

**SUPPLEMENTARY**  
**MASTER OF PHARMACY (M. PHARM.) (CBCS-2019 COURSE)**  
**M.Pharm. Sem-II PHARMACEUTICS :SUMMER- 2022**  
**SUBJECT : MOLECULAR PHARMACEUTICS (NANO TECHNOLOGY & TARGETED DDS)**

Day : Wednesday

Time : 10:00 AM-01:00 PM

Date : 14-09-2022

**S-20763-2022**

Max. Marks : 75

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**N.B.**

- 1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Out of remaining questions answer any **TWO** from each section.
  - 2) Answers to both sections should be written in separate answer books.
  - 3) Figures to the right indicate **FULL** marks.
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**SECTION - I**

- Q.1** Discuss the approaches for targeted brain drug delivery. **(08)**
- Q.2** Answer the following
- a) Explain preparation and evaluation of niosomes. **(07)**
  - b) What are phytosomes? Explain the structural features of phytosomes and highlight the differences between phytosomes and liposomes. **(08)**
- Q.3** Answer the following
- a) Discuss the factors influencing the release performance of microparticulate product **(07)**
  - b) Explain in detail preparation and characterization of lipid nanoparticles. **(08)**
- Q.4** Write short notes on any **TWO** of the following: **(15)**
- a) Monoclonal antibody
  - b) Aquasomes
  - c) Supercritical fluid antisolvent (SAS) technique for microencapsulation

**SECTION - II**

- Q.5** Explain RNA interference. **(07)**
- Q.6** Explain in detail about types, preparation and evaluation of pulmonary delivery systems. **(15)**
- Q.7** What are the challenges in gene delivery? Explain the approaches for effective gene delivery. **(15)**
- Q.8** Write short notes on any **TWO** of the following: **(15)**
- a) Risk and potential target diseases for gene therapy.
  - b) Therapeutic antisense molecules
  - c) Quality control tests for Aerosols

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