

**Total No. of Pages : 01**

**M.Pharmacy (Pharmaceutics) (2017 & Onwards) (Sem.-1)**

**Subject Code : MPH-102T**

**Paper ID : [74658]**

**Max. Marks : 75**

1. Attempt any FIVE questions out of SIX questions.
2. Each question carries FIFTEEN marks.

1.
  - a) Explain the mechanisms of drug release from controlled release dosage forms. Enumerate the different types of oral controlled release formulations.
  - b) What is meant by personalized medication? Write a note on the different approaches employed for this type of medication.
2.
  - a) Enumerate different types of drug release activation systems used for controlled drug delivery. Explain mechanically activated systems.
  - b) Discuss the mechanisms of muco adhesion and give examples of polymers used in such dosage forms.
3.
  - a) Discuss the barriers for successful ocular drug delivery and the approaches used for overcoming them.
  - b) Distinguish between matrix and reservoir TDDS. Enumerate the barriers for successful transdermal drug delivery.
4.
  - a) Give an account of vaccine delivery systems.
  - b) Explain the mechanisms for uptake of antigens.
5.
  - a) What are the challenges for oral delivery of macromolecules. Briefly discuss the approaches employed for this purpose.
  - b) Give a brief account of evaluation of TDDS.
6. Write short notes on :
  - a) Hydrodynamically balanced drug delivery systems.
  - b) Single shot vaccines.
  - c) Evaluation of mucoadhesive systems.