AMAZON – II (CBCS) (2012 COURSE): JULY - 2013
SUBJECT: ADVANCE CORE SUBJECT – II: ADVANCED PHARMACEUTICS – II

Day: Wednesday
Date: 03/07/2013

Time: **10:00 A.M. TO 1:00 P.M.**
Max. Marks: 60

N. B.:

1) Answer any **THREE** questions from Section I and Section – II each.
2) Both the sections should be written in the **SEPARATE** answer books.
3) Figures to the right indicate **FULL** marks.

SECTION-I

Q.1 Discuss physiological basis of mucosal delivery with reference to oral mucosal route. **(10)**

Q.2 Give an account of different types of oral controlled release dosage forms. **(10)**

Q.3 Explain the release mechanism and evaluation techniques of Implants. **(10)**

Q.4 Write notes on: **(10)**

a) SFC based microencapsulation techniques

b) Evaluation of Transdermal patches

SECTION - II

Q.5 Enlist various methods for preparation of polymeric nanoparticles. Discuss their mechanism in detail. **(10)**

Q.6 Discuss formulation approaches and evaluation of peptide and protein delivery. **(10)**

Q.7 Discuss methods of preparation and characterization of multiple emulsions. **(10)**

Q.8 Write notes on: **(10)**

a) Top - down and bottom - up approaches for preparation of nanoparticles

b) Design of Pressurized aerosols.

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AMAZON-II (2012 COURSE – CBCS) : JULY – 2013
SUBJECT ADVANCE CORE SUBJECT-III – ADVANCED PHARMACEUTICS-III

Day : Friday
Date : 05/07/2013

Time : **10:00 A.M. TO 1:00 P.M.**
Max. Marks : 60.

N.B.:

1) Answer any **THREE** questions from Section-I and any **THREE** questions from Section-II.
2) Both the sections should be written in **SEPARATE** answer books.
3) Figures to the **RIGHT** indicate full marks.

SECTION-I

Q.1 Explain the influence of following physicochemical parameters on drug absorption. **(10)**
a) Salt form of drug
b) Polymorphism.

Q.2 Explain the influence of pka of drug and urine pH on renal clearance. **(10)**

Q.3 Give an account of the barriers to drug distribution. **(10)**

Q.4 Write notes on : **(10)**
a) Theories of drug dissolution
b) Kinetics of protein – drug binding.

SECTION-II

Q.5 Derive the expression for C_{max} and t_{max} applying Laplace transform for a drug administered orally assuming one compartment open model and first order kinetics. **(10)**

Q.6 Explain the estimation of steady state concentration following multiple dosing of a drug by IV route. **(10)**

Q.7 Explain the non-compartment analysis approach to derive the pharmacokinetic parameters. **(10)**

Q.8 Write notes on : **(10)**
a) Sigma Minus Method
b) Estimation of K_m and V_m.

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