

Birla Institute of Technology and Science, Pilani (Rajasthan)

Second Semester (2022-23)

PHA F418: Biopharmaceutics and Pharmacokinetics (Closed Book)

Comprehensive Examination

Max. Marks: 30

Duration: 120 Min

Q.1. Give a brief explanation of the effect of drug interactions on protein binding of drugs. Use suitable examples to support your answer. **[5.0 M]**

Q.2. Briefly explain the physiologically-based pharmacokinetic models used to study changes in drug concentration in the body with time. Also, provide the details of its various categories.

[2.5+2.5=5.0 M]

Q.3. Give a brief description of active tubular secretion of drugs with a special emphasis on its advantages and disadvantages. **[3+2=5.0 M]**

Q.4. (A) What are the various effects of (i) alcohol and (ii) food (diet) on drug interactions?

(B) Discuss the effect of environmental chemicals on metabolism of drugs.

[3+2=5.0 M]

Q.5. Discuss various types of prodrugs. Mention three pharmaceutical and three pharmacokinetic applications of prodrugs. **[3+3=6.0 M]**

Q.6. Briefly describe the indirect method of bioavailability measurement. Use schematic diagrams and mathematical expressions to give a proper description. **[1.5X2 +1= 4.0 M]**

All the best