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Total Number of Pages: 02

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MPHARM
M.PH2B.1

2nd Sem M.Pharm Regular/ Back Examination – 2015-16

ADVANCED MEDICINAL CHEMISTRY-I

Time: 3 Hours

Max marks: 70

Q.CODE:W988

**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: (2 x 10)
- a) What is the ratio of ephedrine to ephedrine HCl (pKa 9.6) in the intestinal tract at pH 8.0?
 - b) Classify GPCR's as stated by their effector pathway.
 - c) Explain the significance of Functionalization reaction (Phase-I) and Conjugation Reaction (Phase-II) with one example?
 - d) What are the different sites of Drug Biotransformation? Cite examples.
 - e) From a Combinatorial stand point differentiate between Solid Phase Synthesis and Solution Phase synthesis.
 - f) Define LHASA and its role in Retro Synthetic Analysis.
 - g) Define Parallel and Pooled synthesis.
 - h) How degradation techniques are useful in Retro Synthetic Analysis?
 - i) Differentiate between Consecutive vs Convergent Synthesis?
 - j) What are the different forces play during drug receptor interaction.
- Q2 Explain with the help of particular examples how different physicochemical properties of Drugs influence the biological action. Antiviral agents (10)
- Q3 Explain the role of Cytochrome P-450 in Phase-I Oxidative Biotransformation of drugs with the help of a cycle. (10)
- Q4 Explain with the help of examples two main procedures for High Throughput organic synthesis. (10)

- Q5 Explain the different retrosynthetic strategies applied for synthesis of Candidate drugs. (10)
- Q6 Write Short Notes on
- (a) Convergent synthesis (5)
 - (b) Pooled synthesis (5)
- Q7 Write Short Notes on
- (a) Glucoronide conjugation (5)
 - (b) Stereochemical aspects of drug metabolism (5)
- Q8 Write Short Notes on (5 x 2)
- a) Transmembrane Enzyme linked receptors (RTK's)
 - b) Routes of drug administration