C.U.SHAH UNIVERSITY
Summer Examination-2018

Subject Name: Pharmaceutical Dosage Form Design II
Subject Code: 4PS08DFD1   **Branch: B.Pharm**
Semester: 8   **Date: 26/04/2018**   **Time: 02:30 To 05:30**   **Marks: 70**

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	**Define the following terms :**	**(14)**
a)	Maintenance Dose	
b)	Loading dose	
c)	Extraction ratio	
d)	Organ clearance	
e)	Total body clearance	
f)	Clearance	
g)	Drug interaction	
h)	Ocusert	
i)	Distribution coefficient	
j)	Absorption rate constant (ka).	
k)	Volume of distribution	
l)	Elimination half-life	
m)	First pass effect	
n)	Microspheres	

Attempt any four questions from Q-2 to Q-8

Q-2	**Attempt all questions**	**(14)**
a.	Write a note on diffusion controlled release system.	**(7)**
b.	Discuss in brief the cube root dissolution equation for controlled release dosage forms.	**(7)**
Q-3	**Attempt all questions**	**(14)**
a.	Enumerate the factors affecting the designing of oral sustained release drug delivery systems and explain any one in detail.	**(7)**
b.	Write a note on various approaches for colon targeted drug delivery system.	**(7)**
Q-4	**Attempt all questions**	**(14)**
a.	Explain liposomes as a drug delivery system.	**(7)**
b.	Write a note on osmotic pressure controlled systems.	**(7)**
Q-5	**Attempt all questions**	**(14)**
a.	Write a note on: Hydrogel.	**(7)**
b.	What properties are required for the drug to be a candidate for transdermal drug delivery system? Write evaluation method for of TDDS.	**(7)**
Q-6	**Attempt all questions**	**(14)**
a.	Enlist different pharmacokinetic models. What is compartment model? Mention	**(7)**

advantages and disadvantages of the compartment model.

	b.	Discuss pharmacokinetic drug interactions in detail.	**(7)**
Q-7		**Attempt all questions**	**(14)**
	a.	Explain the term "renal clearance". Describe graphical method for determination of renal clearance.	**(7)**
	b.	Discuss Wagner- Nelson and Loo-Riegelman method.	**(7)**
Q-8		**Attempt all questions**	**(14)**
	a.	Explain how one can detect nonlinear pharmacokinetics? Explain Michaelis Menten equation for capacity limited process.	**(7)**
	b.	Define Clinical Pharmacokinetics and describe its scope.	**(7)**