

[BPHARM 0921]

SEPTEMBER 2021
(FEBRUARY 2021 EXAM SESSION)

Sub. Code: 4258

B. PHARMACY DEGREE EXAMINATION
SECOND YEAR – (NON-SEMESTER)
PAPER III – ADVANCED PHARMACEUTICAL ORGANIC CHEMISTRY
Q.P. Code: 564258

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. What are Purines? Elucidate the structure of Uric acid. Discuss the interrelation between caffeine, theophylline and theobromine.
2. Explain the mechanism and applications of
 - a) Birch reduction
 - b) Meerwein Ponndorf reduction.

II. Write notes on:

(8 x 5 = 40)

1. Explain the chemistry of Vitamin E.
2. Give reasons for the following:
 - a) Explain why the electrophilic substitution reactions of Pyrrole predominantly occur at 2nd position than 3rd position.
 - b) Explain why Pyrrole and Furan is more reactive than Thiophene.
3. What is resolution of Racemic modification? Explain the method of resolution by biochemical separation.
4. Define optical activity. What are the various optical isomers possible in compounds containing two different chiral carbons?
5. Explain Fischer Indole synthesis.
6. Explain Cahn Ingold and Prelog system for assigning configuration based on sequence rules.
7. Explain the chemistry and pharmacological actions of Digitoxin.
8. Explain the chemistry of Camphor.

III. Short answers on:

(10 x 2 = 20)

1. What is Darzen's reaction?
2. Distinguish between Enantiomers and Diastereomers.
3. Why nitrobenzene is mostly used as oxidizing agent in Skraup synthesis.
4. Mention two uses of Lithium aluminum hydride.
5. Give the structure and uses of Folic acid.
6. Give two methods for the synthesis of Imidazole.
7. Write any two reactions of Furan.
8. What is Fischer projection?
9. Explain briefly D and L system of nomenclature.
10. Write the structure and use of Atropine.
