

- N.B. :** (1) Question No. 1 is compulsory.
 (2) Attempt any **four** questions out of remaining **six** questions.

1. (a) Write the structure and chemical name of the following drugs :- 3
 - (i) Hydralazine
 - (ii) Procainamide
 - (iii) Minoxidil.
- (b) Write the structure and important therapeutic use of each of the following :- 4
 - (i) A calcium channel blocking agent.
 - (ii) A muscarinic cholinergic receptor agonist.
 - (iii) An acetylcholine esterase inhibitor.
 - (iv) Propafenone.
2. (a) Give the scheme for the synthesis of the following drugs mentioning the reaction conditions and reagents used in each step (any **two**) :- 6
 - (i) Captopril
 - (ii) Neostigmine
 - (iii) Propranolol.
- (b) Write the name and structure of one official degradation product of Nifedipine. 1
3. (a) Write short notes on (any **two**) :- 6
 - (i) Lipoproteins
 - (ii) Cardiac glycosides
 - (iii) Ganglionic blockers.
- (b) Write the name and structure of a drug used in Alzheimer's disease. 1
4. (a) What are reversible and irreversible inhibitors of Acetylcholinesterase ? Give one example of each and discuss their uses. 4
- (b) What are skeletal muscle relaxants ? Give structure of two synthetic skeletal muscle relaxants ? 3
5. (a) Classify antianginals, giving example of each class. 4
- (b) Discuss HMG-CO enzyme A reductase inhibitors. 3
6. (a) Write the essential structural features required for a molecule to exhibit beta-adrenergic receptor blocking activity. 3
- (b) Explain the structural features of directly acting sympathomimetics which alter the selectivity towards α and β receptors and their subtypes. 4
7. (a) Give the biotransformation of the following drugs (any **two**) :- 6
 - (i) Reserpine
 - (ii) Xylocaine
 - (iii) Gemfibrozil.
- (b) Write the name and structure of a natural cholinergic antagonist. 1