



HC-014-003406

Seat No. _____

**Master of Pharmacy Management (Sem. IV)
(CBCS) Examination**

May / June - 2017

**Pharmaceutical Chemistry - VI
(Organic Chemistry - II) (BP - 404)**

Faculty Code : 014

Subject Code : 003406

Time : 3 Hours]

[Total Marks : 80

- Instructions :**
- (1) Answer and tie up both the sections separately.
 - (2) Figures to the right indicates marks.
 - (3) Answer the three (03) questions from each section.
 - (4) Question one (01) and question five (05) are compulsory.
 - (5) Draw neat and clean diagrams as required.

SECTION - I

- 1** Justify the following comments : (any seven) **14**
- (a) Furan is more aromatic than Thiophene
 - (b) Pyridine is less basic than aliphatic amines
 - (c) Pyrrole shows electrophilic substitution reaction at 2nd and 5th position
 - (d) Chloroacetic acid is more acidic than acetic acid
 - (e) Imidazole has higher boiling point as compare to pyrazole
 - (f) Pyridine is more basic than pyrrole
 - (g) Aromatic amines are less basic than ethyl amine
 - (h) Pyridine undergoes electrophilic substitution reaction at 3rd position.
 - (i) Furan does not under goes diels-Alder reaction
 - (j) Impurities of Thiophene are removed from benzene by using concentrated sulphuric acid.
- 2** Answer the followings :
- (a) 'What is Green Chemistry? Discuss the principle of green Chemistry. **7**
 - (b) Discuss the importance of microwave synthesis. **6**

- 3 Answer the following :
- (a) Write a note on nucleophilic aromatic substitution reaction. 7
- (b) 'Why aldehydes are more reactive than ketones for nucleophilic addition reaction? Write a note on Cannizzaro reaction. 6

- 4 Answer the following:
- (a) Define Racemic mixture. Discuss its resolution methods. 7
- (b) Explain Hoffmann degradation of amide with mechanism 6

SECTION - II

- 5 Answer the following : (any two) 14
- (a) Discuss stereochemistry of Allen, Spiran and Biphenyl.
- (b) Write a short note on
- (a) Fischer Indole Synthesis
- (b) Skraup Quinoline Synthesis.
- (c) Describe preparation of Carboxylic acid.

- 6 Answer the following :
- (a) Draw the structure of the following: 7
- (a) Pyrazole (e) Furan
- (b) Pyridazine (f) Piperidine
- (c) Isoquinoline (g) Pyrimidine
- (d) imidazole
- (b) Differentiate Optical isomerism and geometric isomerism. 6

- 7 Answer the following :
- (a) Explain Riemeier-Tiemann reaction in detail. 7
- (b) Define the following terms : 6
- (1) Chiral center (2) Mesomer
- (3) Optical activity (4) Configuration
- (5) Specific Rotation (6) Nano chemistry

- 8 Answer the following :
- (a) Write short note on 7
- (a) Michel addition reaction
- (b) Perkin condensation
- (b) What is diazonium salt? Give its preparation and application. Discuss Hinsberg test. 6