**Q.1 A sample of galena is contaminated with zinc blend. Name one chemical which can be used to**

 **Concentrated galena selectively by froth floatation method. [1]**

**Q.2 What is pyrometallurgy? Explain with one example. [1]**

**Q.3 Why is froth floatation method is selected for the concentration of sulphide ores?[1]**

**Q.4 Which of the two scraps zinc or iron would be preferred for the recovery of copper from the leached**

 **copper ore and why?**

**Q.5 Write a reaction which shows that all the carbon atoms in glucose are linked in a straight chain.[1]**

**Q.6 Explain the role of :**

 **(i) Cryolite in the electrolytic reduction of alumina.**

 **(ii) Carbon monoxide in the purification of nickel.[2]**

**Q.7 Describe the underlying principal of each of the following metal refining methods: [3]**

 **(i) Electrolytic refining of metals.**

 **(ii) Vapour phase refining of metals.**

 **(iii) Zone refining**

**Q.8 Describe the role of the following:[3]**

 **(i) Depresent in froth floatation process.**

 **(ii) Silica in the extraction of copper from pyrites ore.**

 **(iii)The extraction of Au by leaching with NaCN involves both oxidation and reduction. Justify**

 **giving equations.**

**Q.9 Explain what is meant by :**

 **(i) a peptide linkage (ii) a glycosidic linkage (iii)Pyranose structure of glucose. [3]**

**Q.10 Give reasons for the following-**

 **(i) On electrolysis in acidic solution amino acids migrate towards cathode, while in alkaline solution**

 **these migrate towards anode.**

 **(ii) The monoamino monocarboxylic acids have two pKa values.[2]**

**Q.11 (i) What structural feature is required for a carbohydrate to behave as reducing sugar?**

 **(ii) Give the significance of D &(+)-sign in the name D-(+)-glucose.**

 **(iii)What are the hydrolysis products of (i) maltose (ii) cellulose?[3]**

**Q.12(i) Write the formula of Zwitter ion for Glycine.**

 **(ii)What type of linkages hold together monomers in DNA?**

 **(iii)Glucose or Sucrose are soluble in water but cyclohexane &benzene are insoluble in water.**

 **Explain.[3]**

**Q.13 Define with example**

 **(a)Isoelectric point (b)Mutarotation (c)Denaturation of protiens.[3]**

**Q.14 (i) Name four bases present in DNA. (ii) Which of them is not present in RNA. [2]**

**Q.15 Differentiate between the following :**

 **(i) Secondary and tertiary structure of protein.**

 **(ii)α -Helix and β-pleated sheet structure of protein.**

 **(iii) Fibrous and globular proteins.[3]**

**Q.16(i)What is invert sugar?**

 **(ii)Give reactions with support cyclic structure of glucose.[3]**

**Q.17 What happens when glucose reacts with**

 **(a)HI (b) HNO3 (c)Br2 water [3]**

**Q.18(i) What deficiency diseases are caused due to lack of vitamins B1, B6, D and K in human diet?**

 **(ii) Why vitamin C cannot be stored in our body? [2]**

**Q.19 Describe the principal controlling each of the following processes**

 **(i)Preparation of cast iron from the pig iron.**

 **(ii)preparation of pure alumina from bauxite ore.**