

GUJARAT TECHNOLOGICAL UNIVERSITY**M.PHARM- SEM-III-EXAMINATION – MAY 2012****Subject code: 930102****Date: 18/05/2012****Subject Name: Novel Drug Delivery system: Part-II****Time: 10:30 am – 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.

- Q.1** (a) Write pharmaceutical applications of polymers and discuss in brief polymer characterization. **08**
- (b) Classify various factors affecting bioadhesion/mucoadhesion under separate/distinct heads and discuss in detail two factors from each head. **08**
- Q.2** (a) Discuss in detail polymer properties. **08**
- (b) Discuss different pharmaceutical and pharmacokinetic applications of Prodrug with suitable examples. **08**
- Q.3** (a) Explain the terms Nanotechnology and Nanoparticles. Enumerate different parameters and characterization methods for each parameter in context to characterization of Nanoparticulate system. **08**
- (b) Discuss Sonication and French Pressure Cell (with the help of diagram) in context to methods of preparation of liposomes. **08**
- Q.4** (a) Discuss challenges and stability problems in context to proteins and peptides. **08**
- (b) Define Iontophoresis. Discuss advantages, disadvantages, side effects and biomedical applications of the same. **08**
- Q.5** (a) Define Liposomes, classify them (based on structural parameters) and discuss the applications of the same. **08**
- (b) Define and explain bioadhesion, explain the theories of bioadhesion and enumerate the properties of an ideal polymer for mucoadhesive drug delivery system. **08**
- Q. 6** (a) Discuss in detail PEGylations. **08**
- (b) Discuss in detail Intelligent drug delivery. **08**
- Q.7** Write short note on following. **16**
- (a) Historical Development of Sonophoretic system.
- (b) Proniosomes
- (c) Commonly used Super Critical fluids.
- (d) Insitu gels