

J 1098

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

Third Semester

Chemical Engineering

CH 236 — ORGANIC CHEMISTRY

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

Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

How does sucrose react with acetic anhydride?

What are the uses of starch?

What is the role of diethyl ether in the preparation of Grignard reagent?

How does Methyl Magnesium Iodide react with a ketone?

What is acid number?

In what way fats and oils are different from waxes?

How would you prepare pyrrole?

Give the resonance forms of furan.

What is a dye?

What is meant by denaturation of protein?

PART B — (5 × 16 = 80 marks)

11. (i) Explain the method of preparation of cellulose. Give the property of any two chemical derivatives of cellulose. (8)
- (ii) How is fructose obtained? How does it react with
- (1) Na/C₂H₅OH
 - (2) Hydrazine
 - (3) Con. HNO₃
 - (4) Phenyl Hydrazine. (8)
12. (a) (i) How are the following synthesised from grignard reagent?
- (1) A primary alcohol
 - (2) A secondary alcohol
 - (3) A tertiary alcohol. (9)
- (ii) Write an account on organosilicon compounds. (7)
- Or
- (b) (i) Define : Saponification number and Iodine number. In what way these have proved to be useful in the analysis of oils and fats. (8)
- (ii) Discuss the following as applied to oils and fats.
- (1) Hydrolysis
 - (2) Addition of Halogens. (8)
13. (a) (i) Give the synthesis of furan and pyrrole. (8)
- (ii) Predict the product a reaction with pyrrole of the following reagent
- (1) acetic anhydride at +250°C
 - (2) SO₃ in pyridine
 - (3) Benzene diazonium chloride
 - (4) Br₂/alcohol. (8)

Or

- (i) Describe any four important properties of
- (1) Thiophene
 - (2) Furan.
- (8)

- (ii) Write an account on :
- (1) Sulpha pyridine
 - (2) Coramine
 - (3) Picolines
 - (4) 2-vinyl pyridine.
- (8)

(i) How will you prepare methyl orange and congo red? (8)

(ii) Give the synthesis of Alizarin from anthraquinone. (8)

Or

- (i) Explain the following with reference to proteins.
- (1) Isoelectric point
 - (2) Zwitter ion.
- (8)

(ii) What are proteins? Give any three colour reactions of proteins. (8)

(i) Describe any four general properties of proteins. (8)

(ii) Write an account on sulpha pyridine. (8)

Or

(i) How sulphanilamide is synthesised? (8)

(ii) Write briefly about isopentaquine and pentaquine. (8)