

ORGANIC CHEMISTRY - II

(Common for B.Sc. Bio Tech., Industrial Microbiology)

Time : Three Hours]

[Maximum Marks : 35

Note : Attempt *any* questions each from Section A and B. Section C is compulsory.

Section - A

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|----|-----|--|---|
| 1. | (a) | Explain the aromatic nature of Pyridine and Pyrrole. | 3 |
| | (b) | Give the preparations of Furan. | 4 |
| 2. | (a) | How does Pyrrole undergo electrophilic substitution reactions ? Explain. | 3 |
| | (b) | Give the substitution reactions of Pyridine. | 4 |
| 3. | (a) | How will you synthesise Quinoline ? Give reaction sequences. | 3 |
| | (b) | Give the chemical reaction of Indole. | 4 |
| | (b) | How will you alkylate Enamine ? Give reactions. | 4 |

Section - B

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|----|-----|--|---|
| 5. | (a) | How will you interconvert Glucose and Fructose ? | 3 |
| | (b) | How will you shorten the chain length of an aldose ? | 4 |
| 6. | (a) | Explain the structure of Ribose. | 4 |
| | (b) | Write a note on Mutarotation. | 3 |
| 7. | | Explain the structure of Proteins. | 7 |
| 8. | | How will you prepare α -amino acids ? Give their reactions. | 7 |

Section - C

(Compulsory Question)

9. Do all parts :
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| (a) | What are Threoisomers ? Give <i>one</i> example. | |
| (b) | Explain Electrophoresis. | |
| (c) | Why α -H in Diethyl malonate is acidic ? | |
| (d) | Write the cyclic structure of D(+) glucose. | |
| (e) | Give the structure of Osazone. | |
| (f) | Give <i>one</i> example of Urea formaldehyde resins. | |
| (g) | What are Peptide bonds ? Give <i>one</i> example. | |

(1×7=7)