Enrollment No: _____ Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2020

Subject Name: Pharmaceutical Dosage Form Design I
Subject Code: 4PS07DFD1 Branch: B.Pharm
Semester: 7 Date: 27/02/2020 Time: 10:30 To 01:30 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) Preformulation
b) Overages
c) Biopharmaceutics
d) Absolute bioavailability
e) Relative bioavailability
f) Natural gums
g) Bio-degradable polymers
h) Controlled release polymers
i) Shelf life
j) Racemization
k) Oxidation
l) Racemization
m) C_{max}
n) Mean Kinetic Temperature

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

Q-2 **Attempt all questions** **(14)**

a. What are the various factors affecting solubility? Explain. **(7)**
b. How crystallinity affects dosage forms? **(7)**

Q-3 **Attempt all questions** **(14)**

a. What is accelerated stability testing? How can it be correlated with real time stability? **(7)**
b. Describe matrixing and bracketing in stability study **(7)**

Q-4 **Attempt all questions** **(14)**

a. Discuss the significance of particle size and shape in formulation **(7)**
b. Write brief note on factors affecting plasma protein binding **(7)**

Q-5 **Attempt all questions** **(14)**

a. Classify the stabilizers and write their pharmaceutical applications **(7)**
b. Enumerate different types of transport mechanism. Explain active transport in detail **(7)**

Q-6 **Attempt all questions** **(14)**

a. Discuss different climatic zones for stability studies **(7)**
b. Discuss effect of pKa of drug on absorption of drug from GIT at different pH **(7)**

Q-7		**Attempt all questions**	**(14)**
	a.	Enumerate patient related factors influencing drug absorption	**(7)**
	b.	How will you measure Bioavailability and Bioequivalence?	**(7)**
Q-8		**Attempt all questions**	**(14)**
	a.	Describe Latin Square cross over design for bioequivalence study.	**(7)**
	b.	How dissolution data are compared? Describe comparison based on f1 and f2.	**(7)**