

(Pages : 4)

J – 1844

Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree Examination, March 2020

First Degree Programme under CBCSS

Chemistry

Core Course X

CH 1641 : ORGANIC CHEMISTRY II

(2013-16 Admission)

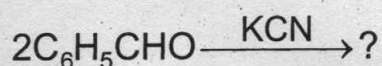
Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions. Answer in one word to maximum **two** sentences. Each question carries 1 mark.

1. Why alcohols have higher boiling points than the corresponding ethers.
2. Give any one method of preparation of picric acid.
3. What is the cause of acidity of carboxylic acid?
4. What is the product of the reaction?



5. What is the product obtained when HCHO is treated with Grignard reagent ( $\text{CH}_3\text{MgBr}$ ) followed by acid hydrolysis?
6. Write the zwitter ion form of alanine.

P.T.O.

7. What are the purines present in RNA?
8. What are epimers?
9. What is the product obtained when fructose is acetylated?
10. What is isoprene rule in the case of terpenes?

(10 × 1 = 10 Marks)

SECTION – B

Short answer type. Answer any **eight** questions from the following. Each question carries **2** marks.

11. How will you convert ethyl alcohol in to methyl alcohol?
12. Give the products formed in the following reaction and name the reaction  
$$2\text{CH}_3\text{CHO} \xrightarrow{\text{dil. alkali}}$$
13. Write down the reaction when acetaldehyde is heated with hydrazine.
14. Give any one method of preparation of citric acid.
15. How will you convert salicylaldehyde into coumarin?
16. What are anomers ? Give an example.
17. What are epimers? Give an example.
18. What are essential and non essential amino acids? Give one example each.
19. Explain the reaction of glucose with phenyl hydrazine.
20. What are essential oils?
21. What is Cannizzaro's reaction.
22. Explain why phenols are acidic in nature.

(8 × 2 = 16 Marks)



## SECTION – C

Short essay type. Answer any **six** questions from the following. Each question carries **4** marks.

23. What is pinacol – pinacolone rearrangement? Explain the mechanism.
24. Explain how will you convert.
  - (a) n-propyl alcohol into isopropyl alcohol.
  - (b) Acetic acid into propionic acid
  - (c) Propionic acid into acetic acid.
25. How will you make distinction between aliphatic and aromatic aldehydes? Explain with reactions.
26. What is aldol condensation? Explain the mechanism.
27. Explain the effects of substituents on acidity of aliphatic and aromatic carboxylic acids.
28. What is mutarotation. Explain the mechanism.
29. Differentiate between RNA and DNA.
30. Explain the chemistry of vision.
31. Explain :
  - (a) saponification value
  - (b) iodine value
  - (c) acid value in the case of oils and fats.

**(6 × 4 = 24 Marks)**

SECTION – D

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

32. Explain the mechanism of following reactions.
- (a) Benzoin condensation
  - (b) Wittig reaction
  - (c) Bayer-villiger oxidation
  - (d) Meerwein-Pondorof-Verley reduction.
33. Explain elaborately, primary, secondary, tertiary and quaternary structures of proteins.
34. Explain elaborately, the extraction and structural elucidation of conine.
35. (a) Explain the any two, preparation, properties and uses of
- (i) cinnamic acid
  - (ii) lactic acid
  - (iii) adipic acid
  - (iv) malic acid.
- (b) Explain elaborately, carbobenzoxy method of peptide synthesis.
- (2 × 15 = 30 Marks)**
-