

(3 Hours)

(Total Marks : 70)

- N. B. :** (1) All questions are **compulsory**.
 (2) **Figures** to the **right** indicate **full marks**.

1. a) Answer the following:**(12)**

- i) What is biotransformation of drugs?
- ii) Discuss mechanism of action spironolactone.
- iii) What are limitations of oral route of administration?
- iv) "Classify adrenergic receptors". Give examples of agonist & antagonist for each receptors.
- v) Why HDL is known as a good cholesterol?
- vi) Write a note on cholinergic drugs used as miotics.

b) Answer the following :**(3)**

- i) Explain terms 'drug potency' & 'efficacy'.
- ii) Give mode of action of captopril.
- iii) "Propranolol is contraindicated in asthmatic patients. State true or false and justify.

2. a) Answer any two of the following:**(8)**

- i) Discuss in-detail pharmacological actions of adrenaline
- ii) Classify skeletal muscle relaxants. Differentiate between depolarizing and non-depolarizing muscle relaxants.
- iii) Describe synthesis, storage, and hydrolysis of acetylcholine

b) Answer any one of the following :**(3)**

- i) Discuss various Phase I reactions in detail.
- ii) Classify routes of administration and discuss advantages and disadvantages of oral route over parenteral route

3. a) Answer any two of the following :**(8)**

- i) Classify anti-hypertensive drugs. Discuss the pharmacotherapy of angiotensin receptor blockers.
- ii) Classify drugs used as antihyperlipedemic therapy. Discuss statins in-detail.
- iii) Classify calcium channel blockers and give their role in management of angina pectoris.

b) Answer any one of the following :**(3)**

- i) Explain the actions of membrane stabilizing agents in arrhythmia.
- ii) Explain mechanism of action of Digitalis.

4 a) Answer any two of the following :

(8)

- i) Describe synthesis, storage, release, and metabolism of catecholamines.
- ii) Classify skeletal muscle relaxants. Add a note on centrally acting muscle relaxants.
- iii) Give the Pharmacological actions of Acetylcholine.

b) Answer any one of the following.

(3)

- i) Write a brief note on isoprenaline
- ii) Discuss the clinical uses of Anticholinergic drugs..

5 a) Answer any two of the following :

(8)

- i) Explain the term receptor. Classify types and explain the transduction mechanism of each type of receptor.
- ii) What are nuclear receptors? Explain the mechanism of action of drug acting on nuclear receptors.
- iii) Write a note on secondary messengers associated with GPCR

b) Write short notes on any one of the following.

(3)

- i) Explain terms 'drug potency' & 'efficacy'
- ii) Write a note on Paracetamol related hepatotoxicity

6 a) Answer any two of the following:

(8)

- i) Discuss the significance of Renin-angiotensin system (RAS) inhibitors in the treatment
- ii) cardiovascular problems
- iii) What is the role of beta-blockers in the management of cardiovascular diseases? Classify them with examples.
- iv) Discuss the mechanism of action of:
 - a) Nicorandil,
 - b) Angiotensin converting enzyme inhibitors

b) Answer any one of the following:

(3)

- i) What is the correlation between protein binding capacity and drug action?
- ii) Explain dose response relationship.