Printed Pages: 01 **Sub Code: BP402T**

Paper Id: 150300 **Roll No.** | | | | | | | | | | |

B.PHARM
(SEMESER-IV) THEORY EXAMINATION 2018-19
MEDICINAL CHEMISTRY-I

Time: 3 Hours ***Total Marks: 75***

Note: Attempt all Sections. If you require any missing data, choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a. Define partition coefficient and give its applications.

b. Explain role of ionization towards biological action of drug.

c. Explain in short biosynthesis of cholinergic neurotransmitters.

d. Write chemical structures of phenytoin and Ethotoin.

e. Write chemical structure and uses of Ketamine hydrochloride.

f. Write differences between Narcotic and non-narcotic analgesics.

g. Compare benzodiazepines and barbiturates.

h. Write synthesis of Ethosuximide.

i. Write chemical structure and mechanism of action for Clozapine.

j. Define ultra-short acting barbiturates with examples.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a. Define biotransformation. Explain principles of drug metabolism including phase I and phase II pathways.

b. . Write classification, mechanism of action and structure-activity relationship of antipsychotics with suitable examples.

c. Explain Bioisosterism, types and their role in drug discovery with suitable examples.

SECTION C

3. Attempt any *five* parts of the following: **5 x7 = 35**

a. Stereochemistry contributes towards biological action of drug. Explain with examples.

b. Write synthesis, mechanism of action and uses of -
i) Ipratropium bromide, ii) Tolazoline.

c. Write a note on medicinal chemistry of barbiturates.

d. Define adrenergic blockers. Explain structure-activity relationship studies and uses of beta blockers.

e. Write classification of parasympathomimetics with examples and chemical structures. Write synthesis of Carbachol.

f. Write synthesis, mechanism of action and uses of –
(i) Chlorpromazine hydrochloride, (ii) Carbamazepine.

g. Write chemical structures, uses of – i) Indomethacin, ii) Valproic acid, iii) Phenacetin, iv) Meperidine hydrochloride, v) Sulindac.

Sub Code:BP402T

Paper Id: 910027 Roll No:

B PHARM
(SEM-IV) THEORY EXAMINATION 2019-20
MEDICINAL CHEMISTRY – I

Time: 3 Hours *Total Marks: 75*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.
2. Any special paper specific instruction.

SECTION A

1. Attempt *all* questions in brief. 10 x 2 = 20

a. Define solubility.
b. What is ring equivalent bioisosterism.
c. Write the mode of action of methyldopa.
d. Write the synthetic route of Phenylephrine.
e. Define parasympatholyticc agents.
f. Classify cholinesterase inhibitors.
g. What are the ideal characteristic of sedatives and hypnotics.
h. Draw the chemical structure of Clonazepam and write mode of action
i. Write the synthetic route of halothane.
j. Write the mode of action of Ultra short acting barbitutrates.

SECTION B

2. Attempt any *two* parts of the following: 2 x 10 = 20

a. Explain in detail about isosterism and bioisosterism with suitable examples.
b. Discuss the SAR beta blocker and write the mode of action synthesis of propanolol.
c. Write the chemical structure, mode of action, synthesis and use of carbachol and procyclidine.

SECTION C

3. Attempt any *five* parts of the following: 7 x 5 = 35

a. Discuss the SAR of barbiturate with suitable examples.
b. Classify anti-inflammatory agents. Discuss the chemical structure mode of action and synthesis of ibuprofen.
c. Describe geometrical isomerism in relation to affect biological activity.
d. Discuss in detail about indirect acting sympathomimetic agents.
e. Classify anticonvulsant drugs and Explain SAR of succinimide. Write the mechanism of action and synthesis of ethosuccimide.
f. Discuss the SAR of morphine analogues. Write the mechanism of action and synthesis of fentanyl.
g. Write a short note on dissociative anaesthetics.

PAPER ID 421119

Roll No:

BPHARM
(SEM IV) THEORY EXAMINATION 2021-22
MEDICINAL CHEMISTRY I – THEORY

Time: 3 Hours *Total Marks: 75*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 10 x 2 = 20

a.	Define metabolism.
b.	Point out the role of partition coefficient in relation to biological action of drug?
c.	Describe the synthesis of Tolazoline.
d.	Give structure and uses of Phenylephrine.
e.	Discuss cholinergic receptors and their distribution.
f.	Differentiate anticholinergics and anticholinesterases.
g.	Compare the basic ring structures and mention uses of barbiturate and benzodiazepine.
h.	Give the MOA and structure of chlorpromazine.
i.	Discuss the synthesis of drug that causes dissociative anaesthesia.
j.	Name and give structures of any two narcotic antagonists.

SECTION B

2. Attempt any *two* parts of the following: 2 x 10 = 20

a.	Summarize about various physicochemical parameters that affect drug action.
b.	Classify sedative and hypnotics. Outline the synthesis, mechanism of action and uses of diazepam.
c.	Classify NSAIDs. Give the synthesis of Ibuprofen.

SECTION C

3. Attempt any *five* parts of the following: 7 x 5 = 35

a.	Compare phase I and phase II metabolism. Discuss various factors affecting drug metabolism.
b.	Outline the classification and SAR of sympathomimetics.
c.	Illustrate the MOA, synthesis and uses of (i) Dicyclomine hydrochloride (ii) Carbachol.
d.	Classify anticonvulsants and give synthesis of phenytoin.
e.	Classify general anaesthetics. Give synthesis of halothane.
f.	Explain the biosynthesis and catabolism of catecholamines.
g.	Give synthesis of propranolol and discuss SAR of beta blockers.

Printed Pages:01 **Sub Code: BP 402T**

Paper Id: 238077 **Roll No.** | | | | | | | | | | |

B.PHARM
(SEM IV) THEORY EXAMINATION 2022-23
MEDICINAL CHEMISTRY-I

Time: 3 Hours ***Total Marks: 75***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

(a) Define Bioisosterism. Give examples.

(b) Give name and structures of two narcotic antagonists.

(c) Discuss mechanism of Methohexital sodium.

(d) What is Cholinesterase reactivator? Write its example and use.

(e) Write synthesis of Phenytoin.

(f) Give uses of Tolazoline and Dicyclomine hydrochloride.

(g) Mention the significance of Ionization and solubility in relation to biological action.

(h) Enumerate Adrenergic receptors and their distribution.

(i) Differentiate Phase I and Phase II reactions.reactions.

(j) From which category chlorpromazine drug belongs? Give its structure.

SECTION B

2. Attempt any *two*parts of the following: **2 x 10 = 20**

(a) What are Sedatives and Hypnotics? Classify them. Give SAR of Benzodiazepines, and synthesis of Diazepam.

(b) Classify Narcotic analgesics. Write SAR of Morphine analogues in detail.

(c) Explain Physicochemical properties in relation to biological action in detail.

SECTION C

3. Attempt any *five*parts of the following: **7 x 5 = 35**

(a) Give uses, mechanism and synthesis of any two: Carbachol / Neostigmine /Salbutamol.

(b) What are Sympathomimetic agents? Classify them.

(c) Classify anti-inflammatory agents. Discuss the mode of action and synthesis of ibuprofen.

(d) Write short note on Adrenergic Antagonists.

(e) Discuss SAR of Phenothiazines.

(f) Write short note on Cholinesterase inhibitors

(g) Elaborate Drug metabolism principles of Phase I and Phase II.

PAPER ID:411119

Subject Code: BP402T

Roll No:

BPHARMA
(SEM IV) THEORY EXAMINATION 2023-24
MEDICINAL CHEMISTRY I – THEORY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Discuss the significance of one physicochemical property of a drug that affects its protein binding in relation to biological action.
b.	Give the structure and uses of neostigmine.
c.	Give the synthesis of salbutamol.
d.	Give the structure and mechanism of action of any one atypical antipsychotic agent.
e.	Enumerate adrenergic receptors and their distribution.
f.	Outline the catabolism of acetylcholine.
g.	Define bioisosterism and its significance with the help of one example.
h.	Differentiate between anticholinergic and anticholinesterase agents.
i.	Name any two ultra-short acting barbiturates with uses.
j.	Illustrate the synthesis and uses of phenytoin.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Differentiate between sedatives & hypnotics and classify them. Discuss the mechanism of action of benzodiazepines and barbiturates.
b.	Explain phase I and phase II metabolism in detail.
c.	Classify NSAIDs along with their mechanism of action. Write the synthesis of methadone.

SECTION C

3. Attempt any *five* parts of the following: **5 x 7 = 35**

a.	Illustrate optical and geometrical isomerism in relation to biological action of drug with suitable examples.
b.	Discuss the classification and SAR of sympathomimetic agents.
c.	Classify cholinergic blocking agents. Explain the SAR of cholinolytic agents.
d.	Explain SAR of anticonvulsant agents and synthesis of diazepam.
e.	Discuss cholinesterase reactivators and narcotic antagonists with their structure, mechanism of action and uses.
f.	Illustrate the synthesis and uses of propranolol and carbachol.
g.	How dissociative anaesthetics differs from other general anaesthetics? Discuss about synthesis, mechanism of action and uses of ketamine.

PAPER ID-311784

Roll No: | | | | | | | | | | | | | |

BPHARM
(SEM IV) THEORY EXAMINATION 2023-24
MEDICINAL CHEMISTRY I – THEORY

TIME: 3HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Enlist the factors affecting drug metabolism.
b.	Discuss the importance of optical isomerism in relation to biological action.
c.	Give the structure and uses of methyldopa.
d.	Outline the biosynthesis of catecholamines.
e.	Enlist cholinergic receptors and their distribution.
f.	What is cholinesterase reactivator? Give example.
g.	Give mechanism of action and structure of Chlorpromazine.
h.	Outline the synthesis of phenytoin.
i.	What is dissociative anesthesia? Give an example.
j.	State the use of narcotic antagonist. Give name and structure of any two narcotic antagonists.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Compare Benzodiazepines and Barbiturates. Discuss in detail SAR of Benzodiazepines.
b.	Discuss drug metabolism principles and factors affecting drug metabolism.
c.	Differentiate narcotic and non-narcotic analgesics with suitable examples. Outline in detail SAR of morphine analogues.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Outline the concept of bioisosterism in detail.
b.	Discuss classification and SAR of sympathomimetic agents.
c.	Classify adrenergic antagonists. Discuss synthesis of tolazoline.
d.	Give the MOA and synthesis of (i) Carbachol (ii) Neostigmine
e.	Explain classification of Cholinolytic agents. Give synthesis of Ipratropium bromide.
f.	What are antipsychotics? Outline classification of antipsychotics and discuss SAR of phenothiazines.
g.	Classify anti-inflammatory agents. Give synthesis of Mefenamic acid.

Roll No: | | | | | | | | | | | | |

BPHARM
(SEM IV) THEORY EXAMINATION 2024-25
MEDICINAL CHEMISTRY I – THEORY

TIME: 3 HRS **M.MARKS: 75**

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a. Define chelation.
b. Differentiate between classical and non-classical bioisosterism.
c. Write the mode of action of terbutaline.
d. Write the biosynthetic pathway of catecholamine.
e. Briefly describe the mode of action of prazosin,
f. Classify synthetic cholinergic blocking agents.
g. Differentiate between sedatives and hypnotics.
h. Draw the chemical structure of chlorpromazine and write mode of action
i. Write the synthetic route of mefenamic acid
j. Briefly describe dissociative anesthetics.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a. Define the physicochemical properties of molecules. Discuss about partition coefficient in relation to biological action.
b. Discuss the SAR of sympathomimetic agents and write the mode of action synthesis of salbutamol
c. Describe the SAR of benzodiazepines. Discuss the mechanism of action and synthesis of diazepam.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a. Discuss the SAR of parasympathomimetic agents with suitable examples.
b. Classify NSAIDs. Discuss the chemical structure mode of action and synthesis of mefenamic acid.
c. Describe geometrical isomerism in relation to affect biological activity.
d. Define epilepsy. Classify antiepileptic agents and the chemical structure of each class.
e. Describe in detail about general anesthetic agents with examples.
f. Discuss the SAR of opioid analgesics.
g. Write a short note biosynthesis and catabolism of acetylcholine.

BPharma Bot02

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