

Roll No.

Total Pages : 4

702/MH

C-2050

ORGANIC CHEMISTRY

Paper-II

Semester - VI

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

Time Allowed : 2 Hours]

[Maximum Marks : 26

Note : Attempt any four questions. All question carry equal marks.

1. (i) Arrange furan, thiophene and pyrrole in decreasing order of reactivity in electrophilic substitution. Give reasons ?
- (ii) Explain the mechanism of nucleophilic substitution in pyridine derivatives.

2. (i) Discuss Fischer indole synthesis.
- (ii) Discuss electrophilic substitution reactions of isoquinoline
3. Write a note on the following
 - (i) Condensation polymerization with example.
 - (ii) Natural and synthetic rubber.
4. (i) Discuss Claisen condensation with example.
- (ii) Discuss alkylation and acylation in enamines.
5. (i) Discuss Killiani Fischer Synthesis for carbohydrates.
- (ii) Explain Mutarotation and give its mechanism.
6. Discuss the following with suitable example
 - (i) Cyclic structure of D(+) glucose
 - (ii) Disaccharides and their classification

7. (i) What do you mean by Zwitter ion and explain its physical and chemical properties ?

(ii) Discuss renaturation of proteins

8. (i) Define protein and discuss its classification and biological importance.

(ii) How will you differentiate between ribonucleosides and ribonucleotides.

9. Attempt all parts :

(i) Compare basicity of pyridine, piperidine and pyrrole ?

(ii) Write monomer and polymerization reaction for synthetic rubber ?

(iii) What do you mean by an active methylene group ? Give example of two molecules having such groups ?

(iv) What are reducing and non-reducing sugars ?

(v) Draw the double helix structure of DNA ?