

# C.U.SHAH UNIVERSITY

## Winter Examination-2022

**Subject Name : Drug Delivery System**

**Subject Code : MPH102T**

**Branch: M.Pharm (Pharmaceutics)**

**Semester : 1**

**Date : 14/03/2023**

**Time : 10:30 To 01:30**

**Marks : 75**

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

**Q-1 Attempt the following questions: (20)**

- a) Explain Ultralente.
- b) Explain push-pull osmotic pump.
- c) Covaxin and Covishield are the type of \_\_\_\_\_ and \_\_\_\_\_ Vaccines, respectively.
- d) What do you mean by PEGylation?
- e) Write four examples of protein drug delivery systems.
- f) What is the difference between controlled and sustained drug delivery?
- g) Give names of four polymers used for mucoadhesion.
- h) What do you mean by telepharmacy?
- i) What is floating lag time in case of GRDDS?
- j) What do you mean by customized drug delivery system?

**Q-2 Attempt any two of following : (20)**

- |          |   |           |
|----------|---|-----------|
| <b>A</b> | Write a note on Osmotically controlled drug delivery system with example. | <b>10</b> |
| <b>B</b> | Explain the barriers of protein drug delivery.                            | <b>10</b> |
| <b>C</b> | Write a note on transdermal delivery of vaccine and therapeutic proteins. | <b>10</b> |

**Q-3 Attempt any Seven of following : (35)**

- |          |   |          |
|----------|---|----------|
| <b>A</b> | List the evaluation parameters for buccal drug delivery systems and explain any three in details. | <b>5</b> |
| <b>B</b> | Write about gas generating and Hydrogel Systems in GRDDS.   | <b>5</b> |
| <b>C</b> | What do you mean by personalized medicines? Explain in detail.                                    | <b>5</b> |
| <b>D</b> | Write a note on factors affecting TDDS.   | <b>5</b> |
| <b>E</b> | Write a note on Bio responsive drug delivery system with example.                                 | <b>5</b> |
| <b>F</b> | Explain the CDDS following dissolution and diffusion as combined mechanism of drug release.       | <b>5</b> |
| <b>G</b> | Explain single shot vaccines.   | <b>5</b> |
| <b>H</b> | Write a note on penetration enhancers in TDDS.  | <b>5</b> |
| <b>I</b> | Explain mechanically activated DDS.   | <b>5</b> |

