



Your answers should be specific to the questions asked.  
Draw neat labeled diagrams wherever necessary. Answer all questions

**LONG ESSAY (Answer any TWO)****2 X 20 = 40 Marks**

1. Explain the structural elucidation of emetine
2. What are penicillins? Explain the chemistry, stability and biological significance of various penicillins
3. a) Explain the metabolism of purines  
b) Explain the SAR of adrenal cortex hormones

**SHORT ESSAY (Answer any FIVE)****5 X 10 = 50 Marks**

4. Explain the chemistry and biological importance of pyrimidine related antineoplastic agents
5. Write the synthesis of
  - a) a  $\beta$ -lactamase resistant cephalosporin
  - b) an antipseudomonal cephalosporin
6. Explain the chemistry and SAR of other fused Betalactam systems
7. Explain the chemistry and importance of any two antidiabetic crude drugs
8. What are cardiac glycosides? Explain their chemistry and SAR
9. List out the various preparations of insulin. Write about storage and release of insulin

**SHORT NOTES****2 X 5 = 10 Marks**

10. Morphine derivatives
11. Antiparasitic agents

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