



# BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Pharm-2019/B.Pharm-2020/B.Pharm-2021

Course Name – Medicinal Chemistry II

Course Code - BP501T

( Semester V )

Library  
Brainware University  
396, Ramkrishnanur Road, Barasat  
Kolkata, West Bengal-700125

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) Select the correct option. Insulin is secreted by the \_\_\_\_\_
- |  |                                |
|--|--------------------------------|
| a) $\alpha$ cells of Langerhans                                      | b) $\beta$ cells of Langerhans |
| c) Both $\alpha$ cells of Langerhans and $\beta$ cells of Langerhans | d) None of these               |
- (ii) Identify the correct option. Which of the following is a short acting Insulin preparation?
- |            |                  |
|------------|------------------|
| a) Novolog | b) Humulin       |
| c) Humalog | d) None of these |
- (iii) Select among the following which acts as a mediator of itching?
- |                  |                   |
|------------------|-------------------|
| a) Histamine     | b) Epinephrine    |
| c) Acetylcholine | d) Norepinephrine |
- (iv) Select from the following which is involved in inflammatory response?
- |                  |                  |
|------------------|------------------|
| a) Acetylcholine | b) Histamine     |
| c) Epinephrine   | d) Noradrenaline |
- (v) Select which subtype of the histamine receptors is located in gastric parietal cells?
- |       |       |
|-------|-------|
| a) H1 | b) H2 |
| c) H3 | d) H4 |
- (vi) Select the subtype of histamine receptors located in the CNS?
- |       |       |
|-------|-------|
| a) H1 | b) H2 |
| c) H3 | d) H4 |
- (vii) Identify the ethylene diamine derivative compound.
- |                |              |
|----------------|--------------|
| a) Pyrilamine  | b) Aspirin   |
| c) Paracetamol | d) Celecoxib |
- (viii) Select the compound which belongs to piperazine derivative group.

- a) Cyclizine  
 c) Ibuprofen
- b) Galantamine  
 d) Indomethacin
- (ix) Select the compound which belongs to the mono amino propyl derivative group.
- a) Ibuprofen  
 c) Aspirin
- b) Pheniramine  
 d) Omeprazole
- (x) Select the one which belongs to phenothiazine derivative group.
- a) Promethazine hydrochloride  
 c) Dopamine
- b) Atropine  
 d) Rivastigmine
- (xi) Select the one which belongs to the dibenzocycloheptene derivative group.
- a) Methotrexate  
 c) Cisplatin
- b) Cyproheptadine  
 d) Vincristine
- (xii) Identify which type of derivative compound is Cetrizine.
- a) Piperazine derivative  
 c) Dibenzapine derivative
- b) Pyrazole derivative  
 d) Phrenothiazine derivative
- (xiii) Identify which type of derivative compound is Buclizine.
- a) Piperazine derivative  
 c) Phenyl ethyl amine derivative
- b) Pyridine derivative  
 d) Phenothiazine derivative
- (xiv) Select the precursor of the synthesis of Diphenhydramine is \_\_\_\_\_
- a) Diphenylmethane  
 c) Aniline
- b) Formic acid  
 d) Pyridine
- (xv) Identify which of the following is used for the treatment of allergy?
- a) Timolol  
 c) Nimesulide
- b) Aspirin  
 d) Cetrizine
- (xvi) Select which one of the following drugs is used for the treatment of hay fever?
- a) Diphenhydramine  
 c) Cisplatin
- b) Vinblastine  
 d) Methotrexate
- (xvii) Select which one of the following drugs is used for the treatment of allergic rhinitis?
- a) Nicotine  
 c) Bitolterol
- b) Chlorpheniramine maleate  
 d) Omeprazole
- (xviii) Identify the alternative use of Minoxidil?
- a) it helps to rebuild immunity  
 c) it helps in hair growth
- b) it helps in osteoporosis  
 d) it helps in blood circulation
- (xix) Identify the position of purine base which is occupied in alkylation by nitrogen mustard?
- a) 5  
 c) 7
- b) 6  
 d) 8
- (xx) identify the correct option. Mechanism of action of Isosorbide di nitrate is:
- a) relaxation of vascular smooth muscle  
 c) arteriolar relaxation
- b) dilation of peripheral artery  
 d) all of these

### Group-B

(Short Answer Type Questions)

5 x 7=35

2. Discuss about the Lipid lowering agents. (5)
3. Discuss about the uses and adverse effect of the following compounds: i) Acetazolamide ii) Frusemide (5)
4. Describe the drugs L-Thyroxine and Liothyronine sodium (5)
5. Establish the mechanism of action for cortisone schematically (5)
6. Explain on the SAR of H<sub>2</sub>-Antagonist drug. (5)

7. Explain the mechanism of action for menadione with its chemical structure and nomenclature (5)

OR

Describe loop diuretics with example. Briefly explain the mechanism of action of loop diuretics. (5)

8. Explain the mechanism of digoxin with its uses and adverse effects. (5)

OR

Classify the anticoagulant drugs with examples (5)

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**Group-C**

(Long Answer Type Questions)

10 x 2=20

9. Illustrate the mechanism of action of Disopyramide phosphate and its pharmacology. (10)

10. Explain the synthesis and SAR of nitroglycerine. (10)

OR

Organized the various important points for the study of the structure activity relationships of Loop Diuretics with few chemical structures. (10)

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