

Seat No.:-----

Enrolment No.:-----

UKA TARSADIA UNIVERSITY

Maliba Pharmacy College

M.Pharm 2nd Semester Internal Examination April 2012

040040202- Drug Delivery Systems-I

Time: 1:30 to 4:30 p.m.

Max. Marks: **70**

Date: 21/04/2012

Instructions:

- Question no. **1 is compulsory.**
- From Q.2 to Q.7 attempt any **four** questions.
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

- Q.1** (a) Answer the following: (any six) **06**
- 1 Enlist different pathways for drug transport.
 - 2 Enlist methods for manufacturing thin films.
 - 3 Define first order and zero order drug release.
 - 4 Define lag time and floating time in context of GRDDS.
 - 5 What is glass transition temperature?
 - 6 What is the threshold pH value for Eudragit L100 & Eudragit S100?
 - 7 Define Mucociliary clearance.
 - 8 What is active and passive targeting?
- (b) Describe in brief: (any four) **08**
- 1 What are the advantages and disadvantages of controlled release systems?
 - 2 Enlist the microorganisms present in colon micro flora.
 - 3 What are the desirable properties of a drug for formulating it as transdermal delivery systems?
 - 4 Classify polymers based on their structure and give suitable examples.
 - 5 How can one formulate parenteral implants?
 - 6 Explain the steps involved in the process of mucoadhesion.
- Q.2** (a) Write a note on dissolution controlled release systems. **04**
- (b) Discuss the various delivery systems utilizing enzymes for drug release. **05**
- (c) Enlist the factors to be considered for designing a controlled release dosage form. Discuss any three in detail. **05**
- Q.3** (a) Classify type of depot preparations. **04**
- (b) How will you formulate and characterize a long acting suspension for parenteral administration? **05**
- (c) Write a short note on solid lipid nanoparticles. **05**
- Q.4** (a) Discuss in detail about characterization of polymers. **04**
- (b) Explain the mechanism of biodegradation. **05**
- (c) Describe in detail about the applications of polymers in delivery systems. **05**
- Q.5** (a) Write a note on controlled porosity osmotic pump. **04**
- (b) Compare effervescent and non-effervescent floating dosage forms. **05**
- (c) Discuss prodrug approach for colon targeting. **05**

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- Q. 6** (a) Discuss the factors which should be considered while designing a nasal drug delivery system. **04**
- (b) What do you understand by naso-lacrimal drainage system? Discuss the pharmacokinetics of a drug following its instillation into cul-de-sac. **05**
- (c) Differentiate between bioadhesion and mucoadhesion. Discuss, briefly, various methods employed for the assessment of bioadhesion. **05**
- Q.7** (a) Classify penetration enhancers and explain their mechanisms. **04**
- (b) Compare iontophoresis and sonophoresis. **05**
- (c) Discuss different approaches employed in development of transdermal delivery systems. **05**
