

BACHELOR OF PHARMACY (B. PHARM.) (CBCS-2019 COURSE)

B. Pharm. Sem-IV : WINTER- 2022

SUBJECT : MEDICINAL CHEMISTRY-I

Day : Monday

Time : 02:00 PM-05:00 PM

Date : 23-01-2023

W-20671-2022

Max. Marks : 75

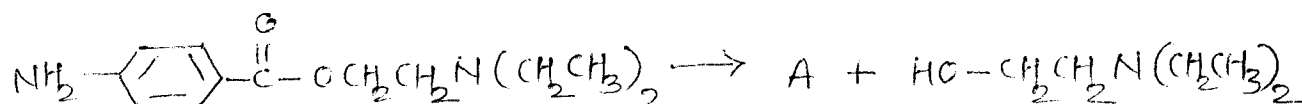
N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION-I

Q.1 Answer all questions: (20)

- a) Enlist different enzymes that catalyzes oxidation in phase I metabolism of drugs.
- b) Predict 'A' in the following hydrolysis of Procaine.



- c) Define solubility. Give different methods to improve solubility of drugs.
- d) Define Bioisosterism. Give classification of bioisosters with one example.
- e) Draw structure and chemical name of Ephedrine.
- f) Explain biological hydrolysis of acetylcholine.
- g) Give structure and uses of Pralidoxime.
- h) Give two examples of non-selective reversible alpha blockers with their structure.
- i) How protein binding affects the bioavailability of drugs.
- j) Explain the role of Cytochrome P-450 monooxygenase in oxidative biotransformations.

Q.2 Answer any **TWO** of the following: (20)

- a) Explain SAR of sympathomimetic agents with suitable examples.
- b) Define Drug Metabolism. Explain Phase II metabolism in detail with suitable examples.
- c) Define cholinolytic agents. Give any two examples of cholinolytic agents from natural alkaloid class with structure, chemical name, mode of action and uses.

SECTION-II

Q.3 Answer any **SEVEN** of the following: (35)

- a) What are anticonvulsant agents? Classify it on the basis of chemical nature with their structures. Explain SAR of hydantoin derivatives.
- b) Explain chemistry and MOA of Benzodiazepine as sedative and hypnotic agent.
- c) Write a note on chemistry of General Anesthetics.
- d) Explain SAR of Morphine analogues.
- e) Write a note ring analogues of Phenothiazine.
- f) What are anti-inflammatory agents? Give chemical classification of anti-inflammatory agents with suitable examples.
- g) Draw structure and uses of following drugs:
 - i) Methadone
 - ii) Ketamine
 - iii) Ibuprofen
 - iv) Methohexital Sodium
 - v) Chlorpromazine
- h) Write a note on opioid analgesics.
- i) Outline scheme of synthesis of Phenytoin and Carbamazepine.