

B.Sc. CBCS Pattern Semester-IV  
**USCCHT08 - Chemistry Paper-II : Organic Chemistry**

P. Pages : 2

Time : Three Hours



**GUG/W/23/12001**

Max. Marks : 50

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1. a) How will you separate primary, secondary and tertiary amines by Heisenberg's method? 5  
b) Explain stability and preparation of benzene diazonium chloride. 5

**OR**

- c) Give the preparation and uses of picric acid. 2.5  
d) Explain amines as a phase transfer catalyst. 2.5  
e) Discuss Hoffman Bromamide Reaction. 2.5  
f) Discuss stability of Benzene diazonium chloride. 2.5
2. a) Explain the structure of pyridine with molecular orbital diagram. 5  
b) What are organometallic compounds? Discuss reaction mechanism of Woodward hydroxylation? 5

**OR**

- c) Explain the Skraup synthesis of preparation of quinoline. 2.5  
d) Compare basicity of pyridine and pyrrole. 2.5  
e) Write a note on Sulphur ylides 2.5  
f) Discuss Prevost hydroxylation 2.5
3. a) What are proteins? Give classification of proteins. Explain peptide linkage in proteins. 5  
b) Discuss principle and calculation involved in estimation of Sulphur Carius method. 5  
In the estimation of Sulphur by Carius method.  
0.2134g of substance gave 0.5876 g BaSO<sub>4</sub>. Calculate the % of S in the compound  
[Ba = 137, S = 32, O = 16]

**OR**

- c) Explain electrophoresis in amino acid. 2.5  
d) Write a note on Isoelectric point. 2.5  
e) Give the principle and calculation involved in the estimation of carbon. 2.5  
f) Write note on Gabriel phthalimide synthesis. 2.5

4. a) Explain the Witt's theory of colour and constitution of Dyes. 5  
b) What is polysaccharides? Explain the open chain structure of Glucose. 5

**OR**

- c) Draw structure of Dettol and give some uses of Dettol. 2.5  
d) Discuss the synthesis and uses of methyl orange. 2.5  
e) Discuss the qualities of ideal drug. 2.5  
f) What are carbohydrates? Give its classification? 2.5
5. Attempt **any ten**. 1x10  
=10
- i) What is reductive amination of aldehyde?  
ii) What is coupling reaction?  
iii) What is the effect of electron releasing groups on basicity of amines?  
iv) What are LDA?  
v) Draw molecular orbital picture of thiophene.  
vi) Define Umpolung.  
vii) What is ninhydrin test.  
viii) Explain the term Empirical & molecular formula.  
ix) What is  $\alpha$ - amino acid.  
x) Draw structure of cellulose.  
xi) Write the structure of phenolphthalein.  
xii) What are Vitamins?

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