

B.Pharm III Year I Semester (R19) Regular & Supplementary Examinations January 2023
MEDICINAL CHEMISTRY - II

Time: 3 hours

Max. Marks: 75

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- | | |
|---|----|
| (a) Write the structure and uses of Thioguanine and Busulfan. | 2M |
| (b) Give two examples of proton pump inhibitors. | 2M |
| (c) Write the structure and uses of acetazolamide. | 2M |
| (d) Write the general structure for Beta blockers, give examples. | 2M |
| (e) Give the structure and uses of Bosentan and Digitoxin. | 2M |
| (f) Write the structure and use of Lovastatin. | 2M |
| (g) Give the structure and medicinal uses of Betamethasone. | 2M |
| (h) Write the mode of action and uses of Sildenafil. | 2M |
| (i) Write the therapeutic application and two examples for sulphonyl ureas. | 2M |
| (j) Write the structure and uses of Butamben and Procaine. | 2M |

PART – B

(Answer any two questions: 02 X 10 = 20 Marks)

- | | |
|--|----|
| 2 (a) Classify Anti-hypertensive drugs with suitable examples. Explain the mechanism of action and therapeutic uses of ACE inhibitors. | 7M |
| (b) Write the synthesis and uses of Methyl Dopa. | 3M |
| 3 (a) Explain the mechanism of action of organic nitrates and nitrites as antianginal drugs. | 5M |
| (b) Give the synthesis and uses of Isosorbide dinitrate and Nitroglycerin. | 5M |
| 4 (a) Classify hypoglycemic agents with mode of action. | 7M |
| (b) Write the synthesis of Tolbutamide. | 3M |

PART – C

(Answer any seven questions: 07 X 05 = 35 Marks)

- | | |
|--|----|
| 5 Write a note on physiological role of histamine, types of histamine receptors in human body. | 5M |
| 6 Write a note on anticancer antibiotics. Explain chemistry and MOA of any one drug. | 5M |
| 7 Give any two structures of Thiazide class of Diuretics and discuss its mechanism of action. | 5M |
| 8 Write a note on calcium channel blockers. | 5M |
| 9 Write a note on the drugs used in congestive heart failure. | 5M |
| 10 Write the structure of the following compounds:
(i) Menadione (ii) Warfarin (iii) Clopidogrel. | 5M |
| 11 Write short notes on thyroid drugs including their structure and mode of action. | 5M |
| 12 Write the structure, mechanism of action and medicinal uses of Tadalafil. | 5M |
| 13 Write the synthesis of Procaine. Give its therapeutic applications. | 5M |

B.Pharm III Year I Semester (R19) Supplementary Examinations July/August 2022

MEDICINAL CHEMISTRY – II

Time: 3 hours

Max. Marks: 75

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- | | |
|---|----|
| (a) Write the structure and uses of cimetidine and cyproheptadine. | 2M |
| (b) Define proton pump inhibitors and anti-neoplastic agents. | 2M |
| (c) Classify Vasodilators with examples. | 2M |
| (d) Write the structure and uses of isosorbide and hydrochlorothiazide. | 2M |
| (e) Define and classify anti-arrhythmic agents. | 2M |
| (f) Write notes on coagulants. | 2M |
| (g) Write nomenclature of steroids. | 2M |
| (h) Define local anesthetics. | 2M |
| (i) Write the synthesis of tolbutamide. | 2M |
| (j) Write the structure and uses of pioglitazone and dibucaine. | 2M |

PART – B
(Answer any two questions: 02 X 10 = 20 Marks)

- | | |
|---|----|
| 2 (a) Define and classify antihistamines with examples. | 5M |
| (b) Write the synthesis, mechanism of action of cimetidine. | 5M |
| 3 (a) Define and classify antihypertensives with examples. | 5M |
| (b) Give the synthesis and uses of acetazolamide. | 5M |
| 4 (a) Classify local anesthetics with examples. | 4M |
| (b) Write the synthesis, mechanism of action of Procaine. | 6M |

PART – C
(Answer any seven questions: 07 X 05 = 35 Marks)

- | | |
|---|----|
| 5 What are anti-neoplastic agents? Classify them with examples. | 5M |
| 6 Write a short note on vasodilators. | 5M |
| 7 Write the synthesis of furosemide. | 5M |
| 8 Define and classify diuretics with examples. | 5M |
| 9 Define and classify anti-hyperlipidemic drugs with examples. | 5M |
| 10 Write the synthesis of disopyramide. | 5M |
| 11 Write short notes on sex hormones. | 5M |
| 12 Describe in detail about the SAR of local anesthetics. | 5M |
| 13 Write the synthesis of dibucaine. | 5M |

B.Pharm III Year I Semester (R15) Supplementary Examinations January 2023
MEDICINAL CHEMISTRY – I

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- Define hydrogen bonding with examples.
 - Define prodrug. Mention its clinical importance.
 - Write the concept of neuromuscular blocking agents.
 - Specify the different types of cholinergic receptors.
 - Give an example of a sedative with structure.
 - Write the synthesis of phenobarbital.
 - Write the structure and uses of Venlafaxine.
 - What do you mean by the term analeptics?
 - What are the environmental side effects of a compound like Halothane?
 - Discuss therapeutic uses and adverse effects of ketamine.

PART – B
(Answer all the questions: 05 X 10 = 50 Marks)

- 2 Explain surface activity in relation to biological activity.
- OR**
- 3 Explain in detail protein binding in relation to biological activity.
- 4 Write in detail the SAR of cholinergic agonists.
- OR**
- 5 Give the SAR of beta-2 adrenergic agonists.
- 6 Describe in detail the SAR of Barbiturates.
- OR**
- 7 Write the synthesis, mechanism of action and uses of Phenytoin and Valproic acid.
- 8 Classify with chemical structures anti-depressants.
- OR**
- 9 Classify analeptics with structures in detail.
- 10 Discuss in detail Meyer-Overton theory. Write MOA and SAR of general anaesthetics.
- OR**
- 11 Define and classify general anaesthetics. Write the MOA and synthesis of thiopental sodium.

B.Pharm III Year I Semester (R15) Supplementary Examinations February 2022

MEDICINAL CHEMISTRY – I

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- Define chelation and give examples.
 - Define hydrogen bonding with examples.
 - Write the structure and uses of ephedrine.
 - Define and classify neuro muscular blockers.
 - Write the synthesis of phenobarbital.
 - Define anxiolytics with example.
 - Write the structure and uses of lysergic acid.
 - Explain mechanism of action of analeptics.
 - Write the synthesis of halothane.
 - Give examples for inhalation general anaesthetics.

PART – B

(Answer all the questions: 05 X 10 = 50 Marks)

- 2 (a) Explain in detail ionization in relation to biological activity.
(b) Write a brief note on bioisosterism and steric features of drugs.
- OR
- 3 (a) Write in brief surface activity in relation to biological activity.
(b) Explain in detail biotransformation.
- 4 (a) Define Adrenergic agents discuss the chemistry & metabolism of neurotransmitters.
(b) Discuss about the synthesis of prazosin.
- OR
- 5 (a) Classify adrenergic antagonist with examples. Write the synthesis of phenoxybenzamine.
(b) Discuss in detail SAR of sympathomimetics.
- 6 (a) Classify sedatives & hypnotics with examples. Write the synthesis of Diazepam.
(b) Discuss the mechanism of action and SAR of hydantoins.
- OR
- 7 Classify anticonvulsants drugs. Outline the synthesis of carbamazepine.
- 8 (a) Classify antidepressants. Outline the synthesis of imipramine.
(b) Write the synthesis of doxapram.
- OR
- 9 (a) Write a note on antidepressant newer agents with examples.
(b) Write the miscellaneous agents of antidepressants drugs.
- 10 Define and classify general anaesthetics. Write the MOA and synthesis of thiopental sodium.
- OR
- 11 Discuss the SAR of esters of local anaesthetics. Write the MOA and synthesis of lignocaine.

B.Pharm III Year I Semester (R15) Supplementary Examinations June/July 2019
MEDICINAL CHEMISTRY – I

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Define soft drug and hard drug.
 - (b) What is hydrogen bonding give example?
 - (c) What are analeptics and give examples?
 - (d) Define sedatives and hypnotics.
 - (e) What are prodrugs and write its significance?
 - (f) What are sympathomimetics? Give examples.
 - (g) What is bioisosterism?
 - (h) Define partition coefficient.
 - (i) What are neurotransmitters name them?
 - (j) Define chelation. Give example.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 Write the various physico chemical properties and how they are related to biological activity.
- OR**
- 3 What are different types of receptors and how they are related to biological activity?

UNIT – II

- 4 What are the various reactions involved in phase – II biotransformation. Explain with suitable examples.
- OR**
- 5 What are adrenergic and anti adrenergic agents? Write the chemistry and metabolism of ephedrine and dopamine.

UNIT – III

- 6 Write a note on cholinergic agents and anticholinergic agents.

OR

- 7 Write the synthesis of ephedrine, prazosin and succinylcholine.

UNIT – IV

- 8 Classify sedatives/hypnotics and anxiolytic agents with example. Write the SAR of benzodiazepines. Explain the synthesis of Phenobarbital.

OR

- 9 Classify antipsychotics with examples and MOA. Write the SAR of phenothiazines. Give the synthesis of chlorpromazine.

UNIT – V

- 10 Classify anticonvulsants with examples. Write the SAR of hydantoins. Write the synthesis of phenytoin.

OR

- 11 Write about tricyclic antidepressant drugs their mechanism of action and SAR. Write the synthesis of imipramine.
