

A 202

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2005.

Third Semester

Chemical Engineering

CH 236 — ORGANIC CHEMISTRY

(Common to Leather Technology, Textile Technology, Textile Chemistry)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How do glucose and fructose react with aqueous sodium amalgam?
2. What are epimers? Give an example.
3. How will you prepare acetic acid from methyl magnesium bromide?
4. What is meant by saponification reaction?
5. Compare the basicity of pyridine and pyrrole.
6. Write one method of preparation of pyridine.
7. Define chromophores and auxo chromes. Give one example each.
8. How is benzene diazonium chloride prepared?
9. What are amino acids? Give two examples.
10. Write the structure of chloroquine.

PART B — (5 × 16 = 80 marks)

11. (i) Give one general method for preparing five membered heterocyclic compounds. (6)
- (ii) What happens when
 - (1) Thiophene reacts with formaldehyde and hydrochloric acid.
 - (2) Pyrrole reacts with chloroform in the presence of alkali.
 - (3) Pyridine reacts with sodamide in the presence of liquid ammonia.
 - (4) Furan reacts with maleic anhydride.
 - (5) Indole reacts with acetyl chloride in the presence of stannic chloride. (10)

12. (a) (i) Prove the structure of D – glucose. (8)
(ii) Give an account of derivatives of cellulose. (8)

Or

- (b) (i) How will you convert D – Fructose into D – Glucose and vice-versa? (8)
(ii) What is muta rotation? Explain with one example. (5)
(iii) Write a note on molisch's test. (3)
13. (a) (i) Starting from a grignard reagent how will you obtain the following.
(1) A secondary alcohol
(2) A ketone
(3) An aldehyde
(4) An ester. (8)
- (ii) Define the following :
(1) Saponification number
(2) Iodine number
(3) Acid number
(4) Reichert – Meissl number. (8)

Or

- (b) (i) What are waxes? How are they classified? Give examples. (4)
(ii) Explain the following reactions of oils :
(1) Hardening of oils.
(2) Rancidity.
(3) Hydrolysis. (6)
- (iii) What happens when ethyl magnesium iodide reacts with
(1) Chloramine (2) Silicon tetra chloride
(3) Allyl bromide. (6)

14. (a) How will you synthesise the following?
(i) Eosin (ii) Alizarin
(iii) Malachite green (iv) Methyl orange. (16)

Or

- (b) (i) How is phenolphthalein prepared? Explain its use as an indicator in acid-base titrations. (6)
(ii) Describe the classification of dyes based on the method of application. (6)
(iii) What are triphenyl methane dyes? How is para-rosaniline prepared? (4)
15. (a) (i) Describe the synthesis of isopentaquine. (6)
(ii) How are sulphanilamides classified? Give examples. (6)
(iii) Give an account of classification of proteins according to composition. (4)

Or

- (b) (i) What are sulpha drugs? How is sulpha pyridine prepared? (6)
(ii) Briefly explain the colour tests for proteins. (6)
(iii) Discuss the primary structure of proteins. (4)
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