



14146

**BRAINWARE UNIVERSITY**

Library
Pharmaceutical Technology
Brainware University
Barasat, Kolkata-700125

Term End Examination 2024-2025**Programme – B.Pharm-2020/B.Pharm-2021/B.Pharm-2022/B.Pharm-2023****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 type of reaction is phase 1 metabolism?
 - a) Synthetic
 - b) Functionalization
 - c) Conjugation
 - d) None of the above
- (ii) What is reaction type of Phase II metabolism?
 - a) Conjugation
 - b) Non synthetic
 - c) Functionalization
 - d) None of the above
- (iii) Select the term for replacement of hydrogen with a fluorine atom is known as
 - a) Isotope
 - b) Isostere
 - c) Isomer
 - d) Isobar
- (iv) Which Drugs block the cholinergic activity?
 - a) Cholinomimetic
 - b) Sympathomimetic
 - c) Cholinolytic
 - d) None of these
- (v) Which enzyme helps to synthesize acetylcholine?
 - a) Oxidoreductase
 - b) Choline Acetyl Transferase
 - c) Amylase
 - d) Transferase
- (vi) Which one of the following has a bicyclic nucleus in its structure?
 - a) Clidinium bromide
 - b) Pyridostigmine
 - c) Echothiophate iodide
 - d) Tropicamide
- (vii) Carbachol is synthesized from which compound?
 - a) Ethyl formate,
 - b) Ethanol,
 - c) Formic acid,
 - d) Ethylene chlorohydrin,
- (viii) Select the one that is a long acting barbiturate.
 - a) Midazolam,
 - b) Mephobarbital,
 - c) Risperidone,
 - d) None of these,
- (ix) Select the one that is an ultrashort acting barbiturate.

- a) Thiopental,
c) Procaine,
(x) Identify the natural source of hyoscyamine from the followings.
a) Panax ginseng
c) Atropa belladonna
(xi) Which one of the following is a barbiturate?
a) Phenobarbital
c) Aspirin
(xii) Identify the correct option how-pKa can be expressed.
a) $-\log K_a$,
c) $\log K_a$,
(xiii) What is the use of naphazoline?
a) Vasodilator,
c) Decongestant,
(xiv) Select among the following which can be used as an antianginal drug?
a) Propranolol,
c) Hyoscyamine,
(xv) State the correct option :carbachol is used for the treatment of
a) Chronic glaucoma,
c) Gout,
(xvi) State the correct option: isoflurophate is used for the treatment of
a) Pertussis,
c) Cholera,
(xvii) Which of the following condition is responsible for the adverse effects like dry mouth, mydriasis, blurred vision, tachycardia?
a) Antimuscarinics,
c) Cholinergics,
(xviii) Identify the following drugs is a 1,2,3,4- tetrahydroacridine derivative?
a) Galantamine,
c) Tacrine,
(xix) The natural source of Physostigmine is
a) Physostigma venenosum,
c) Panax ginseng,
(xx) Choose among the following which is a benzodiazepine?
a) Ampicillin,
c) Chlordiazepoxide,
b) Frusemide,
d) Muscarine,
b) Hyoscyamus niger
d) Acorus calamus
b) Clonazepam
d) Paracetamol
b) $\ln K_a$,
d) None of these,
b) Vasoconstrictor,
d) None of these,
b) Rivastigmine,
d) Digitoxin,
b) Inflammation,
d) Goitre,
b) Dengue,
d) Glaucoma,
b) Antinicotinics,
d) None of these,
b) Rivastigmine,
d) Nicotine,
b) Atropa belladonna,
d) Cassia angustifolia,
b) Aspirin,
d) Tamoxifen,

Group-B

(Short Answer Type Questions)

5 x 7=35

2. Describe drug metabolism by reductive reactions giving suitable examples. (5)

3. Illustrate with structure SAR of solanaceous alkaloids. (5)

4. Discuss biosynthesis of acetylcholine. (5)

5. Explain structure with SAR of muscarinic antagonist (5)

6. Brief on SAR of carbachol. (5)

7. Brief on the SAR of beta adrenergic blockers. (5)

OR

Explain with structure SAR of morphin analogues. (5)

8. Focus on short note of Piroxicam and its severe side effects.

OR

Illustrate the details of the drug diazepam.

(5)

Group-C

(Long Answer Type Questions)

10 x 2=20

9. Discuss briefly about partition co-efficient, hydrogen bonding and chelation in relation to biological action of drugs. (10)

10. Explain about the SAR of phenothiazines. (10)

OR

Illustrate the synthesis of phenylephrine, its properties and uses.

(10)
