

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LO 344]

MAY 2019

Sub. Code: 2905

**M.PHARM. DEGREE EXAMINATION
FIRST YEAR
BRANCH II – PHARMACEUTICAL CHEMISTRY
PAPER II – ADVANCED ORGANIC CHEMISTRY**

Q.P. Code: 262905

Time : Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Explain the mechanism and stereo-chemistry of aliphatic nucleophilic substitution and aromatic electrophilic substitution reaction.
2. a) Classify heterocyclic compounds with examples. Write the preparation and properties of a fused ring structure containing hetero atom.
b) Write in brief about nitrenes.

II. Write notes on:

(10 x 6 = 60)

1. How are chiral drugs prepared? Mention the importance of chiral drugs.
2. Synthones for carbon-carbon bond formation.
3. Types of Pericyclic reactions with examples.
4. Concepts of Nanochemistry.
5. Write the mechanism of Michael reaction. Mention its applications.
6. What is parallel synthesis? Give an example.
7. Write a note on addition reactions with examples.
8. How is an aldehyde group protected during organic synthesis?
9. Explain the generation, fate and biological significance of free radicals.
10. Discuss in detail the mechanisms involved in elimination reactions.
