Final yr. Biopharmaceutics Sem VII (P)

PH March Exam (4) 107

Con. 3423-12. **(REVISED COUESE)** **RV-4662**

14/5/12

(2 Hours) [**Total Marks : 40**

N.B. (1) Question No. **1** is **compulsory.**
(2) Attempt any **four** questions of the remaining **six** questions.

1. Comment briefly on following :– **8**
   (a) Sublingual absorption is rapid than buccal absorption.
   (b) Emulsions are superior to suspensions in administering poorly soluble lipophilic drugs.
   (c) Delay in gastric emptying is recommended for griseofulvin.
   (d) Surfactants can cause decreased drug absorption.

2. (a) Discuss the various barriers to drug distribution. **5**
   (b) Write a note on binding sites on human serum albumin. Give one example of a drug binding to each of these sites **5**

3. (a) Discuss the characteristics of passive and active diffusion. **5**
   (b) Discuss briefly the influence of pharmaceutical excipients on drug bioavailability. **5**

4. Write short notes on any **two** of the following :– **8**
   (a) Theories of drug dissolution.
   (b) Sigma minus method of urine analysis.
   (c) IVIVC.

5. (a) Explain the methods useful in evaluation of bioavailability. **5**
   (b) Write a note on Renal Clearance. **3**

6. An intravenous bolus dose (10 mg) of a drug following one compartment kinetics has a volume of distribution of 300 L and a half life of 8 hours. Calculate– **8**
   (a) The concentration after 10 hours of drug administration.
   (b) The elimination rate constant and clearance.
   (c) The AVC (zero to infinity) of the drug.
   (d) The amount eliminated from the body after 5 hours.
   (e) The percent dose remaining after 10 hours.
   (f) Time required to eliminate 75% of the dose.

7. Write short notes on any **two** of the following :– **8**
   (a) Bioequivalence
   (b) An official dissolution apparatus as per I.P.
   (c) pH partition hypothesis.
