

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

**SET
B**

Duration : 3 hrs.

Full Marks : 75

Time : 30 min.

Marks : 20

1×20=20

PART-A: Objective

Choose the correct answer from the following:

1. In the structure of acetazolamide which ring system is present?
a. Diazo ring
b. Thiatriazole ring
c. Thiadiazole ring
d. Thiazole ring
2. What is the molecular formula for acetic anhydride?
a. $(CH_3CO_2)_2$
b. $(CH_3CO)_2$
c. $(CH_3CO)_2O$
d. $(CH_3CO)O$
3. What is the starting compound to synthesis benzocaine?
a. Toluene
b. p-nitrobenzoic acid
c. Phenol
d. Acetic anhydride
4. The hydrophilic portion of amide derivatives containamine-
a. Primary
b. Secondary
c. Tertiary
d. Quaternary
5. Which of the following is a high potency injectable anesthesia?
a. Procaine
b. Lidocaine
c. Tetracaine
d. Prilocaine
6. 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
7. What is the starting compound to synthesis of disopyramide?
a. 2-bromopyridine & 3-phenylacetone nitrile
b. 2-bromopyridine & 2-phenylacetone nitrile
c. 3-bromopyridine & 2-phenylacetone nitrile
d. 3-bromopyridine & 3-phenylacetone nitrile
8. For the treatment of hypertension, Methyl dopa acts as a-
a. Vasodilator
b. ACE inhibitor
c. Angiotensin blocker
d. Central sympatholytic
9. Which of the following is not an example of antithyroid drug-
a. Thiocyanates
b. ^{131}I
c. Methimazole
d. L-Thyroxine

10. is an example of osmotic diuretics-
 - a. Amiloride
 - b. Triamterene
 - c. Clopamide
 - d. Glycerol
11. Which of the following is an example of antimetabolite-
 - a. Methotrexate
 - b. Dacarbazine
 - c. Imatinib
 - d. Tamoxifen
12. Which of the following is an example of aromatase inhibitor-
 - a. Letrozole
 - b. Finasteride
 - c. Flutamide
 - d. Fosfestrol
13. Which of the following is purine antagonist?
 - a. Thioguanine
 - b. Fluorouracil
 - c. Cisplatin
 - d. Etoposide
14. T₄ represents-
 - a. Thyroxine
 - b. Thyronine
 - c. Triiodothyronine
 - d. Calcitonin
15. What is the smallest functional unit of kidney?
 - a. Nephron
 - b. Ureter
 - c. Urethra
 - d. Renal cortex
16. Which of the following is an example of alpha-adrenergic blocker?
 - a. Labetalol
 - b. Terazosin
 - c. Atenolol
 - d. Losartan
17. Which of the following histamine receptor helps in gastric acid secretion-
 - a. H1
 - b. H2
 - c. H3
 - d. H4
18. First generation antihistamines have _____ nature.
 - a. Alkylating
 - b. Antipyretic
 - c. Analgesic
 - d. Sedative
19. Which of the following is a second-generation antihistamine?
 - a. Meclizine
 - b. Loratadine
 - c. Thioperamide
 - d. Promethazine
20. For the formation of histamine _____ enzyme is used
 - a. Histidine decarboxylase
 - b. Histidine decarboxylase
 - c. Histidine carboxylase
 - d. Histidine carboxylase

(PART-B: Descriptive)

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven (7) questions]

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 5
b. acetazolamide
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