Q.P. Code :04479

[Time: 2½ Hours] **[Marks:70]**

Please check whether you have got the right question paper.

N.B: 1. **All** questions are **compulsory**.
2. Figure to the right indicate full marks.

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

(i) Explain following terms i.e. bioavailability and bioequivalence

(ii) Define

1) Pharmacodynamics
2) Pharmacokinetics

(iii) Explain the term 'receptor' and classify with examples

(iv) Classify cholinergic receptors and give example of selective antagonist for each subtype

(v) Give mechanism of action of Captopril

(vi) Why HDL is known as good cholesterol?

Q.1 **(b)** (i) Explain the term "inverse agonist" with example **03**

(ii) Classify autonomic ganglion blockers

(iii) Enlist factors affecting drug absorption

Q.2 **(a)** Answer any two of the following **08**

(i) Discuss in-detail pharmacological actions of adrenaline

(ii) Classify skeletal muscle relaxants. Differentiate between depolarizing and non-depolarizing muscle relaxants.

(ii) Describe synthesis, storage, and hydrolysis of acetylcholine

Q.2 **(b)** Answer any one of the following **03**

(i) Discuss nephrotoxicity and related causes

(ii) Classify routes of administration and discuss advantages and disadvantages of oral route over parental route

Q.3 **(a)** Answer any two of the following **08**

(i) Classify beta blockers and give their role in the management of cardiovascular diseases

(ii) Classify antiarrhythmic agents and discuss the role of calcium channel blockers in-detail

(iii) Classify antihyperlipidemic drugs. Write a note on bile acid sequestrants

Q.3 **(b)** Answer any one of the following **03**

(i) Give mechanism of action of organic nitrates

(ii) Write a note on sodium channel blockers with examples

Q.4 **(a)** Answer any two of the following **08**

(i) Describe synthesis, storage, release, and metabolism of catecholamines

(ii) Explain in-detail the therapeutic effects of anticholinergic drugs

(iii) Classify adrenergic receptors and discuss therapeutic uses of selective agonist and antagonist for each subtype of receptor

Q.4 **(b)** Answer any one of the following **03**

(i) Classify anticholinesterases and discuss related therapeutic use

(ii) Explain the mechanism of action of tyramine

Q.5 **(a)** Answer any two of the following **08**

(i) What are GPC receptors? Explain role of secondary messengers with example.

(ii) Describe enzyme-linked receptors in-detail

(iii) What are nuclear receptors? Explain the mechanism of action of drugs acting on nuclear receptors

Q.5 **(b)** Answer any one of the following **03**

(i) Discuss various routes of excretion with example of drugs

(ii) Classify phase II reaction with example and write a note on any one reaction

Q.6 **(a)** Answer any two of the following **08**

(i) Classify diuretics. Discuss role of potassium sparing diuretics in-detail

(ii) Discuss therapeutic uses and complication of diuretics

(ii) Compare and contrast loop diuretics with thiazide diuretics

Q.6 **(b)** Answer any one of the following **03**

(i) How does gender and body weight affect drug action?

(ii) Explain how pathological conditions affect drug action
