



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Pharm-2020/B.Pharm-2021/B.Pharm-2022

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) Choose the option Replacement of -O- in a molecule by -S- is an example of:

- | | |
|--------------------------|------------------|
| a) Stereoisomerism | b) Homologation |
| c) Isosteric replacement | d) None of these |

(iii) Select the one which is used to send stimuli for interpretation.

- | | |
|----------------|-------------|
| a) Efferent | b) Afferent |
| c) Interneuron | d) Sensory |

(iv) Identify the receptors which binds with Acetyl choline.

- | | |
|------------|------------------|
| a) Alpha 1 | b) Beta 1 |
| c) M1 | d) None of these |

(v) Which Drugs block the cholinergic activity?

- | | |
|-------------------|--------------------|
| a) Cholinomimetic | b) Sympathomimetic |
| c) Cholinolytic | d) None of these |

(vi) Which is the enzyme that breaks Acetyl Choline?

- | | |
|---------------------------|--------------|
| a) Acetylcholine esterase | b) Lipase |
| c) Protease | d) Hydrolase |

(vii) Identify the affinity towards receptors when Alpha substitution in Acetyl choline occurs.

- | | |
|-----------------------------------|-----------------------------------|
| a) More decrease in affinity to M | b) More decrease in affinity to N |
| c) Affinity remain unchanged | d) None of these |

(viii) Identify the answer-Neostigmine is synthesized from-

- | | |
|---|---------------------------|
| a) m-Chloro-N,N-dimethylaminobenzene | b) 3-dimethylaminophenone |
| c) 3-(4-methoxyphenyl)-1- methylhydrazine | d) None of these |

(ix) Which one of the following is natural source of Galantamine?

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- a) *Leucocum aestivum* b) *Galanthus nivalis*
c) *Narcissus poeticus* d) All of these
- (x) Identify the natural source of hyoscyamine from the followings.
a) *Panax ginseng* b) *Hyoscyamus niger*
c) *Atropa belladonna* d) *Acorus calamus*
- (xi) Which one of the following disease is treated by anisotropine?
a) Inflammation b) Glaucoma
c) Stomach ulcers d) Gout
- (xii) Identify the correct answer-a structure which is used as the starting point for drug design and development is termed as
a) Active principle, b) Pharmacophore,
c) Lead compound, d) Orphan drug,
- (xiii) Select the atom which must be present in hydrogen bonding is
a) Hydrogen, b) Sodium,
c) Calcium, d) Sulphur,
- (xiv) Identify the Isostere of sulphur atom from the followings.
a) -NH-, b) -O-,
c) -Se-, d) All of these,
- (xv) State the correct option: isoflurophate is used for the treatment of
a) Pertussis, b) Dengue,
c) Cholera, d) Glaucoma,
- (xvi) Identify the following drugs which is an antihypertensive
a) Penicillin, b) Caffeine,
c) Aspirin, d) Mecamylamine,
- (xvii) State the following drugs which can be used in case of paralysis caused by skeletal muscle relaxants.
a) Neostigmine, b) Adrenaline,
c) Amphetamine, d) Aspirin,
- (xviii) Select the following drugs that is used as an antispasmodic.
a) Aspirin, b) Valproic acid,
c) Oxybutynin, d) Carbamazepine,
- (xix) Select the following drugs that is used as an antidote for organic phosphate poisoning
a) Pralidoxime, b) Metformin,
c) Aspirin, d) Griseofulvin,
- (xx) Identify from the following which is a depolarizing muscle relaxant
a) Suxamethonium, b) Lignocaine,
c) Diclofenac, d) Nalidixic acid,

Group-B

(Short Answer Type Questions)

5 x 7=35

2. Describe drug metabolism by reductive reactions giving suitable examples. (5)
3. Brief on the metabolism of catecholamine. (5)
4. Illustrate with structure SAR of solanaceous alkaloids. (5)
5. Identify the following drugs by their metabolic reaction clonazepam, aspirin, proconamide, chloromphenical. (5)
6. Brief on SAR of carbachol. (5)
7. Explain the mechanism of action of barbiturates. (5)

OR

- Illustrate the uses and side effects of aspirin. (5)

8. Illustrate the synthesis and SAR of phenytoin. (5)

OR

Classify antipsychotic drugs with example. (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. Categorize the general anesthetics with example and stages of anesthesia. (10)

OR

Illustrate on classification of anticonvulsant drugs according to chemical structure and give example from each category. (10)

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