DELHI PUBLIC SCHOOL, JAMMU

ASSIGNMENT FOR CYCLE TEST- II

SUBJECT – CHEMISTRY

CLASS - XI

Very short answer type

Q1. Write Kc for the given reaction I_2 (s) + $5F_2$ (g) $\leftrightarrow$ $2IF_5$ (g).

Q2. Why pure liquids and solids can be ignored while writing the equilibrium constant expression?

Q3. Give the Stock notation of $HAuCl_4$ and CuO.

Q4.What is syn gas and how it is prepared?

Q5.Why are alkali metals not found in nature?

Short answer type

Q6.What are the favourable conditions for the formation of HI with the help of Le-Chatelier principle?

Q7. Determine the ionisation constant of weak acid and define Ostwald's dilution law.

Q8. What are the applications of Oxidation number? Explain them.

Q9.Calculate the oxidation no of phosphorous in (i) HPO_3^{2-} (ii) PO_4^{3-}

Q10. Write chemical reactions to show the amphoteric nature of water.

Long answer type

Q11. Determine the hydrolysis constant, degree of hydrolysis and pH of solution of salt of weak acid and strong base.

Q12. A sample of pure PCl_5 was introduced into an evacuated vessel at 473K. After equilibrium was attained, concentration of PCl_5 was found to be $0.5 \times 10^{-1} molL^{-1}$. If value of Kc is 8.3×10^{-3}, what are the concentration of PCl_3 and Cl_2 at equilibrium?

Q13.Write the net ionic equation for the reaction of potassium dichromate (VI), $K_2Cr_2O_7$ with sodium sulphite, Na_2SO_3 , in an acid solution to give chromium (III) ion and the sulphate ion.

Q14. Predict the products of electrolysis in each of the following.

(i) An aqueous solution of $AgNO_3$ with silver electrodes.

(ii) An aqueous solution of $AgNO_3$ with platinum electrodes.

(iii) A dilute solution of H_2SO_4 with platinum electrodes.

Q15. Discuss briefly the properties and uses of different types of hydrides.