

- 1.(a) i) Discuss in detail the conjugation reactions involved in the drug metabolism. 7  
 ii) Explain how the following physico-chemical properties influence the biological action of a drug molecule. 6  
 a) Partition coefficient (b) Chelation 7  
**OR**
- (b) i) Describe different prodrug approaches involved in the prolongation of drug activity and masking drug toxicity. 7  
 ii) Explain the importance of bio-isosterism in drug design. 7
- 2.(a) i) Explain the S.A.R. of  $\beta$ -adrenergic blocking agents. 6  
 ii) Write synthesis and uses of (a) Meprobamate (b) Dicyclomine. 8  
**OR**
- (b) i) Classify anti cholinergies giving two examples for each class with structures, mechanism of action and uses. 8  
 ii) Write the synthesis and therapeutic uses of (a) Atenonol (b) Carbachol. 6
- 3.(a) i) What are anti antiarrhythmic drugs? Classify them with examples. 6  
 ii) Outline the synthesis, mechanism of action and uses of (a) Captopril (b) Nifedipine. 8  
**OR**
- (b) i) Classify anti hyper lipidemic agents with suitable example. 6  
 ii) Write a note on cardiac glycosides and their mechanism of action. 6  
 iii) Write the structure and uses of a) Clonidine b) Diltiazem 2
- 4.(a) i) Give the classification of oral hypoglycemics agents with examples. 6  
 ii) Give the synthesis, mechanism of action and uses of a) Furosemide b) Tolbutamide 8  
**OR**
- (b) i) Write a short note on Immuno modulator drugs. 6  
 ii) Write a note on anti thyroid drugs and the synthesis of propylthio uracil. (5+3)
- 5.(a) i) Classify anti histamines /  $H_1$ -receptor antagonists giving one example for each class with structures. 6  
 ii) Write the synthesis, mechanism of action and uses of a) Omeprazole (b) Ranitidine. 8  
**OR**
- (b) i) Write the structural activity relationships and mechanism of action of proton pump inhibitors. 8  
 ii) Write a note on anti coagulants. 6

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