



BRAINWARE UNIVERSITY

Term End Examination 2025-2026

Programme – B.Pharm-2020/B.Pharm-2021/B.Pharm-2023/B.Pharm-2024

Course Name – Medicinal Chemistry I

Course Code - BP402T

(Semester IV)

Full Marks : 75

Time : 3:0 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 20=20

1. Choose the correct alternative from the following :

- (i) Which anticholinergic drug useful in the treatment of peptic ulcer?
 - a) Carbochol
 - b) Edrophonium chloride
 - c) Physostigmine
 - d) Glycopyrrolate
- (ii) Identify the false statement.
 - a) Nicotinic receptor is a ligand-gated ion
 - b) Cholinomimetics increase peristaltic movement.
 - c) Acetyl choline is orally administered for therapy.
 - d) Neostigmine is useful in myasthenia gravis.
- (iii) What is the starting compound of Acetyl choline biosynthesis?
 - a) L-Cysteine
 - b) L-Codeine
 - c) L-Serine
 - d) L-Cholic acid
- (iv) What is the use of Propanolol?
 - a) Asthma
 - b) Ventricular tachycardia
 - c) Anaesthesia
 - d) Atropine poison
- (v) Select the following drugs that is used for the treatment of motion sickness.
 - a) Cisplatin,
 - b) Scopolamine,
 - c) Benzocaine,
 - d) Xylocaine,
- (vi) Which drug of the following class is useful in the treatment of asthma?
 - a) β 1 -Blockers
 - b) β 1 -Agonists
 - c) α 1 -Blockers
 - d) α 1 -Agonists
- (vii) Carbachol is synthesized from which compound?
 - a) Ethyl formate,
 - b) Ethanol,
 - c) Formic acid,
 - d) Ethylene chlorohydrin,
- (viii) What is the precursor for Salbutamol synthesis?

- a) Phenyl acetonitrile
c) 4-Hydroxy propiophenone
- b) Methyl salicylate
d) Mesitylene derivative
- (ix) Identify the option which one of the following drug is used for the treatment of hypertension.
- a) Cisplatin,
c) Prazosin,
- b) Chloramphenicol,
d) Ibuprofen,
- (x) Select among the following which can be used as an antianginal drug?
- a) Propranolol,
c) Hyoscyamine,
- b) Rivastigmine,
d) Digitoxin,
- (xi) Select the natural source of ephedrine from the following options.
- a) Ephedra sinica,
c) Cassia senna,
- b) Cassia angustifolia,
d) Galanthus nivalis,
- (xii) Select drug that can be used for the treatment of COPD?
- a) Atropine,
c) Aspirin,
- b) Frusemide,
d) Salbutamol,
- (xiii) Select the Beta 2 selective antagonist from the followings
- a) Tolazoline,
c) Pindolol,
- b) Ergotamine,
d) Butoxamine,
- (xiv) Identify the option -the synthesis of norepinephrine is prevented by
- a) Alpha-methyldopa,
c) Pilocarpine,
- b) Ephedrine,
d) Reserpine,
- (xv) Choose among the following which is a benzodiazepine?
- a) Ampicillin,
c) Chlordiazepoxide,
- b) Aspirin,
d) Tamoxifen,
- (xvi) Identify which of the following is a N-Anthranilic acid derivative?
- a) Hyoscyamine,
c) Rivastigmine,
- b) Mefenamic acid,
d) Antipyrine,
- (xvii) Choose the following is a Napthalene acetic acid derivative?
- a) Naproxan,
c) Ibuprofen,
- b) Sulindac,
d) Aspirin,
- (xviii) Select among the following is a Enol acid derivative?
- a) Piroxicam,
c) Galantamine,
- b) Tolmetin,
d) Ergotamine,
- (xix) Select among of the following is a Pyrazole derivative?
- a) Antipyrine,
c) Aspirin,
- b) Cisplatin,
d) Nimesulide,
- (xx) Choose natural source of Physostigmine is
- a) Physostigma venenosum,
c) Panax ginseng,
- b) Atropa belladonna,
d) Cassia angustifolia,

Group-B

(Short Answer Type Questions)

5 x 7=35

2. Explain structure with SAR of muscarinic antagonist. (5)
3. Define and classify the anticonvulsant drugs with proper example. (5)
4. Write down the SAR of phenothiazine derivatives. (5)
5. Define and classify the sedative and hypnotics with proper example. (5)
6. Brief on the metabolism of catecholamine. (5)

7. Focus on short note of Piroxicam and its severe side effects. (5)

OR

Illustrate the details of the drug diazepam. (5)

8. Explain the mechanism of action of barbiturates. (5)

OR

Illustrate the synthesis and SAR of phenytoin. (5)

Group-C

(Long Answer Type Questions)

10 x 2=20

9. Illustrate about the SAR of barbiturates. (10)

10. Illustrate on methohexital sodium and its synthesis. (10)

OR

Analyze the SAR of beta-adrenergic agonists and their selectivity for beta1- and beta2-adrenergic receptors. (10)