

GUJARAT TECHNOLOGICAL UNIVERSITY
M.PHARM - SEMESTER-2 EXAMINATION – SUMMER-2019

Subject Code: MPH201T**Date: 27/05/2019****Subject Name: Molecular Pharmaceutics(Nano Tech and Targeted DDS)****Time: 10:30 AM TO 01:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|-------------|------------|---|-----------|
| Q.1 | (a) | Why targeting is needed? Enlist approaches for tumor targeting. Discuss peptide based targeting in detail. | 06 |
| | (b) | Discuss barriers for brain targeting. | 05 |
| | (c) | Discuss vesicular approach of brain targeting in detail. | 05 |
| Q.2 | (a) | Enlist types of nano particles. Discuss evaluation of nano particles. | 06 |
| | (b) | Write a note on evaluation of liposomes. | 05 |
| | (c) | Discuss application of High pressure homogenizer as a tool for preparation of nano particles and liposomes. | 05 |
| Q.3 | (a) | Compare and Contrast: Microcapsules and Microspheres. | 06 |
| | (b) | Explain in brief: i) Niosomes ii) Phytosomes | 05 |
| | (c) | Write a note on quasi emulsion solvent diffusion method. | 05 |
| Q.4 | (a) | Justify with example: Intranasal route is as a pathway to brain targeting. | 06 |
| | (b) | Give your comments:
i) Pulmonary route reduces dose dependent side effects of drugs.
ii) Nano particles cannot be delivered efficiently using aerosols. | 05 |
| | (c) | Write a note on evaluation of aerosols. | 05 |
| Q.5 | (a) | Discuss challenges to gene therapy. | 06 |
| | (b) | Justify: Cancer and diabetes can be prevented using gene therapy. | 05 |
| | (c) | Write a brief not on Kymriah. | 05 |
| Q. 6 | (a) | Compare and contrast: Nano particles and Liposomes. | 06 |
| | (b) | Discuss preparation and applications of monoclonal antibodies. | 05 |
| | (c) | Discuss propellants used for aerosols. | 05 |
| Q.7 | (a) | Discuss liposomes as a tool for gene delivery. | 06 |
| | (b) | Discuss top down approach of nano particle preparation. | 05 |
| | (c) | i) Give your comments:
i) Nano particles can increase saturation solubility of a drug.
ii) Vesicular drug delivery systems cannot accommodate large drug molecules. | 05 |
