

Exam Code: 0433
Sub. Code: 25928

2125
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

- Q1. a) What does the generic name of a drug signify? Give an example.
b) What is the metabolite of amitriptyline? Write its application.
c) Write the category and applications of propofol.
d) What is folic acid? Give its uses.
e) What are anti-seizure drugs? Give an example.
f) Where & how is codeine metabolized?
g) Write the general MOA of antibiotics.
h) What are MAO inhibitors? Give an example.
i) What is arrhythmia? Give one example of an antiarrhythmic drug.
j) Give the structure and uses of gentamicin.
k) Write the name and structure of a sulphonamide used topically for burns.
l) What are anti leprotic drugs? Give an example.

(1 mark each)

UNIT – 1

- Q2. a) What is Pharmacokinetics? Discuss Phase 1 reactions in details.
b) Discuss the chemistry of Tetracyclines. Write their applications also.

(6,6)

- Q3. a) What are β -lactam antibiotics. Discuss their chemistry and applications.
b) What are ace-inhibitors? Give their examples and applications.

(8,4)

UNIT – 2

- Q4. a) Discuss the chemistry and MOA of general anaesthetics.
b) What are narcotic analgesics? How do they differ from NSAIDs? Give two examples of each class with applications.

(6,6)

- Q5. a) Discuss the SAR of Local anaesthetics.
b) Give the category, structure and clinical applications of the following drugs:
(i) Indomethacin (ii) Pethidine (iii) Phenylbutazone

(6,6)

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(2)

UNIT – 3

- Q6. a) What are benzodiazepines? Give the SAR and applications of benzodiazepines.
b) Differentiate between sedatives and hypnotic drugs. Give the SAR of this category of drugs. (6,6)
- Q7. a) Discuss the SAR of tricyclic antidepressant drugs.
b) Discuss the type of epileptic seizures and drugs used to treat epilepsy. (6,6)

UNIT – 4

- Q8. a) Discuss the application of prodrugs with suitable examples. Explain Trojan horse approach.
b) Discuss De-novo drug designing and its application in drug discovery (6,6)
- Q9. a) What are lead compounds? Discuss lead-based drug discovery.
b) Give the application and structure of
(i) Terbutaline (ii) Dopamine (iii) Salbutamol (6,6)

x-x-x