M.Sc. (Chemistry) (CBCS Pattern) Fourth Semester CBCS

PSCHT15.2 - Special Paper-II - Organic Chemistry-II

P. Pages : 2 **GUG/W/18/11456**

Time : Three Hours * 3 5 4 2 * Max. Marks : 80

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1. a) Write a note on Baker Yeast catalysed reaction and application of Enzymes in food and drug industry. **8**

b) Explain following terms: **8**
i) Transition state theory ii) Acid-base catalysis

OR

c) Explain extraction and purification of enzyme in detail. **4**

d) Discuss the mechanism of lysozyme catalyzed rearrangement. **4**

e) Discuss structure and biological function of Co-enzyme A. **4**

f) Discuss the use of enzyme as a target for drug design. **4**

2. a) How is indole synthesized? Discuss its basic character. Give two electrophilic substitution reactions of Indole. **8**

b) Distinguish between pyridazine and pyrazine's on the basis of structure and their chemical properties. **8**

OR

c) Give two methods of synthesis of isoxazoles. **4**

d) How is thiazole prepared? Discuss electrophilic substitution of thiazole. **4**

e) Give the synthesis of Quinolines. **4**

f) Write synthesis and electrophilic substitution reaction in pyrimidines. **4**

3. a) Define lipid which are the three classes of lipid found in membrane? Explain mosaic model of membrane structure. **8**

b) Write the structure and function of m-RNA, t-RNA and r-RNA. **8**

OR

c) How will you synthesized Vitamin - E? Determine its structure. **4**

d) Write a note on β -oxidation of fatty acids. **4**

e) Write down biosynthesis of vitamin -A. **4**

f) Discuss the arrangements of nucleotides in nucleic acid. **4**

4. a) Write short notes on: **8**
i) Alizarin ii) Fluorescein

b) How will you classify polymers? Explain Ziegler-Natta Polymerization with mechanism. **8**

OR

c) Write synthesis and uses of cyanine green dye. **4**

d) Write the classification of drug? Explain applications of methyldopa and ciprofloxacin. **4**

e) Explain co-ordination and Co-polymerization. **4**

f) Write synthesis and chemical properties of indigo dye and cosin. **4**

5. a) Define distortion. **2**

b) Discuss structure of pyridoxal pherphate. **2**

c) Write one synthesis of benzofuran. **2**

d) Write chemical properties and uses of pyrazines. **2**

e) Write function of tringlycerols. **2**

f) What is Vitamin? Write application of Vitamin H. **2**

g) Define syndiotactic polymer with example. **2**

h) Explain serendipity and drug development. **2**

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