

Answer any 2 questions from 1 to 3. Each question carries 1 score (2 x 1 = 2)

- 1) Some refining methods of metals are given below. Fill in the blanks suitably
 Lead-Liquation Mercury-..... 1
- 2) A highly concentrated aqueous solution of ammonia is called..... 1
- 3) Which functional group is present in ether? (-COOH, -O-R, -OH) 1

Answer any 2 questions from 4 to 6. Each question carries 2 scores (2x2=4)

- 4) A chemical reaction taking place in the blast furnace during the industrial production of iron is given below

$$\text{CaO} + \text{SiO}_2 \rightarrow \text{CaSiO}_3$$

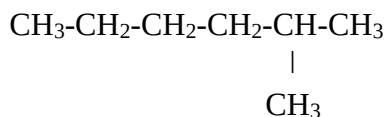
 Identify flux and gangue 2
- 5) Sulphuric acid is not used as a drying agent in the preparation of ammonia. Give reason? 2
- 6) a) Write down the IUPAC name of the compound $\text{CH}_3\text{-CH}_2\text{-OH}$ 1
 b) Write the structure of its functional isomer? 1

Answer any 2 questions from 7 to 9. Each question carries 3 scores (2x3 = 6)

- 7) Sulphuric acid is an important industrial chemical.
 a) Write the name of industrial preparation of sulphuric acid? 1
 b) Sulphuric acid is also formed by the direct dissolution of sulphur tri oxide in water. But this method is not adopted. Give reason? 2
- 8) a) Not all the minerals are ores, but all the ores are minerals. Do you agree with this statement. Justify your answer? 2
 b) Which is the main ore of iron? 1
- 9) Details about a saturated open chain organic compound is given below
 1) There are 3 carbon atoms in the main carbon chain
 2) There is a chloro group in the second carbon atom
 a) Write down the IUPAC name of this compound? 1
 b) Write down the structure of a possible position isomer of this compound? 2

Answer any 2 questions from 10 to 12. Each question carries 4 scores (2x4=8)

10) Structure of an organic compound is given below



Answer the following questions

- a) Number of carbon atoms in the largest chain b) Name of branch
 c) Position of branch d) IUPAC name 4
- 11) Alloy steels are prepared by adding other metals to steel.
 a) Which alloy steel is used for making heating coils? 1
 b) Which alloy steel is used for making permanent magnets? 1
 c) Even though nichrome and stainless steel contain the same components, they possess different properties. Give reason? 2
- 12) Two reversible reactions involving gaseous molecules are given below
 a) $\text{A} + 2\text{B} \rightleftharpoons 2\text{C} + \text{D}$
 b) $\text{P} + 2\text{Q} \rightleftharpoons \text{R} + \text{S}$
 How the rate of forward reaction get influenced when the pressure of the system is increased in both equilibrium system? 4