

CHEMISTRY (XII) CHAPTER 13 (Carboxylic acids)

Short Questions:

1. What are fatty acids? How acid chlorides are made by them?
2. How carboxylic acid can be obtained from alkene?
3. Why do mostly carboxylic acids exist as dimers?
4. Differentiate between acidic and basic amino acids.
5. Write structural formulae of Phthalic acid and Malonic acid.
6. Prepare ethane from acetic acid by reduction.
7. Write reactions of acetic acid with:
 - i. HI/Red Phosphorus
 - ii. NH_3 , Heat
8. How carboxylic acids are prepared by the oxidative cleavage of alkenes?
9. How will you convert acetic acid into methane and acetic anhydride?
10. How will you convert acetic acid into acetamide?
11. What happens when following compounds are heated:
 - i. Sodium formate and Soda lime
 - ii. Ammonium acetate
12. What happens when following compounds are heated:
 - i. Calcium acetate
 - ii. Ammonium acetate
13. What is peptide bond? Write formula of a dipeptide.
14. Define neutral amino acids with example.
15. Write formulae of Glycine and Alanine.
16. How amino acid is prepared by Strecker's synthesis?
17. How carboxylic acids are converted into α -amino acids?
18. What is difference between essential and non-essential amino acids?
19. How acetic acid reacts with?
 - a. PCl_3
 - b. SOCl_2
20. Define Zwitter ion or internal salt?
21. What is meant by Glacial acetic acid?

Long Questions:

1. Complete the following reactions of acetic acid with:
 - a. SOCl_2
 - b. HI/P
 - c. Na_2CO_3
2. Define Zwitter ion. Discuss effect of acidic and basic medium on the dipolar ionic structure of amino acid.
3. Convert acetic acid into
 - i. Methane
 - ii. Acetyl chloride
4. Write a short note on acidic and basic character of amino acids.

CHAPTER 14 (Macromolecules)

Short Questions:

1. Justify by writing the structural formulas that amylose is condensation polymer of α -D Glucose but cellulose is polymer of β -D glucose.
2. Define enzymes. Write their two properties.
3. Discuss Saponification number.
4. Discuss Saponification number and give example.
5. Define Saponification and Iodine number.
6. Define Iodine number.
7. What are differences between DNA and RNA?
8. What is difference between fat and oil?
9. In what way fats and oils are different?
10. What are lipids? Give two physical properties.
11. Define polymerization. Explain the term degree of polymerization.
12. Define acid number. What is rancidity?
13. What is acid number?
14. Write the structure of starch.
15. Give classification of macromolecules.
16. What are carbohydrates? Why are they called so?
17. What are thermoplastic and thermosetting polymers?

- 18.**What are thermosetting polymers?
- 19.**What is difference between glucose and fructose?
- 20.**What is rancidity of fats and oils?
- 21.**Write structure of cholesterol.
- 22.**What are polymers? Give two examples.
- 23.**Define with example condensation polymerization.
- 24.**Give four properties of enzymes.
- 25.**Write a note on condensation polymer.
- 26.**Define iodine number and acid number.
- 27.**What is denaturation of proteins?
- 28.**Briefly describe the two factors which affect activity of enzymes.