

M.Sc. - II (Chemistry) (Old + C.B.C.S. Pattern) Sem-IV  
**MSc2433B / PSCHT15.2 - Organic Chemistry Special-II**

P. Pages : 2

Time : Three Hours



**GUG/W/19/11456**

Max. Marks : 80

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1. a) Write a note on Baker's yeast catalyzed reaction and application of enzyme in food and drug industry. **8**
- b) Explain the following. **8**
- i) Structure and biological function of Lipoic acid.
- ii) Enzyme mechanism for Lysozyme.

**OR**

- c) Write a note on pyridoxal phosphate. **4**
- d) Explain acid-base catalysis. **4**
- e) Discuss the use of Enzyme as a target for drug design. **4**
- f) Explain Extraction and purification of enzyme in detail. **4**

2. a) How will you Synthesised isoquinoline? Give two electrophilic and two nucleophilic substitution reactions on isoquinoline nucleus. **8**
- b) Distinguish between pyridazine and pyrazine on the basis of structure and their chemical properties. **8**

**OR**

- c) How is thiazole prepared? Discuss electrophilic substitution of thiazole. **4**
- d) Discuss structural and chemical properties of pyrimidines. **4**
- e) Write short note on ring cleavages. **4**
- f) Discuss the role of indole ring in biology. **4**

3. a) Discuss purines and pyrimidine bases of nucleic acid and their preparation. **8**
- b) Define lipid. Which are the three clauses of lipid found in membrane? Explain mosaic model of membrane. **8**

**OR**

- c) How will you synthesized vitamin E? Determine its structure. **4**
- d) Give structure and function of m-RNA and t-RNA. **4**
- c) Write note on  $\beta$ -oxidation of fatty acid. **4**
- f) Discuss biosynthesis of vitamin H. **4**

4. a) What are dyes? Discuss direct dying, vat dying and disperse dyeing with suitable examples. 8
- b) How will you classify polymers? Explain Zeigler-Natta polymerization with mechanism. 8

**OR**

- c) Explain antibacterial and antifungal drugs. 4
- d) Write the synthesis and application of ciprofloxacin. 4
- e) Write a note on methylene blue. 4
- f) Explain co-ordination and Co-polymerization. 4
5. a) Explain the term Co-enzyme. 2
- b) Discuss catalytic power of enzyme. 2
- c) Write synthesis of benzofuran. 2
- d) Write structure of isothiazole. 2
- e) Give functions of triglycerides. 2
- f) Write note on DNA replication. 2
- g) How will you synthesis indigo. 2
- h) Give application of Benzocaine. 2

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