

M.Sc. - II (Chemistry) (CBCS Pattern) Semester-IV
PSCHT15.2 - Organic Chemistry Special-II

P. Pages : 2

Time : Three Hours



GUG/W/24/11456

Max. Marks : 80

Note : All questions are compulsory & carry equal marks.

1. a) Explain the reaction mechanism catalysed by Carboxypeptidase A. 8
- b) Explain the following: 8
- 1) Baker's Yeast catalyzed reaction
- 2) Application of enzyme in drug chemistry.
- OR**
- c) Describe biological function of coenzyme A. 4
- d) Explain role of NADP^+ in biological system. 4
- e) Explain orientation and steric effect in enzyme action. 4
- f) Explain the following terms: 4
- 1) Catalytic Power of enzyme.
- 2) Co-factor
2. a) How is indole synthesized? Discuss the basic character. Give two electrophilic substitution reaction of Indole. 8
- b) Write the synthesis of: 8
- 1) Isothiazole
- 2) Pyridazines
- OR**
- c) Explain synthesis of pyrazole. 4
- d) Give the synthesis of Quinolines. 4
- e) Discuss the synthesis of pyrazines. 4
- f) Discuss electrophilic substitution of imidazole. 4
3. a) Discuss structure and function of mRNA, rRNA & t-RNA. 8
- b) Discuss Biosynthesis of vitamin A. 8

OR

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| c) | Explain DNA replication and heredity. | 4 |
| d) | Write a short note on lipid metabolism. | 4 |
| e) | Explain β -oxidation of fatty acids. | 4 |
| f) | Discuss synthesis of vitamin E. | 4 |
| 4. | a) Explain the following: | 8 |
| | 1) Polymerization in homogeneous and heterogeneous system. | |
| | 2) Stereo regulated polymers. | |
| | b) Explain synthesis of | 8 |
| | 1) Methyl dopa | |
| | 2) Ciprofloxacin | |

OR

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| c) | Give synthesis and uses of Alizarin. | 4 |
| d) | Write a short note on drug development. | 4 |
| e) | Explain Ziegler – Natta polymerization with mechanism. | 4 |
| f) | Write a short note on Rhodomines. | 4 |
| 5. | a) Give classification of enzyme. | 2 |
| | b) Define prosthetic groups. | 2 |
| | c) Write one synthesis of benzofuran. | 2 |
| | d) What are azoles, write structured oxazole. | 2 |
| | e) What are triglycerols? | 2 |
| | f) Write structure of vitamin H. | 2 |
| | g) What are dyes? Write structure of cyamine dye. | 2 |
| | h) What are antibacterial and antifungal drugs. | 2 |
