

Con. 2159-11.

(OLD COURSE)

RS-8567

Sem VII (R)

[Total Marks : 35

6/5/11

(2 Hours)

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

1. (a) Write the structure and chemical name of the following drugs :— 3
 - (i) Sacrine
 - (ii) Clonidine
 - (iii) Diazoxide.
- (b) Write the structure and important therapeutic use of each of the following :— 4
 - (i) A β -blocker with α_1 -antagonistic activity.
 - (ii) A vasodilator containing a phthalazine ring.
 - (iii) A choline derivative which acts as a depolarizing neuromuscular blocking agent.
 - (iv) A β_2 -agonist containing resorcinol moiety.
2. (a) Give the scheme of synthesis of the following drugs, mentioning the reaction conditions and reagents used in each step (any two) :— 6
 - (i) Cyclopentolate
 - (ii) Propranolol
 - (iii) Guanethidine.
- (b) Give the structure and use of salbutamol. 1
3. (a) Write short notes on (any two) :— 6
 - (i) Anticoagulants
 - (ii) ACE inhibitors
 - (iii) Nitro vasodilators.
- (b) Write the structure of a natural cholinergic antagonist and mention its use. 1
4. (a) Classify antiarrhythmic agents based on their mechanisms of action, giving examples of each class. 4
- (b) Give the SAR of cholinergic muscarinic receptor agonists. 3
5. (a) Write the essential structural features required for a molecule to exhibit β -adrenergic receptor blocking activity. Also show how appropriate substitutions can enhance β_1 -receptor selectivity. 3
- (b) Discuss reversible inhibitors of acetylcholinesterase. Give the structure of an antidote for severe cholinesterase inhibition and briefly explain how it acts. 4
6. (a) Write a note on calcium channel blockers with emphasis on structural classifications and therapeutic uses. 4
- (b) Give the metabolism of Gemfibrozil and Verapamil. 3
7. (a) Write a note on antihyperlipidemic agents. 4
- (b) Give a brief account of ganglionic blockers. 3