

Exam Code: 0433

Sub. Code: 3453

2022

M.Sc. (Applied Chemistry/Pharmaceutical)

Third Semester

Paper – 301: Medicinal Chemistry

Time allowed: 3 Hours

Max. Marks: 60

**NOTE:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.

x-x-x

I. Attempt the following:-

- a) What are antimycobacterial drugs? Give an example
- b) What is progesterone? Give its structure and use
- c) Give the name and structure of active metabolites of the drug benorylate?
- d) Give the name and structure of a narcotic analgesic which is a drug of abuse
- e) What are calcium channel blockers? Give one example with structure
- f) What are beta lactamase inhibitors? Give an example
- g) Write the clinical use and structure of Phenylbutazone
- h) Write name, structure and uses of two water soluble vitamins
- i) Name a surface anaesthetic used in ear drop solutions and write its structure.
- j) What are lead compounds? Explain with examples
- k) Give structure of benzodiazepine and give its clinical uses
- l) What is lead de novo drug designing?

(12x1)

### UNIT - I

- II. a) Discuss penicillin antibiotic and their MOA.  
b) Give the structure, synthesis and uses of i) Propanolol ii) Pyraznamide (6,6)
- III. a) Discuss the chemistry of cephalosporin antibiotic with their SAR.  
b) Discuss antitubercular drugs with their MOA. (6,6)

### UNIT - II

- IV. a) Discuss the chemistry of morphine.  
b) Give the structure, category and uses of i) Indomethacin ii) Ibuprofen (6,6)
- V. a) Classify local anaesthetics giving and example from each class.  
b) What are anti-tussives? Classify with examples. (6,6)

P.T.O.

(2)

**UNIT - III**

- VI. a) Discuss the chemistry and SAR of tricyclic antidepressants.  
b) Write the structure, synthesis and clinical use of i) Pentobarbitone sodium  
ii) Diazepam
- VII. a) What is epilepsy? Which drugs are used to relieve convulsions?  
b) Give the MOA of benzodiazepines and discuss their chemistry (6,6)

**UNIT - IV**

- VIII. a) What are Prodrugs? Give some categories with examples.  
b) Discuss i) Salbutamol ii) Adrenaline. To which category do they belong? (6,6)
- IX. a) What is pharmacokinetic approach in drug designing?  
b) Explain the use of Prodrugs in medicinal field. (6,6)

x-x-x