

Exam Date & Time: 07-Sep-2021 (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]**

**Marks: 75**

**Duration: 180 mins.**

### SECTION - A

**Answer all the questions.**

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

- 1) Discuss the various approaches for brain targeting (10)
- 2) Write about the use of nanotechnology in formulation of cosmeceuticals and nutraceuticals with examples (10)
- 3) Discuss the preparation of nanofibers, cochleates, nanocrystals and carbon nanotubes (10)
- 4) Explain any two preparation methods of (i) Liposomes (II) Dendrimers (10)
- 5) Write about the vectors used in gene therapy. Write a brief note on biosimilars (10)

### SECTION - B

**Answer all the questions.**

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

- 6) Briefly explain evaluation of intra-nasal drug delivery systems (5)
- 7) Write a note on dry powder inhalers (5)
- 8) Describe the components of a metered dose inhaler (5)
- 9) Discuss the evaluation tests for nanoparticles (5)
- 10) Discuss liposome based gene delivery systems (5)

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