radii of F & Ne in Angstrom are respectively given by :
(A) 0.72, 1.60 (B) 1.60, 1.60
(C) 0.72, 0.72 (D) 1.60, 0.72.

15. Match the correct atomic radius with the element :

S.No.	Element	Code	Atomic radius (pm)
(i)	Be	(p)	74
(ii)	C	(q)	88
(iii)	O	(r)	111
(iv)	B	(s)	77
(v)	N	(t)	66

(A) (i) – r, (ii) – q, (iii) – t, (iv) – s, (v) – p
(B) (i) – t, (ii) – s, (iii) – r, (iv) – p, (v) – q
(C) (i) – r, (ii) – s, (iii) – t, (iv) – q, (v) – p
(D) (i) – t, (ii) – p, (iii) – r, (iv) – s, (v) – q

16. Which of the following order of atomic / ionic radius is not correct ?
(A) F < Cl < Br < I (B) $Mg^{2+} > Li^{+}$
(C) Nb ≈ Ta (D) Li > Be > B

17. Which one of the following statements is incorrect in relation to ionisation enthalpy ?
(A) Ionization enthalpy increases for each successive electron.
(B) The greatest increase in ionization enthalpy is experienced on removal of electron from core of noble gas configuration.
(C) End of valence electrons is marked by a big jump in ionization enthalpy.
(D) Removal of electron from orbitals bearing lower n value is easier than from orbitals having higher n value.

18. The first ionisation enthalpies (in eV) of N & O are respectively given by :
(A) 14.6, 13.6 (B) 13.6, 14.6
(C) 13.6, 13.6 (D) 14.6, 14.6

19. The set representing the correct order for first ionisation potential is :
(A) K > Na > Li (B) Be > Mg > Ca
(C) B > C > N (D) Ge > Si > C

20. The first ionisation enthalpies of Na, Mg, Al and Si are in the order :
(A) Na < Mg > Al < Si
(B) Na > Mg > Al > Si
(C) Na < Mg < Al < Si
(D) Na > Mg > Al < Si

21. The first ionization energy is smallest for the atom with electronic configuration :
(A) $ns^2 np^6$ (B) $ns^2 np^4$
(C) $ns^2 np^5$ (D) $ns^2 np^3$

22. Which among the following elements have lowest value of IE_1 ?
(A) Pb (B) Sn (C) Si (D) C

23. The second ionization energies of elements are always higher than their first ionization energies because :
(A) the cation is smaller than its parent atom.
(B) it is easier to remove electron from cation.
(C) ionization is an endothermic process.
(D) cation formed always have stable half filled or completely filled valence shell electron configuration.

24. Which of the following relation is correct with respect to first (I) and second (II) ionization enthalpies of potassium and calcium ?
(A) $I_{Ca} > II_K$ (B) $I_K > I_{Ca}$
(C) $II_{Ca} > II_K$ (D) $II_K > II_{Ca}$

25. For electron affinity of halogens which of the following is correct ?
(A) Br > F (B) F > Cl
(C) Br < Cl (D) $F^- > I$

26. Which of the following will have the most negative electron gain enthalpy and which the least negative ?
(A) F, Cl (B) Cl, F
(C) S, Cl (D) Cl, P

27. Element having maximum electron affinity is :
(A) Fluorine (B) Chlorine
(C) Bromine (D) Iodine

28. Which of the following will have the most negative electron gain enthalpy and which the least negative ?
F, P, S, Cl.
(A) P, Cl (B) Cl, F
(C) Cl, S (D) Cl, P

29. Following the Mulliken scale, what parameters are required to evaluate electronegativity ?
(A) Only electronegativity
(B) Only electron affinity
(C) Electron affinity and ionization energy
(D) Ionic potential and electronegativity

30. The electronegativity values of C,N,O and F :
(A) increase from carbon to fluorine.
(B) decrease from carbon to fluorine.
(C) increase up to oxygen and is minimum at fluorine.
(D) is minimum at nitrogen and then increase continuously.

31. The electronegativity of the following elements increases in the order :
(A) C < N < Si < P (B) N < Si, < C < P
(C) Si < P < C < N (D) P < Si < N < C

32. The outer most electronic configuration of the most electronegative atom is :
(A) $ns^2 np^5$ (B) ns^2np^6
(C) ns^2np^4 (D) ns^2np^3

33. Which of the following is affected by the stable electronic configuration of an atom ?
(A) Electronegativity
(B) Ionisation enthalpy
(C) Electron gain enthalpy
Correct answer is :
(A) only electronegativity
(B) only ionisation enthalpy
(C) both electron gain enthalpy and ionisation enthalpy
(D) all of the above

34. Correct order of electronegativity of N, P, C and Si on Pauling scale is :
(A) N > P > C > Si (B) C > Si > N > P
(C) N < P < C < Si (D) N > C > P > Si

35. Which of the following is most electronegative element.
(A) Li (B) Mg
(C) H (D) Na

(SECTION-B)

36. Correct order of stability of Sn^{+2} and Sn^{+4} is
(A) $Sn^{+2} > Sn^{+4}$ (B) $Sn^{+2} = Sn^{+4}$
(C) $Sn^{+4} > Sn^{+2}$ (D) All are correct

37. Thallium shows different oxidation states because :
(A) of its high reactivity
(B) of inert pair of electrons
(C) of its amphoteric nature
(D) its is a transition metal

38. In which of the following elements, + 3 oxidation state is more stable than + 5 ?
(A) P (B) As (C) N (D) Bi

39. Which of the following is correct order of stability :
(A) $Tl^{3+} > Bi^{3+}$ (B) $PbO_2 > PbO$
(C) $Tl^{+1} < Tl^{+3}$ (D) $Sn^{2+} = Ge^{2+}$

40. The statement that is **not** correct for periodic classification of elements in Modern periodic table is :
(A) The properties of elements are periodic function of their atomic numbers.
(B) Non-metallic elements are less in number than metallic elements.
(C) For transition elements, the 3d-orbitals are filled with electrons after 3p-orbitals and before 4s-orbitals.
(D) The first ionisation enthalpies of elements generally increase with increase in atomic number as we go along a period.

41. Because of lanthanoid contraction, which of the following pairs of elements have nearly same atomic radii ? (Numbers in the parenthesis are atomic numbers).
(A) Zr (40) and Nb (41)
(B) Zr (40) and Hf (72)
(C) Zr (40) and Ta (73)
(D) Ti (22) and Zr (40)

42. Which of following does not exist :
(A) TlI_3 (B) PbF_4
(C) Both (A) and (B) (D) None of these

43. Identify the least stable ion amongst the following :
(A) Li^- (B) Be^- (C) B^- (D) C^-

44. Which of the following statement is incorrect ?
(A) The tendency to attract bonded pair of electron in case of hybrid orbitals follow the order : $sp > sp^2 > sp^3$
(B) Alkali metals generally have negative value of electron gain enthalpy.
(C) $Cs^+(g)$ releases more energy upon gain of an electron than Cl(g).
(D) The electronegativity values for 2p-series elements is less than that for 3p-series elements on account of small size and high inter electronic repulsions.

45. The incorrect statement among the following is :
(A) the first ionization energy of Al is less than first ionization energy of Mg.
(B) the second ionization energy of Mg is greater than second ionization energy of Na.
(C) the first ionization energy of Na is less than first ionization energy of Mg.
(D) the third ionization energy of Mg is greater than third ionization energy of Al.

46. Match list – I with list – II and select the correct answer using the codes given below –

List – I Ion	List – II Radius
(I) Li^+	(a) 216
(II) Na^+	(b) 195
(III) Br^-	(c) 60
(IV) I^-	(d) 95

Codes :

	I	II	III	IV
(A)	a	b	d	c
(B)	b	c	a	d
(C)	c	d	b	a
(D)	d	c	b	a

47. **A :** F is more electronegative than Cl.
R : F has high electron affinity than Cl.
(A) If both assertion and reason are true and the reason is the correct explanation of the assertion.
(B) If both assertion and reason are true but reason is not the correct explanation of the assertion.
(C) If assertion is true but reason is false.
(D) If assertion is false but reason is true.

48. **A :** Helium has the highest value of ionisation energy among all the elements known.
R : Helium has the highest value of electron affinity among all the elements known.
(A) If both assertion and reason are true and the reason is the correct explanation of the assertion.
(B) If both assertion and reason are true but reason is not the correct explanation of the assertion.
(C) If assertion is true but reason is false.
(D) If assertion is false but reason is true.

49. **A :** The atomic radii of calcium is smaller than sodium.
R : Calcium has a lower nuclear charge than sodium
(A) If both assertion and reason are true and the reason is the correct explanation of the assertion.
(B) If both assertion and reason are true but reason is not the correct explanation of the assertion.
(C) If assertion is true but reason is false.
(D) If assertion is false but reason is true.

50. **A :** First ionisation energy for nitrogen is lower than oxygen.
R : Across a period effective nuclear charge decreases.
(A) If both assertion and reason are true and the reason is the correct explanation of the assertion.
(B) If both assertion and reason are true but reason is not the correct explanation of the assertion.
(C) If assertion is true but reason is false.
(D) If assertion is false but reason is true.