

Organic Chemistry
(Common For B.Sc. Biotech Industrial Microbiology Semester-VI)

Time Allowed : Three Hours

Maximum Marks : 35

Note :- Attempt two questions each from Section A and B. Section C is compulsory. All questions carry equal marks.

Section - A

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| 1. | (a) | Explain Gromatic nature of furan and pyrrole. | 3 |
| | (b) | Give the preparations of thiophene. | 4 |
| 2. | (a) | How does pyrrole undergo electrophilic substitution reactions ? Explain | 3 |
| | (b) | Outline the nucleophilic substitution and electrophilic substitution reactions of pyridine. | 4 |
| 3. | (a) | How will you synthesise isoquinoline ? Give reaction sequences. | 3 |
| | (b) | Outline the electrophilic substitution reactions in indole. | 4 |

Section-B

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|----|-----|--|---|
| 4. | (a) | Write a note on polyurethanes. | 3 |
| | (b) | How will you acylate enamines ? Give reactions | 4 |
| 5. | (a) | How will you convert glucose to mannose ? | 3 |
| | (b) | How will you lengthen the chain length in aldoses ? Give reaction. | 4 |
| 6. | (a) | Explain the structure of deoxyribose. | 4 |
| | (b) | Write note on iso-electric point. | 3 |
| 7. | | Explain in detail the structure of proteins. | 7 |
| 8. | | How will you determine the structure of a peptide ? Explain in detail. | 7 |

Section-C

9. Do all the parts in short :
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| (a) | What is mutarotation ? |
| (b) | Explain Electrophoresis. |
| (c) | Give the structure of osazone. |
| (d) | Give an example of urea formaldehyde resins. |
| (e) | Give two examples of aldoses and ketoses in each case. |
| (f) | Why pyridine is more basic than pyrrole ? |
| (g) | Give brief account of acidic nature of α -h |

1×7=7