

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM - SEMESTER- 8 EXAMINATION – SUMMER -2019**

**Subject Code: 2280016**

**Date: 18-05-2019**

**Subject Name: Current advances in Novel Drug Delivery Systems**

**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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|-------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Q.1</b>  | (a) | Classify liposomes. Describe merits and demerits of liposomes. Describe pharmaceutical applications of liposomes.                         | <b>06</b> |
|             | (b) | Explain evaluation parameter of niosomes.                                                                                                 | <b>05</b> |
|             | (c) | Write the difference between Liposomes and Niosomes.                                                                                      | <b>05</b> |
| <b>Q.2</b>  | (a) | Enlist the method for microcapsules and explain coacervation method.                                                                      | <b>06</b> |
|             | (b) | Explain solvent evaporation method for preparation of microspheres.                                                                       | <b>05</b> |
|             | (c) | Write a note on characterization of pellets.                                                                                              | <b>05</b> |
| <b>Q.3</b>  | (a) | What is sonophoresis? Describe in detail Sonophoresis.                                                                                    | <b>06</b> |
|             | (b) | Describe merits and demerits of iontophoresis. Discuss factor affecting Iontophoretic drug delivery system.                               | <b>05</b> |
|             | (c) | Which drug is ideal candidate for TDDS? Discuss formulation composition use in Transdermal drug delivery systems.                         | <b>05</b> |
| <b>Q.4</b>  | (a) | Enlist the theories of mucoadhesion. Write the mechanism of mucoadhesion. Explain <i>in vitro</i> evaluation bioadhesion test of film.    | <b>06</b> |
|             | (b) | Explain in detail evaluation parameter of Mucoadhesive patches.                                                                           | <b>05</b> |
|             | (c) | Write a short note on Diskette.                                                                                                           | <b>05</b> |
| <b>Q.5</b>  | (a) | Enumerate different type of Nanoparticulate drug delivery system. Explain method to prepared nanoparticle by polymerization based method. | <b>06</b> |
|             | (b) | Describe evaluation parameters of nanoparticles.                                                                                          | <b>05</b> |
|             | (c) | Describe pharmaceutical applications of nanoparticles.                                                                                    | <b>05</b> |
| <b>Q. 6</b> | (a) | Why is called Self emulsifying system? Write pharmaceutical applications of SEDDS.                                                        | <b>06</b> |
|             | (b) | Describe the selection procedure of excipients in self emulsifying drug delivery systems.                                                 | <b>05</b> |
|             | (c) | Describe evaluation parameters of SEDDS.                                                                                                  | <b>05</b> |
| <b>Q.7</b>  | (a) | What is In situ gel? Explain various approaches of insitu gel preparation.                                                                | <b>06</b> |
|             | (b) | Explain evaluation parameter for In situ gels.                                                                                            | <b>05</b> |
|             | (c) | Enumerate different type of Transdermal patch. Describe the composition of transdermal film.                                              | <b>05</b> |

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