1. Answer any three of the following:
   (a) Discuss the conjugation reactions with example.
   (b) What is biotransformation? Explain different pass one reactions with examples.
   (c) Discuss the quantitative structure activity relationship in short.
   (d) How drug design is useful in new drug development? Give the different factors affecting on drug design.

2. Answer any three of the following:
   (a) How sulphonamides are classified according to their therapeutic uses? Give the names and structural formula of clinically important sulphonamides.
   (b) Give the classification of antibiotics. How will you synthesize Chloramphenicol.
(c) Give the synthesis and uses of Verapamil, Sulphadiazine and Pamaquine.
(d) Discuss the classification of diuretics: give the synthesis and therapeutic uses of Furosemide and Ethacrynic acid.

3 Answer any three of the following : 18
(a) Discuss the mode of action of antibiotics.
(b) Define Bioprecursor prodrugs and give a brief account on Carrier prodrugs.
(c) Give the SAR of Anticancer agents.
(d) Define agonists and antagonists. Discuss the mode of action of Hypnotics.

4 Answer any three of the following : 16
(a) Explain the different dealkylation and hydrolysis reaction in drug metabolism.
(b) Give the broad classification of sulfonamides and the synthesis of Sulphathiazole.
(c) Give the synthesis and uses of
   (i) INH
   (ii) Dibucaine
   (iii) Atenolol
(d) Write note on prodrug concept.