

Roll No.

Total Pages : 3

MDQ/M-20

2439

**ORGANIC CHEMISTRY
(SPECIAL)**

Paper-XX

Time Allowed : 3 Hours]

[Maximum Marks : 60

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

UNIT-I

1. Briefly introduce the following terms used in Medicinal chemistry :

- (a) Receptor
- (b) Neurotransmitter
- (c) Ion-channel
- (d) Therapeutic index
- (e) Prodrug
- (f) Agonist.

2×6=12

2. (a) What is the importance of lead compound in medicinal chemistry? Explain with suitable examples.

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- (b) What are the different factors which stimulate an enzyme for its catalytic activity? 4
- (c) Briefly explain the steps involved in development of a new drug. 4

UNIT-II

- 3. Give synthesis, mode of action and medicinal uses of the following drugs :
 - (a) Chlorambucil
 - (b) Diclofenac
 - (c) Chloroquine. 4×3=12
- 4. (a) What are antifertility agents? How they are classified? Give name and structure of any two antifertility agents belonging to two different classes. 4
- (b) Write a short note on Calcium channel blockers as Cardiovascular drugs. 4
- (c) Giving synthesis. explain, how AZT acts as anti HIV agent. 4

UNIT-III

- 5. (a) Precisely introduce the term antibiotics, β -lactam antibiotics and explain why, we require semisynthetic penicillins. 4

- (b) Outline the synthesis of cephalosporin C starting from L(+) –cysteine. 8
- 6. (a) Draw the structure of Penicillin and explain its antibacterial properties. 4
- (b) Outline the synthesis of D-Penicillineamine from Valine. 8

UNIT-IV

- 7. What are Alkaloids? Discuss in detail the general methods used for the structure elucidation and degradation of alkanoids. 12
- 8. (a) Sketch the biosynthetic route of Ephedrine. 4
- (b) Describe the chemical methods used for determining the structure of Conine. 8