

**B. PHARM.
FIFTH SEMESTER
MEDICINAL CHEMISTRY-II
BP501T [REPEAT]
[USE OMR FOR OBJECTIVE PART]**

**SET
A**

Full Marks : 75

Duration : 3 hrs.

Time : 30 min.

Marks : 20

1×20=20

PART-A: Objective

Choose the correct answer from the following:

- For the formation of histamine ___ enzyme is used
 - Histidine decarboxylase
 - Histidine decarboxylase
 - Histidine carboxylase
 - Histidine carboxylase
- Which of the following is a second-generation antihistamine?
 - Meclizine
 - Loratadine
 - Thioperamide
 - Promethazine
- First generation antihistamines have _____ nature.
 - Alkylating
 - Antipyretic
 - Analgesic
 - Sedative
- Which of the following histamine receptor helps in gastric acid secretion-
 - H1
 - H2
 - H3
 - H4
- Which of the following is an example of alpha-adrenergic blocker?
 - Labetalol
 - Terazosin
 - Atenolol
 - Losartan
- What is the smallest functional unit of kidney?
 - Nephron
 - Ureter
 - Urethra
 - Renal cortex
- T₄ represents-
 - Thyroxine
 - Thyronine
 - Triiodothyronine
 - Calcitonin
- Which of the following is purine antagonist?
 - Thioguanine
 - Fluorouracil
 - Cisplatin
 - Etoposide
- Which of the following is an example of aromatase inhibitor-
 - Letrozole
 - Finasteride
 - Flutamide
 - Fosfestrol

10. Which of the following is an example of antimetabolite-
 - a. Methotrexate
 - b. Dacarbazine
 - c. Imatinib
 - d. Tamoxifen
11. is an example of osmotic diuretics-
 - a. Amiloride
 - b. Triamterene
 - c. Clopamide
 - d. Glycerol
12. Which of the following is not an example of antithyroid drug-
 - a. Thiocyanates
 - b. ^{131}I
 - c. Methimazole
 - d. L-Thyroxine
13. For the treatment of hypertension, Methyldopa acts as a-
 - a. Vasodilator
 - b. ACE inhibitor
 - c. Angiotensin blocker
 - d. Central sympatholytic
14. What is the starting compound to synthesis of disopyramide?
 - a. 2-bromopyridine & 3-phenylacetonitrile
 - b. 2-bromopyridine & 2-phenylacetonitrile
 - c. 3-bromopyridine & 2-phenylacetonitrile
 - d. 3-bromopyridine & 3-phenylacetonitrile
15. The site of action for Spironolactone is-
 - a. Proximal tubule/loop of henle
 - b. Distal tubule/collecting duct
 - c. Ascending loop of henle/distal tubule
 - d. Both b&c
16. Which of the following is a high potency injectable anesthesia?
 - a. Procaine
 - b. Lidocaine
 - c. Tetracaine
 - d. Prilocaine
17. The hydrophilic portion of amide derivatives containamine-
 - a. Primary
 - b. Secondary
 - c. Tertiary
 - d. Quaternary
18. What is the starting compound to synthesis benzocaine?
 - a. Toluene
 - b. p-nitrobenzoic acid
 - c. Phenol
 - d. Acetic anhydride
19. What is the molecular formula for acetic anhydride ?
 - a. $(\text{CH}_3\text{CO}_2)_2$
 - b. $(\text{CH}_3\text{CO})_2$
 - c. $(\text{CH}_3\text{CO})_2\text{O}$
 - d. $(\text{CH}_3\text{CO})\text{O}$
20. In the structure of acetazolamide which ring system is present?
 - a. Diazo ring
 - b. Thiazotriazole ring
 - c. Thiadiazole ring
 - d. Thiazole ring

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PART-B: Descriptive

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven (7) questions]

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|---|---|
| 1. What is histamine? Write the SAR of H1 antagonist? | 5 |
| 2. Write the SAR of Proton pump inhibitor? | 5 |
| 3. Write the SAR of diphenyl alkylamine derivatives? | 5 |
| 4. Describe the mechanism of action for loop diuretics with a clean diagram? | 5 |
| 5. Define antiarrhythmic drugs? Write the classification? Write the SAR of phenytoin? | 5 |
| 6. Write the mechanism of action in brief for thyroid and anti-thyroid drugs? | 5 |
| 7. Describe the SAR of the following- a. Thiazides
b. acetazolamide | 5 |
| 8. Define anti-hyperlipidaemic drugs? Write the classification? Describe the mechanism of action for HMG-CoA reductase inhibitor? | 5 |
| 9. Define local anesthetics? Write the classification? Describe the SAR of benzoic acid derivative? | 5 |

PART-C : Long type questions

[Answer any two (2) questions]

1. Draw the structure of the following compounds with two uses of each- 10
 1. Diphenhydramine
 2. Cimetidine
 3. Methotrexate
 4. Furosemide
 5. Warfarin
 6. Procaine
 7. Tolbutamide
 8. Prednisolone
 9. Progesterone
 10. Procainamide
 11. Captopril and
 12. Promethazine

2. Define antineoplastic agents? Write the classification for cytotoxic drugs? Write the SAR for mechlorethamine. Write synthesis of Mercaptopurine with two uses. 10

3. Write the synthesis with two uses for the following drugs - 10
 1. Isosorbide dinitrate
 2. Warfarin
 3. Disopyramide phosphate
 4. Benzocaine
 5. Furosemide

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