PAPER ID-421542

Subject Code: MPH202T

Roll No: | | | | | | | | | | | | | |

**MPHARM**

**(SEM II) THEORY EXAMINATION 2021-22**

**ADVANCED BIOPHARMACEUTICS & PHARMACOKINETICS**

***Time: 3 Hours*** ***Total Marks: 75***

**Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.

## SECTION A

**1. Attempt *all* questions in brief.** **10 x 2 = 20**

| | |
|---|---|
| a. | State the mechanism of drug absorption through the GIT. |
| b. | Define the pH microclimate of GIT. |
| c. | State the rate-limiting steps in drug absorption. |
| d. | Name the drug formulation factors affecting drug product performance. |
| e. | What do you mean by 'cytochrome p450-based drug interactions'? |
| f. | Mention the significance of compartment modeling. |
| g. | Differentiate between the terms 'bioavailability' and 'bioequivalence'. |
| h. | Define 'crossover study designs'. |
| i. | Classify oligonucleotides with suitable examples. |
| j. | State the steps involved in the preparation of monoclonal antibodies. |

## SECTION B

**2. Attempt any *two* parts of the following:** **2 x 10 = 20**

| | |
|---|---|
| a. | Explain the methods of correlation of *in vivo* data with *in vitro* dissolution data. |
| b. | Explain the term 'drug product stability' and describe the methods for its evaluation. |
| c. | Describe the methods of designing and evaluation of bioequivalence studies. |

## SECTION C

**3. Attempt any *five* parts of the following:** **7 x 5 = 35**

| | |
|---|---|
| a. | Write a brief note on Noyes– Whitney equation and drug dissolution. |
| b. | Describe the roles of various biopharmaceutical factors affecting drug bioavailability. |
| c. | State and explain the applications of the Michaelis–Menten equation with explanation of the terms involved. |
| d. | Write in brief the methods for assessing bioavailability. |
| e. | Describe the pharmacokinetics and pharmacodynamics of biotechnology drugs. |
| f. | Explain the roles of the various components of immunotherapy. |
| g. | Write brief notes on 'Generic biologics' and 'generic substitution'. |

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