

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**

**End Semester Examination – Summer 2022**

**Course: B. Pharmacy**

**Sem: VI**

**Subject Name: Medicinal Chemistry-III**

**Subject Code: BP601T**

**Max. Marks: 75**

**Date: 13/07/2022**

**Duration: 3.45 Hrs.**

**Instructions –**

- 1. All questions are compulsory**
- 2. Answers to MCQs should be written in full sentences**
- 3. Draw diagrams / figures wherever necessary**
- 4. Figures to right indicate full marks**

**Q. 1. Multiple Choice Questions (MCQs) = 20 x 1 = 20 (All the questions are compulsory)**

- i) Basic Nucleus of Cephalosporins and Penicillins is.....
- Lactone
  - Thiazole
  - Lactam Ring
  - Beta Lactam Ring
- ii) Streptomycin is produced by which of the following organisms?
- Streptomyces griscus
  - Streptomyces fradiae
  - Streptomyces noursei
  - Streptomyces nodosus
- iii) What is Target for clavulanic acid?
- Lactamase
  - L-alaracemase
  - The transpeptidase enzyme
  - Penicillin acylase
- iv) Aminoglycosides work by irreversibly binding to the..... ribosomal subunit.
- 50S
  - 30S
  - both
  - none
- v) Benzyl Penicillin is chemical name for which of the following penicillin..?
- Penicillin-G
  - Penicillin-V
  - Penicillin-F
  - Phenethicin
- vi) Chemically tetracycline is derivative of.....
- Purine
  - Pyridine
  - Octahydronaphthacene
  - Phenanthrene
- vii) Which is naturally occurring anti-malaria drug?
- Quinacrine
  - Artemisinin
  - Mepacrine
  - Mefloquine
- viii) Chloroquine can be synthesized by reaction of 4-diethylamino-1-methylbutylamine with?
- 4,7-dichloroquinoline
  - $\alpha$ -naphthol
  - $\beta$ -naphthol
  - None of the above
- ix) What is co-trimoxazole?
- Sulphamethoxazole + trimethoprim, 3:1



## Q. 2. Long Answers

2 x 10 = 20 (Answer 2 out of 3)

1. What are antibiotics? Give Chemical Classification of antibiotics with structures. Discuss in brief about Chemistry and SAR of antibiotics containing Penam ring system.
2. Classify antimalarial agents. Discuss SAR and MOA of 4-aminoquinolines and 8-aminoquinolines. Outline the synthetic scheme for Chloroquine.
3. Classify Sulphonamides with structures. Write Chemistry and MOA of Sulpha drugs. Add note of DHFR inhibitor. Give the synthesis of Trimethoprim.

## Q. 3. Short Answers

7 x 5 = 35 (Answer 7 out of 9)

- i) Discuss chemistry, SAR and MOA of Tetracycline.
- ii) What are anti-mycobacterial agents? Draw the structures of any two anti-tubercular drugs. Outline the synthesis of p-amino salicylic acid.
- iii) Write in brief about anthelmintics. Outline synthetic scheme for Mebendazole.
- iv) What are aminoglycosides? Write MOA and Chemistry of aminoglycosides.
- v) Define Prodrug. Give the Applications of Prodrug with examples.
- vi) Classify antiviral agents. Discuss in brief about RTI's.
- vii) Discuss chemistry, SAR, MOA of fluoroquinolone antibacterial agents giving synthetic of Ciprofloxacin.
- viii) Write a note on combinational chemistry & its applications in drug discovery.
- ix) Give chemical classification of antifungal drugs with example. discuss chemistry of Imidazole antifungal

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