

**Answer the following multiple choice questions on electronegativity.**

1. What is the electronic configuration of the least electronegative element?  
a)  $[\text{He}]2s^1$       b)  $[\text{Ne}]3s^2$       c)  $[\text{Xe}]6s^1$       d)  $[\text{Xe}]6s^2$
2. Which is the correct order of electronegativity of the following elements?  
a)  $\text{C} < \text{N} < \text{Si} < \text{P}$       b)  $\text{Si} < \text{P} < \text{C} < \text{N}$       c)  $\text{N} < \text{C} < \text{P} < \text{Si}$       d)  $\text{C} < \text{Si} < \text{N} < \text{P}$
3. Central atom of which of the following molecules has highest electronegativity?  
a)  $\text{SiF}_4$       b)  $\text{CF}_4$       c)  $\text{SiH}_4$       d)  $\text{CH}_4$
4. Electronegativity of noble gases may be estimated using-  
a) Pauling's scale      b) Mulliken scale      c) Allred-Rochow scale      d) All of these
- 5) On which factors does electronegativity vary?  
a) Oxidation state      b) Hybridisation of the atom      c) Ionisation energy      d) All of these
- 6) What is the electronegativity of bromine in Allred-Rochow scale?  
a) 2.75      b) 1.41      c) 1.96      d) 3.10
- 7) Calculate electronegativity of hydrogen from the following data:  
 $E_{\text{H-H}} = 458 \text{ kJ/mol}$        $E_{\text{F-F}} = 155 \text{ kJ/mol}$        $E_{\text{H-F}} = 565 \text{ kJ/mol}$        $\chi_{\text{P}}(\text{F}) = 4.0$   
a) 6.24      b) 2.24      c) 4.24      d) 2.00
- 8) How does electronegativity vary in group 11?  
a)  $\text{Cu} > \text{Au} > \text{Ag}$       b)  $\text{Cu} > \text{Ag} > \text{Au}$       c)  $\text{Au} > \text{Ag} > \text{Cu}$       d)  $\text{Ag} > \text{Cu} > \text{Au}$
- 9) Which acidity sequence cannot be explained using the trend of variation of electronegativity?  
a)  $\text{C}_2\text{H}_2 > \text{C}_2\text{H}_4 > \text{C}_2\text{H}_6$       b)  $\text{HF} > \text{NH}_3 > \text{H}_2\text{O}$   
c)  $\text{HClO}_2 < \text{HClO}_3 < \text{HClO}_4$       d)  $\text{HF} < \text{HCl} < \text{HBr} < \text{HI}$
- 10) Which of the following statement is false?  
a) Electronegativity is affected by d-level contraction as well as lanthanide contraction.  
b) Electronegativity of period 2 elements is much higher than those of period 3 elements.  
c) Electronegativity of f-block elements increase gradually from left to right along a period.  
d) Electronegativity of methyl group is higher than that of hydrogen.