C.U.SHAH UNIVERSITY
Winter Examination-2020

Subject Name: Drug Delivery System
Subject Code: MPH102T   **Branch: M.Pharm (Pharmaceutics)**
Semester: 1   Date: 09/03/2021   Time: 11:00 To 02:00   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-1	**Attempt all the following questions.**	**[2X10]=20**
a)	Explain briefly the principle of Osmotic drug delivery system.	**[2]**
b)	Write the rationale behind Drug Delivery System.	**[2]**
c)	Describe briefly the surface erosion.	**[2]**
d)	Explain briefly the Biodegradable polymer.	**[2]**
e)	Differentiate between Intercellular and Transcellular diffusion.	**[2]**
f)	Write four advantages of GDDS.	**[2]**
g)	Explain briefly the Hollow fibres.	**[2]**
h)	Define vaccine with two examples.	**[2]**
i)	Write some common protein denaturing agents.	**[2]**
j)	Draw a neat labeled diagram of Franz diffusion cell.	**[2]**

Q-2	**Write long answers of any two:**	**[2X10]=20**
a)	Explain the physiochemical properties of a drug influencing drug product design and performance.	**[10]**
b)	Described the factors to be considered in the design of Osmotic drug delivery system.	**[10]**
c)	Discuss in detail the evaluation of Transdermal drug delivery system.	**[10]**

Q-3	**Write short answers of any seven:**	**[7X5]=35**
a)	Explain Enzyme activated Drug delivery system with suitable diagram.	**[5]**
b)	Describe hydrophilic contact lens as Ophthalmic drug delivery system.	**[5]**
c)	Explain the barriers to peptide and protein delivery.	**[5]**
d)	Write a note on Telepharmacy.	**[5]**
e)	Explain briefly the 3D printing of Pharmaceutical.	**[5]**
f)	Describe the evaluation of Buccal Drug delivery system.	**[5]**
g)	Explain penetration enhancers with suitable examples.	**[5]**
h)	Write a note on Effervescent floating Drug delivery system.	**[5]**
i)	Explain *in-vitro* skin permeation kinetics.	**[5]**