Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 08

Ph.D in Faculty of Pharmacy

PHARMACEUTICS

M.Code : 77384

Time : 3 Hrs. **Max. Marks : 70**

INSTRUCTIONS TO CANDIDATES :

1. **Attempt any FIVE questions out of EIGHT question.**
2. **Each question carry FOURTEEN marks.**

1. A) What is the purpose of pre-formulation studies? Discuss the solid state characteristics that are evaluated during this phase and the importance of each characteristic.

   B) Write a note on ionic polymers and their applications in modifying drug release from dosage forms.

2. A) Differentiate between controlled, sustained and delayed release drug kinetics. Give a brief description of the physicochemical factors affecting sustained release.

   B) Write a note on SUPAC guidelines.

3. A) What is meant by QbD and its purpose? Mention the designs used for this purpose with their limitations and advantages. Highlight the essential features of QbD.

   B) Differentiate between prospective, retrospective and concurrent validation processes. Mention the situations when they are applicable.

4. A) Write a note on IVIVC methods.

   B) Write a note on materials used for sterile liquid packing.

5. A) What are the components of a blister packing? Mention the role of each component in blister packing.

   B) What is meant by biowaiver? Mention the classes of drugs/dosage forms enjoying biowaiver.

6. What are nano particles? Discuss the unique properties of nano particles. Discuss the methods used for preparing nano particles for drug targeting.

7. Outline the need and protocol for bioequivalence trials. Mention the different study designs used for this purpose, briefly discussing each design.

8. A) Write a note on sachet packing and its components.

   B) Explain specificity, accuracy and precision with respect to analytical validation.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.