

Time: 3 Hrs

Marks: 80

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

- Q 1a. Answer the following 16
- (i) Define 'against' & 'Bioequivalence'
 - (ii) What is drug potency and drug efficacy
 - (iii) Explain the mechanism of action of mannitol
 - (iv) Classify muscarinic receptors and give example of selective antagonist for each subtype
 - (v) Give mechanism of action of Dopamine
 - (vi) Why HDL is known as good cholesterol?
 - (vii) Enlist factors affecting drug absorption
 - (viii) Biotransformation is a process of detoxification - True or False with justification
- Q 1b. Answer following 4
- (i) Explain the term "inverse agonist" with example
 - (ii) Classify anti-anginal drugs
 - (iii) Define first pass effect? What purpose does it serve?
 - (iv) What is drug dependence?
- Q 2 (a) Answer **any two** of the following 8
- (i) Discuss in-detail pharmacological actions of acetylcholine
 - (ii) Classify skeletal muscle relaxants. Differentiate between depolarizing and non-depolarizing muscle relaxants.
 - (iii) Describe synthesis, storage, and hydrolysis and metabolism of catecholamine.
- Q 2 (b) Answer **any one** of the following 4
- (i) Classify routes of administration and discuss advantages and disadvantages of parenteral route over topical route
 - (ii) Write a note on routes of excretion.
- Q 3 (a) Answer **any two** of the following 8
- (i) Classify beta blockers and give their role in the management of cardiovascular diseases
 - (ii) Classify anti-hypertensive drugs and write a note Renin angiotensin aldosterone inhibitors.
 - (iii) Classify anti-hyperlipidemic drugs. Write a note on HMG-CoA reductase inhibitors.
- Q 3 (b) Answer **any one** of the following 4
- (i) Give mechanism of action of organic nitrates
 - (ii) Write a note on calcium channel blockers with therapeutic uses
- Q 4 (a) Answer **any two** of the following 8
- (i) Describe synthesis, storage, release, and metabolism of acetylcholine
 - (ii) Explain in-detail the therapeutic effects of Anticholinesterases
 - (iii) Classify cholinergic receptors and discuss therapeutic uses of selective agonist and antagonist for each subtype of receptor

- Q 4 (b) Answer **any one** of the following 4
- (i) Give therapeutic classification of symmpathomimetics.
 - (ii) Explain the mechanism of action of Prazosin
- Q 5 (a) Answer **any two** of the following 8
- (i) Classify receptors? Explain IP3 DAG pathway in detail?
 - (ii) Describe enzyme linked receptors in detail
 - (iii) Write a note on nuclear receptors? Explain the mechanism of action of drugs acting on nuclear receptors
- Q 5 (b) Answer **any one** of the following 4
- (i) Discuss factors affecting bioavailability?
 - (ii) Write a note on Phase II reactions with example and discuss any one reaction
- Q 6 (a) Answer **any two** of the following 8
- (i) Classify diuretics. Discuss role of Potassium Sparing Diuretics in-detail
 - (ii) Write a note on pharmacotherapy of loop diuretics
 - (iii) Discuss pharmacotherapy of thiazide
- Q 6 (b) Answer **any one** of the following 4
- (i) How does body weight affect drug action?
 - (ii) Comment on disease induced changes in drug action
