**I YEAR CHEMISTRY IPE QUESTION PAPER – JUNE 2010**

## SECTION - A

I.   **Answer all the following :**                                        **10 × 2 = 20**

   1.   State Graham's law.

   2.   Give two uses of heavy water.

   3.   How many moles of glucose are present in 540gms of glucose ?

   4.   What is a diagonal relationship ? Write an example.

   5.   Give equations for the formation of caustic soda from NaCl.

   6.   What is the biological importance of $Mg^{+2}$ and $Ca^{+2}$ ions ?

   7.   Explain the Nalgonda defluoridation technique.

   8.   What is greenhouse effect ?

   9.   Name the functional group isomers of the molecular formula $C_3H_6O$

   10.  Give an example for the Wurtz's reaction.

### SECTION - B

II.   **Answer any six of the following :**                                **6 × 4 = 24**

   11.  State and explain Dalton's law of partial pressures.

   12.  Balance the equation in acidic medium by the ion – electron method.

$$Br^- + SO_4^{-2} \longrightarrow Br_2 + SO_2$$
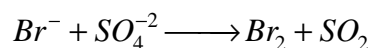
   13.  Describe the electrolytic method for the preparation of hydrogen peroxide.

   14.  Name any two alloys of aluminium and give their compositions.

   15.  Graphite is a conductor of electricity while diamond is not. Explain.

   16.  Explain the structures of $XeF_2$ and $XeF_4$

   17.  What is substitution reaction ? Write any two substitution reactions of benzene.

   18.  Explain Markownikoff's rule with a suitable example.

**SECTION - C**

**III.** **Answer any two of the following :** **2 × 8 = 16**

19. Mention quantum numbers. Explain the significance of various types of quantum numbers.

20. What is periodic property ? How do the following properties change in a group and period? Explain.

(a) Atomic radius

(b) Ionization potential

(c) Electro – negativity

21. Write the MOED's of :

a) $N_2$          b) $O_2$