

C.U.SHAH UNIVERSITY

Winter Examination-2022

Subject Name : Biopharmaceutics and Pharmacokinetics - Theory**Subject Code : BP604T****Branch: B.Pharm****Semester : 6****Date : 22/09/2022****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.
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- Q-1 Elaborate the terms: (20)**
- a) Clearance
 - b) Total Body Clearance
 - c) First Pass Metabolism
 - d) Active Diffusion
 - e) Hepatic clearance
 - f) Bioavailability
 - g) Renal Clearance
 - h) Bioequivalence
 - i) Pharmacokinetic Models
 - j) BCS Class
- Q-2 Attempt any two of following: (20)**
- A** Enlist various factors influencing GI absorption of a drug from its dosage form and explain physicochemical factors affecting drug absorption in detail. **10**
- B** Define biotransformation and discuss in brief phase I and Phase II biotransformation **10**
- C** Explain Michaelis Menten equation for capacity limited process **10**
- Q-3 Attempt any Seven of following: (35)**
- A** Discuss the kinetics of protein binding **5**
- B** Comment on passive diffusion is one of the important mechanisms of drug absorption **5**
- C** Discuss the absorption of drugs from non-oral extra vascular routes **5**
- D** What are pharmacokinetic models? Explain in detail compartment models **5**
- E** Discuss USP dissolution apparatus with specific uses **5**
- F** Write a note on renal excretion of drugs **5**
- G** What are the problems faced in formulation of BCS Class II drugs? Discuss suitable strategies to overcome them **5**
- H** Write a note on Wagner Nelson Method **5**
- I** Discuss various methods used for the measurement of bioavailability **5**

