C.U.SHAH UNIVERSITY
Summer Examination-2019

Subject Name: Advanced Biopharmaceutics and Pharmacokinetics
Subject Code: MPH202T   **Branch**: M.Pharm (Pharmaceutics)
Semester: 2   **Date: 20**/04/2019   **Time:** 02:30 To 05:30   **Marks:** 75
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-I	**Attempt all the following questions.**	**[2X10]=20**
a)	Describe in brief sink condition.	**[2]**
b)	Explain the term cube root law of dissolution.	**[2]**
c)	Describe briefly Polymorphisms with example.	**[2]**
d)	Explain the term Intrinsic dissolution.	**[2]**
e)	Describe in brief Extraction ratio.	**[2]**
f)	Write briefly hepatic clearance.	**[2]**
g)	Describe in brief Bioequivalence.	**[2]**
h)	Explain the term Relative bioavailability.	**[2]**
i)	Explain briefly AUC.	**[2]**
j)	Describe briefly Dosage regimen.	**[2]**
Q-II	**Long Answer (Answer 2 out of 3)**	**[2X10]=20**
a)	Describe the factors influencing GI absorption of a drug.	**[10]**
b)	Explain the various conditions that may affect drug dissolution and release.	**[10]**
c)	Discuss in detail estimation of K_{max} and V_{max}.	**[10]**
Q-III	**Short Answer (Answer 7 out of 9)**	**[7X5]=35**
a)	Explain Franz diffusion cell.	**[5]**
b)	Write a note on active transport.	**[5]**
c)	Describe Wagner-Nelson method for estimation of K_a.	**[5]**
d)	Write the causes of non-linearity.	**[5]**
e)	Discuss Michaelis Menten equation.	**[5]**
f)	Write the applications of IVIVC.	**[5]**
g)	Explain Square Cross-over design with suitable example.	**[5]**
h)	Write a note on Monitoring drug therapy.	**[5]**
i)	Explain urinary excretion studies.	**[5]**