

ORGANIC CHEMISTRY

(Common for B.Sc., Biotech and B.Sc. Industrial Microbiology)

Paper-II : Semester-VI

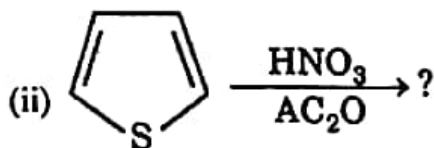
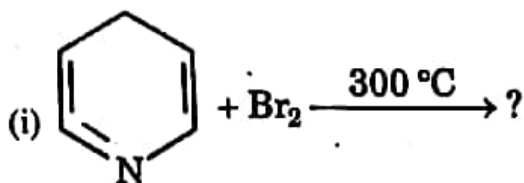
Time Allowed : Three Hours

Maximum Marks : 35

Note : The candidates are required to attempt two questions each from Section A and B carrying 7 marks each and the entire Section C consisting of 7 short answer type questions carrying 2 marks each.

SECTION-A

1. (a) Compare the basicity of Pyridine, piperidine and pyrrole.
(b) Complete the following reactions giving mechanism :



3,4

2. (a) Outline the mechanism of SKraup synthesis.
(b) Complete the following reactions giving mechanism :



3,4

3. What is Polymerization ? Explain :

(i) Ionic Vinyl Polymerization.

(ii) Condensation Polymerization.

3½×2

4. Write short notes on the following :

(a) Acylation of enamine; indicating the advantages of this method.

(b) Claisen condensation.

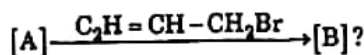
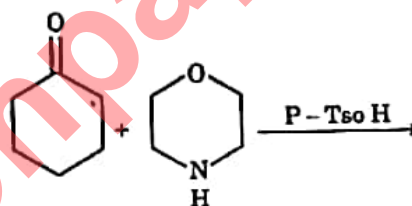
3½×2

SECTION-B

5. (a) What are the limitations of Open chain structure of D(+) glucose ? How have these been removed by cyclic structure ?
- (b) Write short notes on Epimerization 3, 4
- (c) Mutarotation.
6. (a) Discuss briefly the structure of Starch and Cellulose. Give its uses to mankind. 4,3
- (b) What does Cane sugar yield on hydrolysis ? Draw the structure of product. 4,3
7. (a) What are Amino acids ? Explain acidic as well as basic character of amino acids. 4,3
- (b) Write short note on Electrophoresis.
8. Write short notes on the following :
- (a) End group analysis 3½×2
- (b) Stereochemistry of Aminoacids.

SECTION-C

9. (i) Complete the following reactions. What are A + B



- (ii) Out of Furan, thiophene and pyrrole which one is most aromatic and why ?
- (iii) What are Erythrose and Threose sugar ? Give one example.
- (iv) What is Urea formaldehyde resin ? Give its importance.
- (v) Draw the structure of products obtained by acid hydrolysis of Sucrose.
- (vi) What is the difference between DNA and RNA ?
- (vii) In helical structure of DNA Adenine and Thymine are linked by how many bonds ? 1×7=7