# Question Paper

Exam Date & Time: 13-May-2024 (10:00 AM - 01:00 PM)

## MANIPAL ACADEMY OF HIGHER EDUCATION

**BPharm - Semester VI**
End semester theory examinations May 2024
**Medicinal Chemistry III (Theory) [PCH-BP601T-S3]**

**Marks: 75** **Duration: 180 mins.**

**I Multiple Choice Questions (MCQs)**

**Answer all the questions.** Section Duration: 30 mins

1) The drug used for the treatment of filariasis is (1)

- Albendazole
- Thiabendazole
- Piperazine citrate
- Diethyl carbamazine citrate

2) Difluroquinolone derivative is (1)

- Lomifloxacin
- Enoxacin
- Ofloxacin
- Norfloxacin

3) Drug used for Schistosomiasis is (1)

- Ivermectin
- Eflornithine
- Oxaminiquine
- Atovaquone

4) Sulpha drug used for local infections is. (1)

- Sulpha pyridine
- Sulpha diazine
- Sulphamethoxazole
- .
- Sulphasalazine

5) Drug that inhibits helminth specific enzyme fumarate reductase is (1)

- Albendazole
- Thiabendazole.
- Mebendazole
- Metronidazole

6) Loracarbef is a (1)

- Carbopenam
- Oxopenam

Carbocepham
Thiopenam

7) An antibiotic with Antifungal property is (1)

Fradicin
Cloxacillin
Oxacillin
Dicloxacillin

8) Cephalosporin derivative used for the treatment of meningitis.is (1)

Ceftizoxime
Cefamandole
Ceftazidime
Cefoperazone

9) Penicillin v is orally active because of the presence of (1)

Phenyl group
Benzyl group
Methyl group
Oxygen atom.

10) Which drug is an inhibitor of DHP-1 enzyme? (1)

Imipenam
Thienamycin
Clavulanic acid
Biapenam

11) In cefotaxime which isomer is shows more beta lactamase property? (1)

Syn isomer
Anti isomer
Dextro isomer
Levo isomer

12) An example for purine nucleoside antiviral drug is (1)

Ritonavir
Iodoxuridine
Acyclovir
Saquinavir

13) (1)

Identify the correct statement with respect to erythromycin

Erythromycin is fairly stable in acids
Erythromycin is fairly stable in aqueous bases but is sensitive to acids
Erythromycin is unstable in aqueous bases
Erythromycin is unstable in aqueous bases and acids

14) Identify the wrong statement with respect to Lincosamide antibiotics (1)

They are sulfur-containing antibiotics
Weakly acidic in nature
They inhibit peptidyl transferase action
Have 8-carbon sugar in their structure

15) Identify the wrong statement with respect to Quinine (1)

- It is a 6'-methoxyquinoline derivative
- Oxidation of C-9 alcohol ketone results in decrease in activity
- Quinuclidine is not essential
- Replacement of methoxy with chlorine decreases the activity.

16) Identify the wrong statement with respect to Chloroquinine (1)

- Chloroquine is a weakly acidic compound
- It is a 4-Amino Quinoline derivative
- The d-isomer less toxic
- Inhibits hemozoin formation

17) Identify the wrong statement with respect to Pyrazinamide (1)

- It is a prodrug
- It is active only under acidic conditions
- It is freely soluble in water
- It is a first line drug

18) Streptomyces orchidaceus is the source of (1)

- Streptomycin
- Rifampicin
- Cycloserine
- Capreomycin

19) Identify the Quinoline antitb drug (1)

- Amikacin
- Moxifloxacin
- Ethionamide
- Delamanid

20) Identify the molecule which is not a prodrug. (1)

- Prontosil
- Dipivefrine
- Benorylate
- PAS

## II Long Answers

**Answer all the questions.**

1) 1A. Explain the chemistry, SAR, MOA of action of tetracyclines and write the structure and uses of two Penicillin derivatives. (10)
1B Outline the synthesis of sulphacetamide and Metronidazole.

2) Give the structure, mechanism of action and SAR of Pamaquine.Give the synthesis, mechanism of action and uses of Chloramphenicol. (10)

## III Short Answers

**Answer all the questions.**

1) Write the structure and uses of the following. a) Nalidix acid b) Norfloxacin c) Streptomycin d) (5)

| | | |
|---|---|---|
| | Iodoxuridine | |
| 2) | Classify antifungal drugs giving one structure from each class. Discuss the SAR of sulpha drugs. | (5) |
| 3) | Classify anti protozoal and anthelmintics agents giving one structure from each class and outline the method of synthesis of ciprofloxacin. | (5) |
| 4) | Discuss the degradation reactions of penicillins.Write the structures of one antiviral drug and one folate reductase inhibitors. | (5) |
| 5) | Write the structure of a) Pyrazinamide b) Ethambutol c) PAS d) cycloserine. Explain the mechanism of action of any two of them. | (5) |
| 6) | Explain the electronic factor and its importance in drug discovery. Explain the applications of combinatorial synthesis | (5) |
| 7) | Explain site specific prodrugs and Mutual prodrugs with examples. | (5) |

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