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Code No: R7002

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B. Pharmacy IV Year I Semester Examinations, May-2012

BIOPHARMACEUTICS AND PHARMACOKINETICS

Time: 3 hours

Max. Marks: 80

**Answer any five questions
All questions carry equal marks**

1. Explain different processes involved in drug therapeutics with the help of schematic representation. [16]
- 2.a) What is Henderson Hasselbach equation? Explain.
b) With the help of above equation. Explain the absorption of weakly acidic and basic drugs.
c) Delayed intestinal transit is sometimes desirable why? [16]
- 3.a) Explain why distribution of drugs is not uniform through out the body?
b) Enlist various factors affecting drug distribution. Explain about any three factors affecting distribution. [4+12]
- 4.a) List the factors affecting protein drug binding. Explain about the factors related to the drug and how patient related factors affect distribution of drugs.
b) Explain in brief about the influence of diseased states on protein drug binding with examples. [10+6]
- 5.a) Define renal clearance, hepatic clearance total clearance, intrinsic capacity clearance and fraction of drug available.
b) What is extraction ratio? What its significance? How do you calculate fraction of drug available to the system? [8+8]
6. Explain about clinically important drug interactions occurring at the distribution level and metabolism level with suitable examples. Give its clinical significance. [16]
- 7.a) Define chemical equivalence, pharmaceuticals equivalence, bioequivalence and therapeutic equivalence.
b) Give a four way cross over design for four products A, B, C and D.
c) What are the objectives of bioavailability studies? [4+6+6]
- 8.a) How do you correlate invitro drug dissolution with in vivo bio availability?
b) Describe about dissolution rate test apparatus and its significance. [8+8]

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