

M.PHARM

(SEM II) THEORY EXAMINATION 2018-19
ADVANCED BIOPHARMACEUTICS & PHARMACOKINETICS

Time: 3 Hours

Total Marks: 70

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

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14
- Write Noyes– Whitney equation.
 - Define the term biopharmaceutics
 - What is compartment modelling?
 - Write a short note on pharmacogenomics.
 - Discuss extraction ratio.
 - Explain rate-limiting steps in drug absorption
 - Explain clinical significance of bioequivalence

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21
- Describe mechanism of drug absorption and factors affecting drug absorption.
 - Discuss the biopharmaceutical factors affecting drug bioavailability.
 - Explain Michaelis–Menten equation.
 - Explain compendial methods of dissolution and alternative methods of dissolution testing.
 - Write a note on one compartment model- IV bolus.

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7
- Write a note on correlation of in vivo data with in vitro dissolution data
 - Write a detailed note on protein binding of drug.
4. Attempt any *one* part of the following: 7 x 1 = 7
- Discuss design and evaluation of bioequivalence studies
 - Explain cytochrome p450-based drug interactions
5. Attempt any *one* part of the following: 7 x 1 = 7
- Explain biosimilar drug products
 - Write a note on Monoclonal antibodies
6. Attempt any *one* part of the following: 7 x 1 = 7
- Classify compartment models and explain them with concept.
 - Discuss the application of pharmacokinetic models.
7. Attempt any *one* part of the following: 7 x 1 = 7
- Write a detailed note on drug transport.
 - Write a note on clinical significance of bioequivalence studies