

Total No. of Questions : 6]

SEAT No. :

P3157

[Total No. of Pages : 2

[5245]-403

Second Year B. Pharm. (Semester - IV)

PHARMACEUTICAL ORGANIC CHEMISTRY - IV

(2013 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

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

SECTION - I

Q1) Give a detail account of methods of synthesis and reactions of furan. **[10]**

OR

Draw the structure and give numbering of following heterocycles with one example of drug belonging to each:

- a) Pyridine
- b) Quinoline
- c) Pyridazine
- d) Benzimidazole
- e) Hydantoin

Q2) Answer in short (ANY FIVE) **[15]**

- a) Why pyridine is more reactive towards nucleophiles than benzene
- b) Explain basic and acidic character of pyrrole
- c) Draw the resonance structures of furan
- d) Write any two reactions for synthesis of quinoline
- e) Explain the acidic and basic character of imidazole
- f) Write the following reactions of indole:
 - i) Gattermann Reaction
 - ii) Reimer-Tiemann reaction
- g) Give Hantzsch synthesis of Pyridine

P.T.O.

Q3) Write a short note on (ANY TWO) [10]

- a) Electrophilic substitution reactions of imidazole
- b) Nucleophilic substitution reactions of pyridine
- c) Disconnection involving two functional groups
- d) Retrosynthetic scheme of Propranolol

SECTION - II

Q4) What is combinatorial synthesis? Explain various techniques in combinatorial chemistry. [10]

OR

Establish general and cyclic structures of D(+) glucose.

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

- a) Write a note on Mutarotation.
- b) Give any three reactions of glucose.
- c) What are Polysacchrides? Discuss in brief about Cellulose
- d) Explain any two methods of preparation of Fructose.
- e) Explain significance and medicinal importance of Carbohydrates.
- f) Explain the use of Nanochemistry.
- g) Explain applications of Combinatorial chemistry.

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

- a) Use of Microwave in organic synthesis.
- b) Reducing sugars
- c) Ruff degradation.
- d) Solid supported synthesis of peptides.

