Roll No……..….. **Total No. of Printed Pages: 1**
Total No. of Questions: [13]

M. Pharma (Pharmacology) (Semester-2nd)
PRINCIPLES OF DRUG DISCOVERY
Subject Code: MPL203T
Paper ID: [17250307]

Time: 03 Hours **Maximum Marks: 75**

Instruction for candidates:

1. Section A is compulsory. It carries 20 marks. It consists of 5 questions of 4 marks each.
2. Section B consist of 9 questions of 5 marks each. The student has to attempt any 7 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(4 marks each)**

Q1. Attempt the following:
   a. Classify types of molecular docking with suitable examples?
   b. Differentiate between traditional versus rational drug design?
   c. Define G score? Enumerate various programs used in docking process?
   d. Differentiate between SAR and QSAR?
   e. Write a short note on the role of nucleic acid microarrays in drug discovery process?

Section – B **(5 marks each)**

Q2. Describe in brief about Hansch analysis of QSAR modeling?
Q3. Write a brief account on the rationale of prodrug design and practical considerations involved in the prodrug design?
Q4. Write a brief note on Comparative Molecular Field Analysis (COMFA)?
Q5. Describe the concept of pharmacophore mapping?
Q6. Explain the role of transgenic animals in target validation?
Q7. Enumerate the advantages and limitations of Free Wilson Analysis?
Q8. Discuss the applications of combinatorial chemistry in lead identification?
Q9. Write the brief note on Zinc finger proteins?
Q10. Write a brief account on partial least square analysis (PLS)?

Section – C **(10 marks each)**

Q11. Write an elaborated note on the structure and pharmacophore based drug designing approaches with suitable example?
Q12. Define lead? Explain lead seeking methods with suitable example, How the identified lead is optimized?
Q13. Explain in detail on the role of genomics and proteomics in target discovery and validation?