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Pharmaceutical Technology
Brainware University
Barasat, Kolkata-700125

BRAINWARE UNIVERSITY

Term End Examination 2024-2025

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

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) Select from the following which is involved in inflammatory response.
 - a) Acetylcholine
 - b) Histamine
 - c) Epinephrine
 - d) Noradrenaline
- (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 ethylene diamine derivative from the followings.
 - a) Pyrilamine
 - b) Aspirin
 - c) Paracetamol
 - d) Celecoxib
- (vi) Select the compound which belongs to piperazine derivative group.
 - a) Cyclizine
 - b) Galantamine
 - c) Ibuprofen
 - d) Indomethacin
- (vii) Select the compound which belongs to the mono amino propyl derivative group.
 - a) Ibuprofen
 - b) Pheniramine
 - c) Aspirin
 - d) Omeprazole
- (viii) Select the one which belongs to phenothiazine derivative group.

- a) Promethazine hydrochloride b) Atropine
c) Dopamine d) Rivastigmine
- (ix) Identify which of the following agents is a glucosidase inhibitor?
a) Acrabose b) Pepsin
c) Dezocine d) Butorphanol
- (x) Identify , Omeprazole is a _____
a) Proton pump inhibitor b) Beta blocker
c) Antineoplastic agent d) Antihistaminic
- (xi) Identify which one of the following is a mast cell stabilizer.
a) Nicotine b) Esmolol
c) Muscarine d) Cromolyn sodium
- (xii) Identify the use of Diuretics.
a) increase blood flow rate b) increase urine flow rate
c) increase reabsorption d) none of these
- (xiii) Select the use of Quinidine.
a) Antihypertensive drug b) Antianginal drug
c) Anticancer drug d) Antiarrythmic drug
- (xiv) Select the one which is a mineralocorticoid.
a) Amiloderone b) Spironolactone
c) Frusemide d) Acetazolamide
- (xv) Which drug acts as nitric oxide donor?
a) Sotalol b) Clofibrate
c) Nifedipine d) Nitroglycerine
- (xvi) Select the correct option. Insulin consists of _____ amino acids.
a) 51 b) 60
c) 80 d) 90
- (xvii) The drugs used for the treatment of Zollinger-Ellison syndrome is
a) Isoproterenol b) Famotidine
c) Carboplatin d) Aspirin
- (xviii) Identify the correct option. The compound with tri nitrate ester of glycerol used as a Nitroglycerine compound is
a) 1,2,4-butanetriol trinitrate b) 1,3,5-pentanetriol trinitrate
c) 1,2,3-propanetriol trinitrate d) none of these
- (xix) Select the correct option. Class IV Antiarrhythmic drugs acts by blocking:
a) Ca++ channel b) Na+ channel
c) K+ channel d) None of these
- (xx) The particular amino acid part that is common in ACE inhibitor is
a) Alanine b) Serine
c) Glycine d) Proline

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Group-B

(Short Answer Type Questions)

5 x 7=35

2. Discuss about the uses and adverse effect of the following compounds: i) Acetazolamide ii) Frusemide. (5)
3. Describe loop diuretics with example. Briefly explain the mechanism of action of loop diuretics. (5)

4. Describe about the drug sotalol. (5)

5. Describe the chemical structure with chemical name and uses of Betamethasone (5)

6. Illustrate the mechanism of action of Carbonyl anhydrase inhibitor diuretics. (5)

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

OR

Classify the anticoagulant drugs with examples (5)

8. Produce the synthetic steps involved for Tolbutamide and write the adverse effects of it (5)

OR

Write the synthesis of mechloroethamine and pharmacological uses of it (5)

Group-C

(Long Answer Type Questions)

10 x 2=20

9. Represent the synthesis, mode of action and uses of Cimetidine. (10)

10. Explain anti-hyperlipidemic agents with classification and mention its mechanism of action. (10)

OR

Explain the synthesis and SAR of Nitroglycerine. (10)

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