

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

- Q.1 **Briefly answer the following-** 1×12
- i. Clinical uses of propranolol
  - ii. IUPAC name of cyclopropane
  - iii. Draw the structure of gentamicin and streptomycin
  - iv. Differentiate between penicillin's and cephalosporin's
  - v. Common mechanism of action of tetracycline
  - vi. Write structure of any two anti mycobacterium drugs
  - vii. What are antitussive agents
  - viii. Draw structure of phenytoin and its IUPAC name
  - ix. Name one long acting barbiturates and its clinical use
  - x. Structure of isoprenaline
  - xi. What is combinatorial chemistry
  - xii. What is drug designing
- UNIT I**
- Q.2 a) Classify antiarrhythmic drugs and their common mode of action with suitable example. 6,6
- b) Explain drug metabolism reactions with suitable example 6,6
- Q.3 Discuss the following-
- a) Structure, synthesis and clinical uses of cyclosporine
  - b) Structure of any two sulphonamides and their therapeutic uses
- UNIT II**
- Q.4 a) Classify local anesthetic with suitable example 6,6
- b) Discuss the mechanism of action and synthesis of cyclopropane 6,6
- Q.5 Discuss mechanism of action and clinical uses of the following
- a) Indomethacin
  - b) Bromohexine
- UNIT III**
- Q.6 Give synthesis and uses of the following 6,6
- a) Pentobarbitone sodium
  - b) Theophylline
- Q.7 Draw the structure and mechanisms (any two drugs) of the following categories - 6,6
- a) Antidepressant drug
  - b) Benzodiazepines
- UNIT IV**
- Q.8 a) Discuss the storage, release and metabolism of any one catecholamine with suitable structures 6,6
- b) Write a note on "discovery of lead compounds" 6,6
- Q.9 Write note on the following
- a) Lead based methods
  - b) Combinatorial chemistry

x-x-x