



(Pages : 3)

C -1380

Reg. No. :

Name :



Sixth Semester B.Sc. Degree Examination, April 2017
First Degree Programme under CBCSS

CHEMISTRY

Core Course - X

CH 1641 : Organic Chemistry - II
(2013 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION - A

Answer **all** questions. Answer in **one** word to maximum **two** sentences.

Each question carries **one** mark :

1. Write the structures of Picric acid and resorcinol.
2. Predict the product when salicylaldehyde is treated with alkaline H_2O_2 and give its structure.
3. What are the reagents used in Clemenson reduction ?
4. Give the structure of benzoin.
5. What is glacial acetic acid ? Why is it so named ?
6. Name an acid which occurs in sour apples. Give its structure.
7. Draw the open chain structure of β -anomer of D-glucose.
8. Name any two α -amino acids. Give their structures.
9. What are essential amino acids ?
10. Define isoprene rule. (10×1=10 Marks)

SECTION - B

Short answer type. Answer **any 8** questions from the following.

Each question carries **two** marks :

11. What is isoelectric point ? What type of compounds exhibit isoelectric point ?
12. Outline the mechanism of Fries rearrangement.

P.T.O.



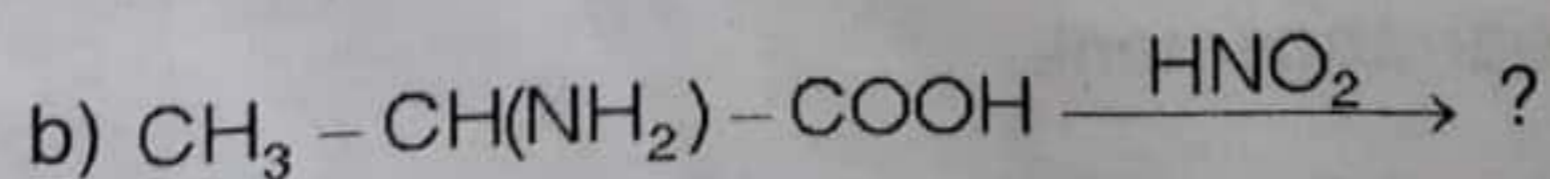
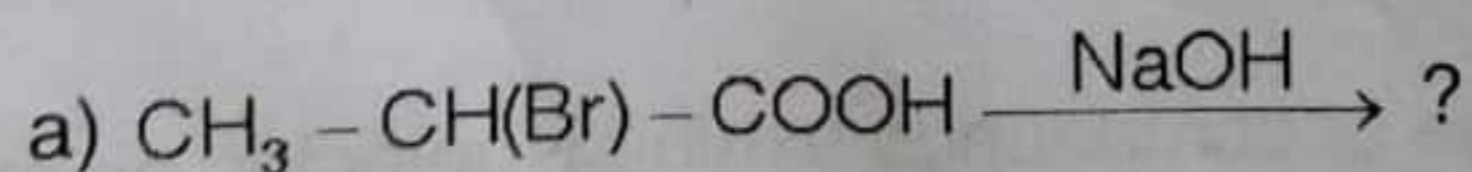
13. What is Meerwein-Ponndorf Verley reduction ? How is it carried out ?
14. Predict the product when acetaldehyde reacts with excess of ethyl alcohol in presence of dry HCl. Mention the importance of this reaction.
15. Arrange the following in the decreasing order of their acidity. Give reasons.
 $\text{CH}_3 - \text{COOH}$, $\text{H} - \text{COOH}$, $\text{Cl} - \text{CH}_2 - \text{COOH}$.
16. What is anthranilic acid ? What happens when it is distilled ?
17. Give the open chain and ring structure of sucrose.
18. What is mutarotation ? Explain.
19. Name an optically inactive amino acid. What are Switter ions ?
20. What is hippuric acid ? How is it produced ?
21. Give the structure of geraniol and codeine.
22. What are soaps ? Differentiate between soft and hard soap. (8×2=16 Marks)

SECTION - C

Short essay type. Answer any 6 questions from the following.

Each question carries four marks :

23. Write briefly on crown ethers.
24. What are the methods to distinguish between primary, secondary and tertiary alcohols ?
25. Outline the mechanism of Wittig and Cannizzaro reactions.
26. i) How is benzanilide prepared from benzophenone oxime ? Give its mechanism.
 ii) Suggest the mechanism of base catalysed aldol addition of acetaldehyde.
27. Outline the synthesis of citric acid. Give any two reactions.
28. i) How is Coumarin prepared from
 a) Salicylaldehyde b) Coumarinic acid ?
 ii) Predict the products





29. What is Kiliani synthesis ? Explain its importance.
30. What are the different classes of RNA ? Explain their function.
31. Name the different water soluble vitamins and the deficiency diseases.
Give the structure of any two.

(6×4=24 Marks)

SECTION - D

Answer **any 2** questions. **Each** question carries **15** marks.

32. i) How is the structure of quinine established ?
ii) Write a brief note on chemistry of vision.
33. Discuss the different levels of structure organisation of proteins.
34. Describe the structure elucidation of fructose.
35. Explain the mechanism of the following :
- i) Bayer - Villiger oxidation.
 - ii) Claisen condensation
 - iii) Reimer-Tiemann reaction
 - iv) Pinacol - pinacolone rearrangement
 - v) LiAlH_4 reductions.

(15×2=30 Marks)