

## UKA TARSADIA UNIVERSITY

Maliba Pharmacy College

B. Pharm 5<sup>th</sup> Semester Internal Examination 2013 (Mid-Sem 1)

## 030020502- Medicinal Chemistry-I

Time: 1:30 p.m. To 3:30 p.m.

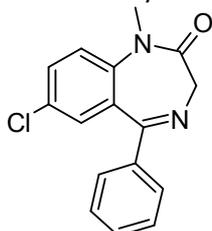
Max. Marks: 40

Date: 31/08/2013

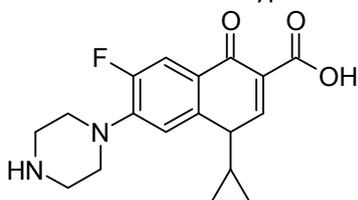
**Instructions:**

- Attempt any **FIVE** questions.
- Each question carries **08** marks.
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

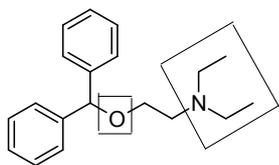
- Q.1 A) Describe different theories of receptor. 4  
 B) Explain forces involved in drug receptor interaction and factors affecting it. 4
- Q.2 A) Explain different second messengers used in signal transduction. 4  
 B) Classify prodrug and explain applications of it. 4
- Q.3 A) What are the factors affecting drug metabolism? Explain with examples. 4  
 B) Write a note on SAR Acetylcholine. Write synthesis of carbachol chloride. 4
- Q.4 A) What are the functions of blood brain barrier? 4  
 B) Differentiate between Log P and Log D. 4
- Q.5 A) Calculate percent ionization of indomethacin (pKa 4.5) at pH 2.5 and pH 7.5. 4  
 B) What is enzyme induction? Predict three metabolites of diazepam. 4



- Q.6 A) Define any four terms 4  
 1. Log P 2. pKa 3. Ferguson Principle 4. Bioisosterism 5. Protein Binding  
 6. Volume of Distribution
- B) Identify the basic and acidic functional groups of ciprofloxacin. If ciprofloxacin is weakly basic in nature then what type of salt can be made? 4



- Q.7 A) Give examples of classical and non-classical bioisosteres. Given below is a lead molecule A. Design at least two new chemical entities by doing bioisosteric replacement on highlighted atom/atoms. 4



A

- B) Explain the stereochemistry aspects of drug action. With examples. 4