

SARDAR PATEL UNIVERSITY
Programme & Subject: M.Sc (Organic Chemistry)
Semester: IV
Syllabus with Effect from: June - 2013

Paper Code: PS04ECHE01	Total Credit: 4
Title Of Paper: Medicinal Chemistry	

Unit	Description in detail	Weightage (%)
I	Introduction to Medicinal Chemistry, Pharmacokinetics: Drug absorption, drug distribution, drug Metabolism (general pathway of drug metabolism: Oxidative, reductive and hydrolytic reactions) Drug Design: Concepts pf drug design, Approaches to lead discovery, SAR, Combinatorial chemistry, Prodrugs. Drug excretion. Drug administration.	25%
II	Pharmacodynamics: Receptors, Chemical messengers, Binding sites, Receptor types and subtypes(protein receptors, DNA receptors with examples of Agonists and Antagonists)	25%
III	Psychoactive Drugs: Antianxiety agents, Antipsychotics, Antidepressants, Psychotomimetic drugs. Cardiovascular Drugs: Antianginal and Vasodilators, Antihypertensive drugs, Anticholesterolemic agents Antithyroid drugs.	25%
IV	Antibiotics: General Introduction, Chemical Classification. β-lactam antibiotics: Penicillins, Cephalosporins, β -lactamase inhibitors, Aminoglycosides, Tetracyclines, Chloramphenicol, Quinolone antibacterials. Antineoplastics Agents: Classification, synthesis and drug profile.	25%

Basic Text & Reference Books:-

- Wilson and Gisvold's Textbook of Organic Medicinal and Pharmaceutical, Chemistry, 11th Edition by John H. Block & John M. Beale, Published by Lippincott Williams & Wilkins (2004).
- Principles of Medicinal Chemistry, 4th Edition by William O-Foye, Thomas L. Lemke and David A. Williams, Published in India by B. I. Waverly Pvt. Ltd. New Delhi (1995).
- Essential of Medicinal Chemistry, 2nd Edition by Andrejus korolkovas, Published by Wiley-India Edition (1988)
- Instant Notes: Medicinal Chemistry, Edited by Graham L. Patric, Published by Viva Books Private Ltd. (2002)
- Textbook of Medicinal Chemistry Vol. I & II by V. Alagarsamy Published by Elsevier (2010)
- Medicinal Chemistry 3rd Edition by Ashutosh Kar Published by New age international (P) Limited, Publishers (2005)
- Medicinal Chemistry Edited by Alfred Burger Published by Interscience Publishers, John Wiley & Sons, New York (1951)
- Burger's Medicinal Chemistry and Drug Discovery Vol. 3: Therapeutic agents Edited by Manfred E. Wolff Published by Interscience Publishers, John Wiley & Sons, New York (1996)
- Burger's Medicinal Chemistry 4th Edition : Part III Edited By Manfred E. Wolff Published by Interscience Publishers, John Wiley & Sons, New York (1981)

