Roll No……..….. **Total No. of Printed Pages: [01]**
Total No. of Questions: [13]

M. Pharmacy (Pharmaceutics) (Semester – 1st)
MODERN PHARMACEUTICS
Subject Code: MPH 103T
Paper ID: [17250103]

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) Define preformulation studies. Give its goals and objectives.
b) Describe different types of validation.
c) Give the outline on layout of buildings as per cGMP.
d) Give a brief note on similarity factors in dissolution studies.
e) Give a brief account on tablet tooling.

Section – B **(5 marks each)**

Q2. Describe DQ, IQ, OQ and PQ in pharmaceutical validation.
Q3. Briefly explain preformulation considerations in preparation and stability of large and small volume parenteral products.
Q4. Write about response surface methodology.
Q5. Describe the concept of Total Quality Management.
Q6. Discuss the methods for inventory management and control.
Q7. Discuss various in vitro dissolution apparatus.
Q8. Write in brief about drug release kinetics.
Q9. Write a brief note on physics of tablet compression.
Q10. Write the significance of statistical tests in dissolution studies.

Section – C **(10 marks each)**

Q11. Write a detailed note on Optimization techniques in pharmaceutical formulation and Processing.
Q12. Discuss in detail about ICH & WHO guidelines for calibration and validation of equipments.
Q13. Describe current good manufacturing practices in detail.