

**PART-I**

Questions from 1 to 3 carries 1 score each

A. Answer any Two questions from 1 to 3**(2 x 1 = 2)**

1. Identify the compound which contains a carbon – carbon double bond. (1)
(C₅H₁₂ , C₂H₂ , C₃H₆ , C₄H₁₀)
2. Find the relation and fill up suitably. (1)
Bauxite : Leaching ; Tin stone :
3. Which is used as a chemical fertiliser (1)
(Sodium chloride , Calcium carbonate , Ammonium Sulphate)

PART-II

Questions from 4 to 6 carry 2 scores each

B. Answer any Two questions from 4 to 6**(2 x 2 = 4)**

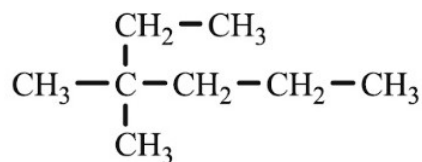
4. $H_2(g) + I_2(g) \rightleftharpoons 2 HI(g)$
 - (a) What is the total number of moles of reactants and products in the above reaction? (1)
 - (b) What is the effect of pressure on this reversible reaction? Explain. (1)
5. Differentiate between ‘roasting’ and ‘calcination’ (2)
6.
 - (i) CH₃ – CH₂ – CH₂ – CH₃
 - (ii) CH₃ – CH₂ – CH₂ – CH₂ – OH
 - (iii) CH₃ – CH₂ – O – CH₂ – CH₃
 - (iv) CH₃ – CH₂ – CH₃
 - (a) Identify the isomer pair in the given compounds. (1)
 - (b) Name the isomerism. (1)

PART-III

Questions from 7 to 9 carry 3 scores each

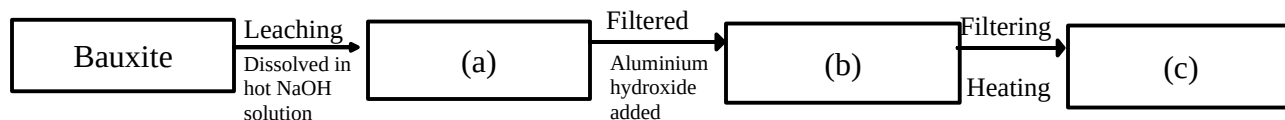
C. Answer any Two questions from 7 to 9**(2 x 3 = 6)**

7. The structure of hydrocarbon in given below:



- (a) How many C- atoms are there in the main chain? (1)
- (b) Identify the branch and its position number? (1)
- (c) Write the IUPAC name of this compound. (1)

8. a) Ammonia gas is collected by Downward displacement of air in laboratory. Why? (1)
 b) Complete the chemical equation given below and find the product obtained when ammonia is dissolved in water
 $\text{NH}_3 + \text{H}_2\text{O} \rightarrow \dots\dots\dots$ (1)
 c) When an Ammonia tanker leaks, water is sprayed to reduce its intensity. What is the reason for this? (1)
9. Complete the flow diagram, related to concentration of bauxite. Find (a), (b) and (c) (3)



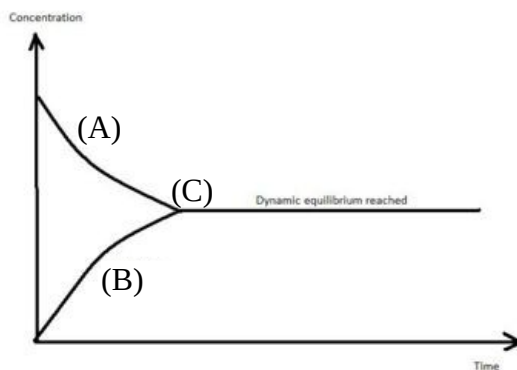
PART-IV

Questions from 10 to 12 carry 4 scores each

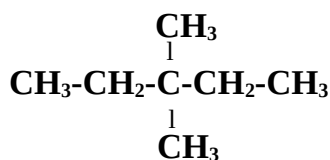
(2 x 4 = 8)

D. Answer any Two questions from 10 to 12

10. The graph for the reversible reaction, $\text{N}_2(\text{g}) + 3\text{H}_2(\text{g}) \rightleftharpoons 2\text{NH}_3(\text{g}) + \text{Heat}$ is given below.



- (a) Write the chemical equation associated A and B? (1)
 (b) Write two peculiarities of point C? (2)
11. (a) Draw structural formula of an organic compound having IUPAC name 2,3 – Dimethylhexane (1)
 (b) Write the molecular formula of this compound. (1)
 (c) Write IUPAC name of the structure given below. Is the given structure is chain isomer of 2,3 – Dimethylhexane? Why (2)



12. (a) Molten iron obtained from the blast furnace contains 4% carbon and other impurities what is this known as? (1)
 (b) Which alloy steel is used for making heating coil? Write its components. (2)
 (c) Some alloy steels contain the same components, then how do they possess different properties? (1)