

This question paper contains 3 printed pages.]

Your Roll No.

4334

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M. Tech./Sem.VI
CHEMICAL SYNTHESIS AND PROCESS
TECHNOLOGIES
Paper-Module 32 : Drug Delivery Technologies
(Admissions of 2008 and onwards)

Time : 2 Hours

Maximum Marks : 38

*(Write your Roll No. on the top immediately
on receipt of this question paper.)*

*Attempt five questions in all including
Q.No.1, which is compulsory.*

1. (i) Define and give applications of following.
- (a) Liposomes
 - (b) Dendrimers
 - (c) Organogels
 - (d) Solid liquid nano particles.

6

[P.T.O.]

- (ii) Explain basic principle as of Targeted Drug Delivery. What is its importance? 4
2. (i) What are nano emulsions? How these are prepared? 3
- (ii) Give a brief account of factors affecting drug loading and drug release. 4
3. (i) Giving suitable examples, discuss role of nano technology in targeted drug delivery. 5
- (ii) What are the applications of liposomes in drug delivery systems? 2
4. (i) What are multiple emulsions? Discuss various emulification techniques. 5
- (ii) How liquid crystalline systems are used in drug delivery? 2
5. Write a note on the following (*any two*) 7
- (i) Molecular Imprinting Technology (MIP)
- (ii) Microelectrochemical Systems (MECS) in drug release.
- (iii) Parenteral routes of drug delivery.
6. (i) How biodegradable polymers are important for micro encapsulation of drugs. 5
- (ii) What is protein and peptide based drug delivery system. 2

7. (i) Give a brief account of techniques to manufacture microcapsules. 5
- (ii) What are the advantages and disadvantages of nasal systemic drug delivery. 2