

Total No. of Questions : 6]

SEAT No. :

P1985

[5145]- 403

[Total No. of Pages : 2

S.Y.B.Pharmacy

**243 : PHARMACEUTICAL ORGANIC CHEMISTRY - IV
(2013 Pattern) (Semester - IV)**

Time :3 Hours]

[Max. Marks :70

Instructions to the candidates:

- 1) *Answers to the two sections should be written in separate books.*
- 2) *Figures to the right indicate full marks.*
- 3) *All questions are compulsory.*

SECTION - I

Q1) a) Give a detail account of guidelines and rules in retrosynthesis. **[10]**

OR

b) Give methods of synthesis and reactions of Pyridine. **[10]**

Q2) Answer in short (Any Five) **[15]**

- a) Nucleophilic substitution reactions of quinoline
- b) Give reason: Furan shows electrophilic substitution at 2 or 5 position.
- c) Give following reactions of furan:
 - i) Diels-Alder reaction
 - ii) Gomberg reaction
- d) Give properties of imidazole.
- e) Draw the following heterocycles with numbering and example of one drug each:
 - i) Cinnoline
 - ii) Benzthiazole
 - iii) Oxazole
- f) Draw the resonance structure of:
 - i) Imidazole
 - ii) Pyridine
- g) Give any two reactions of pyrrole.

P.T.O.

Q3) Write a short note on (Any Two) [10]

- a) Electrophilic substitution reactions of quinoline.
- b) Methods of synthesis of indole.
- c) Electrophilic substitution reactions of imidazole.
- d) Retrosynthetic route of Sulfamethoxazole.

SECTION - II

Q4) Write in detail structural establishment of Glucose. [10]

OR

What is combinatorial synthesis? Add a note on multiple parallel synthesis in Combinatorial chemistry. Explain Tea Bag method of synthesis. [10]

Q5) Solve any five of the following. [15]

- a) Explain combinatorial chemistry in drug discovery.
- b) How will you distinguish between glucose and fructose?
- c) Explain mutarotation of glucose.
- d) Explain any two reactions of any hexose.
- e) Explain use of Microwave in Pharmaceutical Organic chemistry.
- f) Write short notes on Solid supported synthesis of peptides.
- g) Explain lengthening and shortening the chain of aldoses with respective examples.

Q6) Write short notes on any two of the following. [10]

- a) Deconvolution method in combinatorial chemistry.
- b) Nanochemistry
- c) Killiani - Fischer synthesis.
- d) Solid supported synthesis of peptides.

