ELECTRON AFFINITY

1. The electron affinity values ($KJmol^{-1}$) of three halogens X,Y and Z are respectively -349, -333 and -325. Then X,Y and Z respectively are (M2003)

1) F_2, Cl_2 and Br_2 2) Cl_2, F_2 and Br_2 3) Cl_2, Br_2 and F_2 4) Br_2, Cl_2 and F_2

2. The formation of the oxide ion $O^{2-}_{(g)}$ requires first an exothermic and then an endothermic step as shown below: (AIEEE-2004)

$$O_{(g)} + e^- \rightarrow O^-_{(g)}; \Delta H = -142 kjmol^{-1}, O^-_{(g)} + e^- \rightarrow O^{2-}_{(g)}; \Delta H = 844 kjmol^{-1}.$$

This is because:

1) O^- ion has comparatively larger size than oxygen atom

2) Oxygen has high electron affinity

3) O^- ion will tend to resist the addition of another electron.

4) Oxygen is more electronegative

3. An element "X" has IP = 1681 kJ/mole and EA = -333 kJ/mole then its electro negativity is (AIIMS)

1) $\frac{1681+333}{544}$ 2) $\frac{1681+333}{129}$ 3) $\frac{1681+333}{5.6}$ 4) $\frac{1681+333}{2.8}$

4. If the E.N value of Nitrogen in the Pauling scale is 3.0, then the value in mulliken scale will be (BHU2003)

1) 11.2 2) 22.4 3) 8.4 4) 3.0

Hint-Mulliken EN value=2.8 X Pauling EN values

5. For Electron affinityof halogens, which of the following is correct? (AIIMS2004)

1) Br>F 2) F>Cl 3) F >I 4) Br>Cl

6. which of the following has highest Electron affinity? (BHU2005)

1) N 2) Cl 3) O 4) F

7. The correct order of electronegativity of the elements of halogen family is (PMT2008)

1) I > Br > F > C*l* 2) Br > I> C*l* >F 3) F > C*l* > Br > I 4) Cl > Br > I>F

8. The correct order of decreasing electronegativity of the elements,i-Be,ii-O,iii-N andiv-Mg (PMT2011)

1) ii> iii >i > iv 2) iii>iv> ii >i 3) i > ii > iii > iv 4) i > ii >iv>iii

9. Increasing order of the electronegativity of elements in the following (AFMC2010)

1) C, N, Si, P 2) N, Si, C, P 3) Si, P, C, N 4) P, Si, N, C

10. Which of the following is2nd most Electro negative element? (PMT2007)

1) S 2) Cl 3) O 4) F

KEY

1) 2 2)3 3) 1 4) 3 5)3 6) 2 7)3 8) 1 9)3 10) 3