

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B. Pharm. - SEMESTER-VIII • EXAMINATION – SUMMER -2018**

**Subject code: 280003****Date: 02/05/2018****Subject Name: Pharmaceutical Chemistry-X (Medicinal Chemistry)****TIME: 10:30AM TO 01:30PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Write synthesis of warfarin, carvediol, acetazolamide. **06**  
(b) Discuss SAR of ACE inhibitors and dihydropyridines **05**  
(c) Write a note on antiplatelet agents. **05**
- Q.2** (a) Write synthesis of metoprolol, clofibrate, hydrochlorothiazide. **06**  
(b) Define artrial tachycardia and artrial flutter. Classify antiarrhythmic agents with chemical structures and mechanism of action. **05**  
(c) Write a note on plasma expanders. **05**
- Q.3** (a) Write synthesis of lignocaine, hydralazine, glyceryl trinitrate **06**  
(b) Discuss SAR of following: **05**  
(i)HMG CoA reductase inhibitors. (ii)Thiazide diuretics  
(c) Write a note on thrombolytic agents **05**
- Q.4** (a) Discuss cardiotonic agent in detail. Give SAR of cardiac glycoside. **06**  
(b) Define hyperlipoproteinemia. Classify anti-hyperlipidemic agents with chemical structures and mechanism of action. Discuss in brief bile acid sequestrants. **05**  
(c) Describe antiobesity agents in detail. **05**
- Q.5** (a) Give one name of drug with its chemical structure of following: **06**  
(i) Centrally acting antihypertensive agent (ii) ACE inhibitor  
(iii) Peripheral antiadrenergic agent (iv) Direct vasodilator  
(v) Antiarrhythmic agents (Class 1B) (vi) Xanthine diuretic.
- (b) Write a note on carbonic anhydrase inhibitor and aldosterone antagonist. **05**
- (c) What is angina pectoris ? Classify anti-anginal agents with chemical structures and mechanism of action. **05**

- Q.6** (a) Draw chemical structure and give pharmacological category of following drugs (any six): **06**
- (i) Furosemide (ii) Flecainide (iii) Methyl dopa (iv) Nicorandil  
(v) Nifedipine (vi) Dicoumarol (vii) Triamterene (viii) Mannitol
- (b) Write a note on selective  $\alpha_1$  adrenergic receptor antagonist and mixed  $\alpha$  and  $\beta$  blockers. **05**
- (c) What is combinatorial chemistry? Write note on solid phase synthesis and give applications of combinatorial chemistry. **05**
- Q.7** (a) Enlist methods used in QSAR analysis. Explain Hansch model and free Wilson mathematical model. **06**
- (b) Write a note on optimization of lead. **05**
- (c) Define QSAR. Give its advantages and disadvantages. Enlist different parameters used in QSAR. **05**

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