

**M. PHARM. SEM-II (CHOICE BASED CREDIT & GRADE SYSTEM)**

**: SUMMER - 2018**

**SUBJECT: ADVANCE CORE SUBJECT – III: ADVANCED PHARMACEUTICS - III**

**Day : Thursday**  
**Date : 05/07/2018**

**S-2018-4005**

**Time : 10.00 AM to 01.00 PM**  
**Max. Marks: 60**

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**N.B.**

- 1) Attempt **ANY THREE** questions from Section – I and **ANY THREE** questions from Section – II.
  - 2) Figures to the **RIGHT** indicate **FULL** marks.
  - 3) Answers to both the sections should be written in the **SEPARATE** answer books.
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**SECTION – I**

- Q.1** Derive the expressions for studying the kinetics of protein drug binding. **(10)**
- Q.2** Elaborate on the influence of particle size and salt form of drug on absorption. **(10)**
- Q.3** Explain the blood brain barrier. What are the approaches used to enhance the drug distribution to the brain. **(10)**
- Q.4** Write note on **(10)**  
a. Chemical factors influencing drug metabolism.  
b. ABC transporters.

**SECTION – II**

- Q.5** Derive the expression for estimation of steady state concentration following multiple dosing of a drug given by IV route. **(10)**
- Q.6** Explain Non-linear Pharmacokinetics and elaborate on enzyme kinetics useful for the estimation of  $K_m$  and  $V_m$ . **(10)**
- Q.7** Compute the expression for elimination rate constant and distribution rate constant for a drug given by IV route assuming two compartment model. **(10)**
- Q.8** Write notes on: **(10)**  
a. Application of Pharmacokinetics in monitoring drug therapy.  
b. Dose adjustment in renal failure.

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