Q.P. CODE : 7922

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

ANSWER ANY FOUR **4 X 25 = 100 Marks**

1. a) Explain with examples the role of Hammet and Taft constants in QSAR studies
   b) what do you know of topology modelling? Discuss its importance
   c) Mention the various reagents employed and their specific uses in the structural biology studies related to genetically engineered drug discovery
2. a) Discuss with examples the various drug – receptor interactions and explain their importance in drug design
   b) What do you know of free – willson analysis? Mention its limitations
   c) Give an account of Monte Carlo simulations used in molecular mechanics
3. a) What is direct discovery? Explain with examples
   b) Give an account of radioligand binding assays
   c) Write briefly on natural product libraries
4. Explain the importance of the following in drug design
   a) Biostseric replacements
   b) Backbone cyclization
   c) Non – peptide ligands
5. a) Discuss the different in vivo and in vitro assays for studying gastric acid inhibitors
   b) Give an account of immunosuppressive drugs obtained from natural sources
   c) Explain the role of pKa in drug design studies
6. a) Discuss the various empirical approaches used in the estimation of partition coefficient
   b) What is receptor based drug design
   c) What is dose – response analysis
   d) How is Hansch analysis useful in QSAR of antitumor agents

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