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PY 132701

Roll No. of candidate

2017

B.Pharm. 7th Semester End-Term Examination

PHARMACEUTICS – VI

(Bio-Pharmaceutics and Pharmacokinetics)

Full Marks – 100 Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer question No. 1 and any *six* from the rest.

1. Multiple choice questions : (10 × 1 = 10)

   (a) Carrier mediated transport follows

   (i) First order kinetics

   (ii) Zero order kinetics

   (iii) Non-linear kinetics

   (iv) None of the above

   (b) To obtain good in vitro-in vivo dissolution rate co-relation, the in-vitro dissolution must always be carried under sink conditions, which can be achieved by

   (i) Adding fresh solvent

   (ii) Increasing the volume of dissolution fluid

   (iii) Adding selected adsobents

   (iv) All the above are true

[Turn over

(c) The absolute surface area of hydrophobic drugs can be converted to effective surface area by

(i) Using surfactant

(ii) Using hydrophobic diluent

(iii) Statement (i) is correct but statement (ii) is wrong

(iv) Both the statements (i) and (ii) are correct

(d) For polymorphic forms of the Chloramphenicol palmitate –A, B and C, which of the following statement is not correct?

(i) 'B' form shows best bio-availability

(ii) 'A' form is virtually inactive

(iii) 'C' form shows best bio-availability

(iv) All the statements above statements are correct

(e) Phenobarbital having the pKa value of 8.1 is

(i) Un-ionized at all the pH values

(ii) Un-ionized at only acidic pH values

(iii) Ionized at gastric pH

(iv) Ionized at all the pH values

(f) APOC is

(i) Agglomeratrive phase of comminution

(ii) Apparent phase of comminution

(iii) Apparent phase of cell

(iv) None of the above

(g) Internal transit time of ileum is

(i) 5 minutes

(ii) 0.5 – 1 hour

(iii) 3 – 6 hours

(iv) 6 – 12 hours

(h) Which of the following statement is true

(i) Dopamine cannot pass BBB

(ii) Levodopa can pass BBB

(iii) DMSO can enhance the permeation to BBB

(iv) All the above are correct

(i) Beta-1 globulin is also called as

(i) Transcortin

(ii) Cerceloplasmin

(iii) Transferrin

(iv) Carotinoids

(j) The three means by which the particle size of a drug can be reduced to sub-micron level are

(i) Use of solid solution

(ii) Use of eutectic mixture

(iii) Use of solid dispersion

(iv) All the above

2. (a) How the ionisable drugs are absorbed? (2)

(b) Buffered aspirin tablets are more effective than sodium salt form of aspirin. Why? (5)

(c) Discuss briefly the influence of pharmaceutical excipients on drug's bio availability. (8)

3. (a) Enlist and illustrate the steps involved in the absorption of a drug from orally administered solid dosage forms. (10)

(b) Explain the Noyes-Whitney's equation. (5)

4. Explain the following : $(5 \times 3 = 15)$

(a) Blood brain barrier

(b) Blood placental barrier

(c) Blood cerebro spinal barrier

5. (a) Define pharmacokinetics.

(b) Explain the first order and zero order kinetics. $(2 + 13 = 15)$

6. (a) Describe one compartment open model I.V. bolus administration. (9)

(b) Write short note on mixed order kinetics. (6)

7. (a) What do you mean by total body clearance. (3)

(b) How K_E is determined from Urinary excretion data? (12)

8. (a) What is bio-equivalence studies? (4)

(b) Describe the methods for enhancement of bioavailability. (11)

9. Write short notes on : $(5 \times 3 = 15)$

(a) Non-Compartment Model

(b) Plasma Drug Conc-Time Profile

(c) First Pass Metabolism
