

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

P. Pages : 2

Time : Three Hours



GUG/S/23/11456

Max. Marks : 80

Notes : 1. All questions are compulsory and carry equal marks.

1. a) What do you mean by enzyme? Give the properties and applications of enzymes. **8**
- b) Explain the following terms. **8**
- i) Apoenzyme
 - ii) Prosthetic group
 - iii) Orientation
 - iv) Steric effect.

OR

- c) Give the mechanism of Koshland's induced fit hypothesis. **4**
- d) Explain the mechanism of carboxypeptidase A. **4**
- e) Discuss the biological functions of following. **4**
- i) Thiamine pyrophosphate
 - ii) Pyridoxal Phosphate.
- f) Write the application of enzymes in food and drug chemistry. **4**
2. a) i) Discuss nucleophilic substitution in quinoline and iso-quinoline. **8**
- ii) Give any two methods for the synthesis of thiazole. **8**
- b) Discuss the structural properties and synthesis of pyridazines. **8**

OR

- c) Write down the synthesis of indole. **4**
- d) Discuss the chemical applications of pyrazine. **4**
- e) What do you mean by Azoles. Discuss electrophilic and nucleophilic substitution of Imidazole. **4**
- f) Discuss the synthesis of Isoxazole. **4**

