



International Islamic University Chittagong

Department of Pharmacy

Program: B. Pharm (Hons)

Examination: Final

Session: Spring-2019

Course Code: Pharm-3607

Course Title: Medicinal Chemistry -II

Full Marks: 50

Time: 2 Hours and 30 Minutes

Group A (Marks: 20) *Answer any two questions*

1. a) "Stereo chemistry of drugs impact therapeutics and toxicity" - justify. 3
b) Evaluate the conditions of geometric and optical isomer. 4
c) Give an outline on R-S system of nomenclature of configurational isomer. 3
2. a) Define specific rotation? Write about meso-compounds. 3
b) Compose the differences between enantiomer and di-stereoisomer. 2
c) Explain the order of priority in case of different configurations. 2
d) Deduce the terms: i) S (+) isomer ii) Plane polarized light 3
iii) Z-isomer
3. a) Discuss about the representation of conformational isomer. 3
b) Which conformation of cyclohexane is less stable? Explain why? 3
c) Propose the factors effecting stability of conformers. 2
d) Write about different staggered conformations of n-butane. 2

Group B (Marks: 30) *Answer any three questions*

4. a) Define receptor. Write down the mechanism of fast receptors with examples. 3
b) Mention the different mode of drug actions. 3
c) How receptors are regulated? Explain about receptor desensitization. 4
5. a) Give an overview on the dose response relationship curve. 4
b) Briefly describe the mechanism of enzyme receptors. 3
c) Write short note on: i) Synergism ii) Up regulation 3
6. a) Why chair conformation of cyclohexane is most stable than other conformation? 3
b) Briefly describe factors that affect the stability of isomers. 5
c) Outline the difference between stereospecific and stereoselective reaction. 2
7. a) Sketch the metabolic pathway of acetaminophen including hepatotoxic metabolite 4
b) Formulate the following reactions : i) Alkene metabolism 4
ii) Methylation ii) amino acid conjugation iv) heterocyclic compound
c) Give an overview about metabolism and drug design. 2