Code No: B3203/R10 **R10**

III B.Pharmacy II Semester Supplementary Examinations, Nov - 2016
BIOPHARMACEUTICS AND PHARMACOKINETICS

Time: 3 hours **Max Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks

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1. Write a note on
   (a) Mamillary model
   (b) Catenary model [8+7]

2. Differentiate transcellular transport and paracellular transport mechanisms of drug absorption. [15]

3. Explain how age, pregnancy, obesity, diet, disease states affecting the distribution of drugs. [15]

4. Explain about binding of drugs to various blood components in detail. [15]

5. A subject received an i.v. dose of 100mg of a drug and plasma concentrations of drug were given as in the table Time 1 2 3 4 5 6 7(hours) Plasma concentration 60.65 36.79 22.31 13.53 8.21 4.98 3.02 (ug mi^{-1}) From the above data
   (a) Calculate the overall elimination rate constant
   (b) Volume of distribution
   (c) Elimination half life
   (d) Plasma drug concentration at zero time(c_0) [3+4+4+4]

6. Write notes on the following drug interactions
   (a) Warfarin – Phenyl butazone
   (b) Phenytoin – Valproic Acid
   (c) Levodopa – Pyridoxine
   (d) Alcohol – Disulfiram [3+4+4+4]

7. Discuss the methods aimed at enhancing bioavailability through enhancement of drug dissolution rate. [15]

8. (a) Write the significance of ANOVA, confidence interval approach in bioavailability studies.
   (b) Describe crossover designs [8+7]

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