

# Question Paper

Exam Date & Time: 11-May-2023 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.

**Molecular Pharmaceutics (Nano Tech and Targeted DDS) [PCE-MPH201T -S2]**

**Marks: 75**

**Duration: 180 mins.**

### SECTION - A

**Answer all the questions.**

Answer the following (10 marks x 5 = 50 marks)

- 1) Describe gene delivery systems used in gene therapy. (10)
- 2) What is bioinformatics? Describe its applications. (10)
- 3) Explain the methods of preparation of resealed erythrocytes (10)
- 4) Discuss the various approaches for brain targeting (10)
- 5) Discuss the factors affecting nasal absorption. Briefly explain evaluation of intra-nasal drug delivery systems (10)

### SECTION - B

**Answer all the questions.**

Answer the following (5 marks x 5 = 25 marks)

- 6) What are dendrimers? Give their methods of preparation. (5)
- 7) What are the safety issues with nanopharmaceuticals? (5)
- 8) Explain any TWO approaches for colon targeting (5)
- 9) What are monoclonal antibodies? Explain their preparation techniques (5)
- 10) Write a note on dry powder inhalers (5)

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