

**M. PHARM (Pharmaceutics) SEM – II (CBCS - 2019 COURSE):** *Winter-2021*  
**SUBJECT: MOLECULAR PHARMACEUTICS (NANO TECHNOLOGY & TARGETED DDS)**

Day: Monday  
Date: 29-11-2021

**W-20763-2021**

Time: 02:00 PM-05:00 PM  
Max Marks. 75

**N.B.**

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

**SECTION – I**

- Q.1** Explain the concept of drug targeting and highlight its significance. (08)
- Q.2** Elaborate on the techniques of preparation and characterization of polymeric nanoparticles. (15)
- Q.3** Explain the mechanism of liposome formation. What are the types of liposomes based on the composition? Explain the different methods of preparation of liposomes. (15)
- Q.4** Write notes any **TWO** of the following: (15)
- a) Coacervation phase separation technique
  - b) Electosomes
  - c) Monoclonal Antibodies

**SECTION - II**

- Q.5** Explain the challenges associated with gene delivery. (07)
- Q.6** Explain in detail about types, preparation and evaluation of intranasal drug delivery systems. (15)
- Q.7** Describe the Two & Three phase aerosol systems. Explain in detail about quality control tests for aerosols. (15)
- Q.8** Write notes any **TWO** of the following: (15)
- a) DPI
  - b) Aptamers as drugs of future
  - c) Applications of Gene Therapy

\*

\*

\*