

Date Planned : __ / __ / __	Daily Tutorial Sheet - 4	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level - 1	Exact Duration : _____

46. Which of the following elements never has an oxidation state +1? ▶
(A) F **(B)** Cl **(C)** Br **(D)** I
47. The fourth period of modern periodic table includes:
(A) 8 elements **(B)** 18 elements **(C)** 32 elements **(D)** unknown elements
48. Ionisation enthalpy is lowest in a period for: ▶
(A) halogen **(B)** noble gas
(C) alkali metal **(D)** alkaline earth metal
49. An element with high electronegativity has:
(A) low IE and high EA **(B)** low IE and low EA
(C) high IE and low EA **(D)** high IE and high EA
50. Which of the following elements is expected to have maximum electronegativity?
(A) Al **(B)** S **(C)** Si **(D)** P
51. The paramagnetic species among the following is: ▶
 $\text{Na}^+, \text{Zn}^{2+}, \text{Cu}^+, \text{Fe}^{3+}$
(A) Na^+ **(B)** Zn^{2+} **(C)** Cu^+ **(D)** Fe^{3+}
52. The diamagnetic species among the following is:
 $\text{Cu}^{2+}, \text{Cr}^{3+}, \text{Co}^{3+}, \text{Cd}^{2+}$
(A) Cu^{2+} **(B)** Cd^{2+} **(C)** Cr^{3+} **(D)** Co^{3+}
53. The correct decreasing order of electropositive character among the following elements is: ▶
Fe, Sc, Rb, Br, Te, F, Ca
(A) $\text{Fe} > \text{Sc} > \text{Rb} > \text{Br} > \text{Te} > \text{F} > \text{Ca}$ **(B)** $\text{Ca} > \text{Rb} > \text{Sc} > \text{Fe} > \text{Te} > \text{F} > \text{Br}$
(C) $\text{Rb} > \text{Ca} > \text{Sc} > \text{Fe} > \text{Br} > \text{Te} > \text{F}$ **(D)** $\text{Rb} > \text{Ca} > \text{Sc} > \text{Fe} > \text{Te} > \text{Br} > \text{F}$
54. If each orbital can take maximum of three electrons, the number of elements in the third period of the periodic table will be: ▶
(A) 12 **(B)** 6 **(C)** 8 **(D)** 24
55. Allred – Rochow's electronegativity depends upon ▶
(A) electron affinity **(B)** effective nuclear charge
(C) radius **(D)** (B) and (C) both
56. Which of the following transitions involves maximum amount of energy? ▶
(A) $\text{M}_{(\text{g})}^- \longrightarrow \text{M}_{(\text{g})}$ **(B)** $\text{M}_{(\text{g})} \longrightarrow \text{M}_{(\text{g})}^+$
(C) $\text{M}_{(\text{g})}^+ \longrightarrow \text{M}_{(\text{g})}^{2+}$ **(D)** $\text{M}_{(\text{g})}^{2+} \longrightarrow \text{M}_{(\text{g})}^{3+}$
57. IE_1 and IE_2 of Mg are 178 and 348 kcal mole⁻¹. The energy required for the reaction, $\text{Mg} \longrightarrow \text{Mg}^{2+}$ is: ▶
(A) +170 kcal **(B)** +526 kcal
(C) -170 kcal **(D)** -526 kcal

58. The IE_1 , IE_2 , IE_3 , IE_4 and IE_5 of an element are 7.1, 14.3, 34.5, 46.8, 162.eV respectively. The element is likely to be : ▶
- (A) Na (B) Si (C) F (D) Ca
59. Among N, C, Si and P, which has highest electronegativity :
- (A) P (B) Si (C) N (D) C
60. Which of the following have maximum electron affinity?
- (A) $1s^2 2s^2 2p^5$ (B) $1s^2 2s^2 2p^6$
- (C) $1s^2 2s^2 2p^6 3s^2 3p^5$ (D) $1s^2 2s^2 2p^6 3s^2 3p^6$