

GUJARAT TECHNOLOGICAL UNIVERSITY
M.PHARM - SEMESTER-2 EXAMINATION – SUMMER-2019

Subject Code: MPH203T**Date: 31/05/2019****Subject Name: Computer Aided Drug Delivery System****Time: 10:30 AM TO 01:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1	(a) Write a brief note on ICH Q8 (R2) Pharmaceutical Development Guideline.	06
	(b) What is Design of Experiments. Enumerate and justify the advantages of DoE.	05
	(c) Describe simulation of gastrointestinal absorption.	05
Q.2	(a) Describe application of Computers in Pharmaceutical Research and Development.	06
	(b) What is factorial design. Discuss 3 ² full factorial design in detail.	05
	(c) What are Biowaiver? Discuss biowaiver with respect to ANDA.	05
Q.3	(a) Discuss computer simulations in pharmacokinetics and pharmacodynamics parameter.	06
	(b) What is IVIVC. Discuss various levels of IVIVC.	05
	(c) Describe in brief virtual trial and Fed vs. Fasted state.	05
Q.4	(a) Discuss QbD in formulation development with an example.	06
	(b) Write a note on Clinical Data Collection and Management.	05
	(c) Discuss computer aided formulation of pharmaceutical microemulsions with example.	05
Q.5	(a) Discuss P glycoprotein transporter with respect to cell homeostasis.	06
	(b) Describe Ethics of Computing in Pharmaceutical Research.	05
	(c) Discuss in brief modeling techniques for drug disposition.	05
Q. 6	(a) Discuss Choline Transporter in detail.	06
	(b) Explain the concept of optimization with example.	05
	(c) Write a note on application of pharmaceutical automation.	05
Q.7	(a) Write a note on Nucleoside Transporters.	06
	(b) Describe with example Plackett Burman Screening Design.	05
	(c) Discuss application of artificial intelligence in drug delivery.	05
