

H 1150

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2006.

Second Semester

Fashion Technology

CH 236 – ORGANIC CHEMISTRY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are carbohydrates? Give one example each for aldose and ketose.
2. Write the reaction of glucose with concentrated nitric acid.
3. How will you prepare acetic acid using methyl magnesium iodide?
4. What are waxes? Give their general formula.
5. Pyrrole shows aromatic character. Why?
6. How does furan react with acetic anhydride?
7. What are chromophores and auxochromes? Give examples.
8. Write a note on direct dyes.
9. What is denaturation? Give one method of denaturation of proteins.
10. Define isoelectric point.

PART B --- (5 × 16 = 80 marks)

11. (i) Give the general method of preparing five membered heterocyclic compounds from 1,4-diketones. (6)
- (ii) What happens when
- (1) a mixture of C_2H_2 and HCN passes through a red hot tube.
 - (2) Indole reacts with chloroform in the presence of alkali.
 - (3) Thiophene reacts with HCHO and HCl.
 - (4) Pyrrole treated with CH_3ONa and CH_2I_2 .
 - (5) a mixture of C_2H_2 and NH_3 passes through a red hot tube. (10)

12. (a) (i) Enumerate the reactions that lead to the open chain structure of glucose. (10)
- (ii) Explain mutarotation. (6)

Or

- (b) (i) Compare the properties of cellulose and starch. (6)
- (ii) Describe the preparation and uses of chemical derivatives of cellulose. (10)
13. (a) (i) Starting with CH_3MgBr how will you prepare the following :
- (1) ethyl alcohol,
 - (2) tertiary butyl alcohol,
 - (3) 2-butanol and
 - (4) acetone. (8)
- (ii) Define the following terms :
- (1) saponification number,
 - (2) iodine number,
 - (3) acid number and
 - (4) reichertmeissl number. (8)

Or

- (b) (i) Describe the preparation and properties of organo silicon compounds. (8)
- (ii) Write notes on rancidity, hydrogenolysis, drying of oils and hardening of oils. (8)

14. (a) Give the preparation of the following :

- (i) methyl orange,
(ii) malachite green,
(iii) eosin and
(iv) congo red. (16)

Or

- (b) (i) What are anthraquinone dyes? Describe the preparation of alizarine? (8)
- (ii) How are the dyes classified according to the method of application? (8)

15. (a) (i) Describe the classification of proteins according to their composition. (8)
- (ii) How is isopentaquine synthesized? (8)

Or

- (b) (i) Write any four colour tests of proteins. (8)
- (ii) Describe the synthesis of
- (1) sulphanilamide and
(2) sulphopyridine. (8)