

- (c) Write the mechanism of Claisen condensation. 2
6. (a) What do you mean by isoelectric point ? Explain, why different  $\alpha$ -amino acids have different iso-electric points. 2
- (b) Write a brief note on solid phase peptide synthesis. 2
- (c) Explain peptide bond. 1
7. (a) What is chain-growth polymerization ? Give two examples of such polymers. 2
- (b) Explain Zeigler-Natta polymerization with mechanism. Also give its advantages. 2
- (c) What are epoxy resins ? Give their preparation. 1

B-5254

4

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5254

### B. Sc. EXAMINATION

(For Batch 2011 & Onwards)

(Sixth Semester)

CHEMISTRY

Paper-XX

CH-306

Organic Chemistry

Time : Three Hours

Maximum Marks : 27

**Note :** Attempt Five questions in all, selecting two questions from each Section. Question No. 1 is compulsory.

1. (a) Out of alcohols and thioalcohols, which are stronger acids and why ?
- (b) Why are 5-membered heterocyclic compounds more reactive towards electrophilic substitution reactions than benzene ?

(5-29/24)B-5254

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- (c) Compare the aromatic character of pyrrole, thiophene and furan giving reasons. 2
- (d) Pyridine is more basic than pyrrole, explain. 2
- (e) Explain, why  $\alpha$ -hydrogens are acidic in nature. 1
- (f) Why amino acids are called amphoteric compounds ? 1
- (g) What do you mean by primary and secondary structure of proteins ?  $7 \times 1 = 7$

### Section A

- 2. (a) Define sulphur ylides and give example. 1
- (b) Convert benzene sulphononic acid into benzyl amine. 2
- (c) Write one method of synthesis and uses of sulphaguanidine. 2
- 3. (a) Describe Bischler-Napieralski synthesis of isoquinoline along with its mechanism. 2

B-5254

2

- (b) Give two examples of electrophillic reactions of quinoline where substitution takes place at 5 and 8-positions and why ? 2
- (c) What happens when Indole is sulphonated with  $\text{SO}_3$  ? 1
- 4. (a) Explain, why electrophillic substitution in pyridine takes place at position-3 and nucleophilic substitution at position-2 ? 2

- (b) Explain aromatic character of pyrrole on the basis of MO theory. 2
- (c) Give one method of preparation of Furan. 1

### Section B

- 5. (a) What are enolates ? Give two examples along with their structures. 2
- (b) Out of enolate anion formed from ethyl acetate and diethyl malonate which is more stable and why ? 1

(5-29/25)B-5254

3

P.T.O.