

Registration no:

--	--	--	--	--	--	--	--	--	--

Total Number of Pages: 01

bput question papers visit <http://www.bputonline.com>**MPHARM**  
**M.PH2A.2****2<sup>nd</sup> Semester Regular/Back Examination 2016-17****BIOPHARMACEUTICS and PHARMACOKINETICS****Branch: PHARMACEUTICS****Time: 3 Hours****Max Marks: 70****Q.CODE: Z1046**

**Answer Question No.1 which is compulsory and any five from the rest.**  
**The figures in the right hand margin indicate marks.**

**Q1 Answer the following questions:****(2x10)**

- Describe the relationship between dose and AUC.
- Explain the term extraction ratio (ER). Describe the meaning of ER 0.6.
- What do you understand by the term Biowaiver? Explain it with suitable examples.
- Seven elimination half lives are required for complete elimination of any drug. Explain the statement.
- An increase in infusion rate will increase the steady state plasma drug concentration. True or False, Justify.
- What is Level A /V/VC. Explain it.
- Write short notes on MAT and MDT.
- Differentiate between catenary and mammillary model.
- Hydrophilic drugs can easily permeate through blood-Brain barrier. True or false, Justify.
- What is the significance of  $T_{max}$  and  $C_{max}$

bput question papers visit <http://www.bputonline.com>**Q2 a) Describe in detail about passive diffusion.****(6)****b) Write about surface renewal theory of dissolution.****(4)****Q3 Write in detail about determination of absorption rate constant ( $k_a$ ) by method of residual and Wagner nelson method.****(10)****Q4 What is Circadian rhythm? What is the importance of chronokinetics in the administration of drugs? Discuss in detail about approaches used chronotherapeutic drug delivery systems.****(10)****Q5 a) Define bioequivalence. Describe in detail about cross over study design.****(5)****b) Describe briefly on drug binding to human serum albumin (HAS).****(5)****Q6 a) Discuss about physiologic pharmacokinetic model.****(5)****b) Write about determination of elimination rate constant by rate of excretion method****(5)****Q7 What is saturable enzymatic elimination process? Discuss in detail about Michael-Menten kinetics. Describe about various methods for determination of  $V_{max}$  and  $K_m$ .****(10)****Q8 Write Short notes on the following****(2.5x4)**

- Instantaneous distribution compartment model
- Apparent volume of distribution
- BCS of drugs
- Gastric emptying