

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
FIRST SEMESTER 2022-2023
PHA G617: Advanced Drug Delivery Systems
Mid-term Examination

Maximum marks: 30
Weightage: 30%
Date: 01/10/2022

Closed Book

Duration: 90 min

Note:

- Please follow all the *Instructions to Candidates* given on the cover page of the answer book.
- All parts of a question should be answered consecutively.
- Each answer should start from a fresh page.
- Assumptions made if any, should be stated clearly at the beginning of your answer.

No. of Pages	= 1
No. of Questions	= 7

Q1. Write short notes on: [6 M]

- a. Technology push
- b. Partitioning effect and Drug expulsion
- c. Reverse phase evaporation method

Q2. Long acting injectable microparticulate formulation of a hydrophobic drug is ought to be prepared. Explain the process you will follow and its optimization to achieve the desired size and encapsulation efficiency. [6 M]

Q3. Polymer could impact the selection of method for the preparation of micelles. Explain [4 M]

Q4. Compare: [4 M]

- a. Microemulsions and nanoemulsions
- b. Polymeric micelles and polymeric nanoparticles

Q5. Giving suitable example, explain the process for the preparation of nanosuspensions. [4 M]

Q6. "There is a plenty of room at the bottom". Elaborate on the famous lecture by renowned physicist Richard Feynman vis- a-vis advancements happened in nanotechnology. [3 M]

Q7. Nanotechnology could be used to enhance the bioavailability of a drug. Explain. [3 M]

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