



MANIPAL COLLEGE
OF PHARMACEUTICAL SCIENCES
MANIPAL
(A constituent unit of MAHE, Manipal)

Specialization: Industrial Pharmacy

M. Pharm I Semester, End Semester Make Up Examination, January 2023

PCE-MIP102T: Pharmaceutical Formulation Development

Date: 18-01-2023

Duration: 3 hours

Max. Marks: 75

Instructions: Answer ALL questions

Answer the Following

5 Q × 10 marks = 50 marks

Q1. Discuss on solid state stability studies, solution phase stability studies and compatibility studies during pre-formulation phase of product development.

Q2. Explain Co-solvency solubilisation technique in detail.

Q3. Describe Korsmeyer-Peppas dissolution model and any four methods to maintain sink condition during dissolution studies.

Q4. Discuss four different types of excipients used in Solid dosage forms. Give two examples for each category.

Q5. Explain the study conditions for Accelerated and long-term stability studies as per ICH guidelines.

Answer the following

5 Q × 5 marks = 25 marks

Q6. Discuss on organoleptic studies and its importance during pre-formulation stage.

Q7. Describe phase solubility curve for pure compound with neat labelled diagram.
(3+2)

Q8. Discuss Type I dissolution apparatus as per I.P

Q9. Enlist the advantages of stability studies.

Q10. What is matrixing? Discuss.