B 2117

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2007.

Second Semester

Fashion Technology

CH 236 — ORGANIC CHEMISTRY

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define monosaccharides and disaccharides. Give examples.

2. How is mercerised cotton prepared?

3. What are waxes? Give any two examples.

4. How are tertiary alcohols prepared using Grignard reagents?

5. Give the resonance structures of furan.

6. Write a note on Mannich reaction.

7. Define direct dyes. Give one example.

8. How is benzene diazonium chloride prepared?

9. What is meant by Zwitter ion?

10. Write the structure of isopentaquine.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Describe Kiliani-Fischer cyanohydrin synthesis with a suitable example. (8)

(ii) Write a note on the derivatives of cellulose. (8)

Or

(b) (i) How does glucose react with the following

(1) Bromine water

(2) Tollen's reagent

(3) Phenyl hydrazine

(4) Sodium amalgam and water? (8)

(ii) Describe the main chemical properties and uses of starch. (8)

12. (a) (i) Define saponification number and iodine number. How is saponification number determined? (8)

(ii) Explain the following :

(1) Rancidity

(2) Drying of oils. (8)

Or

(b) (i) How are the following prepared from Grignard reagents?

(1) a primary alcohol

(2) a ketone

(3) an acid

(4) an ester. (8)

(ii) Write the reactions of methyl magnesium iodide with the following :

(1) Allyl bromide

(2) Propyne

(3) Acetaldehyde

(4) Acetyl chloride. (8)

13. (a) (i) What happens when

(1) a mixture of acetylene and hydrogen sulphide passed through a tube containing aluminium oxide at 400°C

(2) Pyrrole reacts with sulphuryl chloride in ether at 0°C

(3) Furan reacts with hydrogen in the presence of nickel

(4) Indole reacts with chloroform in the presence of alkali. (8)

(ii) Write Fischer Indole synthesis. Discuss the reactions of indole. (8)

Or

(b) (i) Explain the aromatic character of pyrrole and pyridine. (8)

(ii) Describe one method each for the preparation of furan, thiophene, pyrrole and pyridine. (8)

14. (a) (i) Name and give the structure of

(1) an azo dye

(2) triphenyl methane dye

(3) a vat dye

(4) phenolphthalein dye. (8)

(ii) Give the synthesis and uses of alizarin. (8)

Or

(b) How will you synthesise the following

(i) Methyl orange

(ii) Malachite green

(iii) Eosin

(iv) Indigo. (16)

15. (a) (i) How are proteins classified according to composition? (8)

(ii) What are sulpha drugs? Describe the synthesis of

(1) Sulphanilamide

(2) Sulpha pyridine. (8)

Or

(b) (i) Discuss the structure of proteins. (8)

(ii) How is chloroquin synthesised? Give its pharmacological properties. (8)