



[Time: 3 Hours]

[Max. Marks: 75]

**Principles of Drug Discovery -II**

**Q.P. CODE: 5179**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

**LONG ESSAY (Answer any Three)**

**3 X 10 = 30 Marks**

1. Explain the factors to be considered in prodrug design with examples.
2. Discuss about level of protein structure and their applications.
3. What are the types of molecular docking? Explain any two docking based screening method.
4. Explain Hansch analysis in detail with example.

**SHORT ESSAY (Answer any Nine)**

**9 X 5 = 45 Marks**

5. Explain about genomics in target identification and validation.
6. Discuss about threading and homology protein structure modeling methods.
7. Explain about the role of high throughput screening in rational drug design.
8. What are the applications of NMR and X-ray crystallography in protein structure prediction?
9. Explain about role of transgenic animals in target validation.
10. Write a note on statistical methods used in QSAR analysis.
11. What are the importance of proteomics in identification and validation of target?
12. Discuss the basic principles involved in the design of prodrug.
13. Explain about COMFA and COMSIA (Comparative Molecular Similarity Index Analysis).
14. Explain about manual docking.

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