



BRAINWARE UNIVERSITY

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Term End Examination 2025-2026

Programme – B.Pharm-2020/B.Pharm-2021/B.Pharm-2022/B.Pharm-2023

Course Name – Medicinal Chemistry II

Course Code - BP501T

(Semester V)

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 among the following which acts as a mediator of itching.

a) Histamine	b) Epinephrine
c) Acetylcholine	d) Norepinephrine
- (ii) Identify the subtype of the histamine receptors mediates acidity.

a) H1	b) H3
c) H2	d) None of these
- (iii) Select which subtype of the histamine receptors is located in gastric parietal cells.

a) H1	b) H2
c) H3	d) H4
- (iv) Select the subtype of histamine receptors located in the CNS.

a) H1	b) H2
c) H3	d) H4
- (v) Identify the compound which belongs to amino alkyl ether derivative group.

a) Aspirin	b) Chloramphenicol
c) Diphenhydramine	d) Nimesulide
- (vi) Select the compound which belongs to piperazine derivative group.

a) Cyclizine	b) Galantamine
c) Ibuprofen	d) Indomethacin
- (vii) Identify which type of derivative compound is Cetrizine.

a) Piperazine derivative	b) Pyrazole derivative
c) Dibenzapine derivative	d) Phrenothiazine derivative
- (viii) Select the precursor of the synthesis of Diphenhydramine is _____.

a) Diphenylmethane	b) Formic acid
c) Aniline	d) Pyridine
- (ix) Select which one of the following drugs is used for the treatment of allergic rhinitis.

a) Nicotine	b) Chlorpheniramine maleate
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- c) Bitolterol
(x) Select which of the following drug is a mast cell stabilizer.
a) Nicotine
c) Muscarine
(xi) Identify the alternative use of Minoxidil.
a) it helps to rebuild immunity
c) it helps in hair growth
(xii) Justify the statement-Imidazole ring is not mandatory to have H₂-antagonistic activity
a) The statement is correct
c) May be correct
(xiii) Recognize the correct option .Which one of the following drugs is used in congestive heart failure?
a) Nesiritide
c) Digitoxin
(xiv) Select the correct option. Glucocorticoids consist of _____ number of Carbon atoms.
a) 32
c) 25
(xv) Select the correct option. Insulin is secreted by the _____
a) α cells of Langerhans
c) Both α cells of Langerhans and β cells of Langerhans
(xvi) Identify the correct option. Which of the following is a short acting Insulin preparation?
a) Novolog
c) Humalog
(xvii) Identify the drug which is used as a bile acid sequestrant.
a) Lisinopril
c) Cholestipol
(xviii) Select the correct option. Class IV Antiarrhythmic drugs acts by blocking:
a) Ca⁺⁺ channel
c) K⁺ channel
(xix) The particular amino acid part that is common in ACE inhibitor is
a) Alanine
c) Glycine
(xx) Introduction of 3-hydroxy group and 3-keto group in the androstane ring
a) Decreased the androgenic activity
c) caused the toxicity
d) Omeprazole
b) Esmolol
d) Cromolyn sodium
b) it helps in osteoporosis
d) it helps in blood circulation
b) The statement is not correct
d) none of these
b) Digoxin
d) All of these
b) 21
d) 20
b) β cells of Langerhans
d) None of these
b) Humulin
d) None of these
b) Verapamil
d) Cyproheptadiene
b) Na⁺ channel
d) None of these
b) Serine
d) Proline
b) Increased the androgenic activity
d) no changed in the androgenic activity

Group-B

(Short Answer Type Questions)

5 x 7=35

2. Describe about the drug sotalol. (5)
3. Produce the synthetic steps involved in tolbutamide and write the adverse effects of it. (5)
4. State the mechanism of action of alkylating agent. (5)
5. Give examples of RAAS inhibitors of each category with their uses and adverse effects. (5)
6. Discuss about H₂ antagonists and its classification. (5)
7. Prioritize about anticoagulants and classify it. (5)

OR

- Explain the SAR of thiazide diuretics. (5)
8. Focus on the SAR of Promethazine along with IUPAC name and uses. (5)

OR

Classify the drugs used in congestive heart failure with examples.

(5)

Group-C

(Long Answer Type Questions)

10 x 2=20

9. List out the structure and uses of the following drugs: captopril, propranolol, warfarin & heparin. (10)
10. Explain anti-hyperlipidemic agents with classification and mention its mechanism of action. (10)

OR

Explain the synthesis and SAR of Nitroglycerine.

(10)
