Rajarshi Shahu Mahavidyalaya, Latur
(Autonomous)
Department of Chemistry

Course Type: GE-I

Course Title: Medicines in Daily Life

Course Code: 101CHE1401

Credits: 03 **Max. Marks: 75** **Lectures: 45 Hrs.**

Learning Objectives:

The Learning Objectives of this course are as follows:

LO 1. To make students study the basic details about various medicines of general uses, which are crucial for various diseases

LO 2. To make students learn about the active pharmaceutical ingredient in some medicines, their synthesis; therapeutic effect and side effects on human physiology.

LO 3. To make students aware of the positive and negative effects of medicines that is essential for a healthy day-to-day life.

Learning Outcomes:

By the end of the course, the students will be able to:

CO 1. Explain the role of different medicines on human physiology.

CO 1. Write about active pharmaceutical ingredient and their roles in different disease.

CO 1. Discuss the use of different medicines and their effect and side effects.

Unit No.	Title of Unit & Contents	Hrs.
I	**General Introduction**	**15**
	1. Introduction-Health, disease, drugs, chemotherapy. 2. Approaches in drug designing, 3. Classification of drugs and their origin. 4. Definitions and Terms used in Medicinal Chemistry.	
	Unit Outcomes: UO1. Define various terms in Medicinal Chemistry UO2. Classify Drugs on the basis of their functions.	
II	**Medicines for infectious Diseases**	**15**
	Structure of active ingredients, uses, dosage, side effects and their natural remedies: 1. Antibiotics 2. Antiparasitic 3. Antifungal 4. Antiviral	

	Unit Outcomes: UO 1. Define various type of drugs such as antifungal, antiviral, etc UO 2. Write the structure and uses of drugs.	
III	**Medicines for Non-infectious diseases**	**20**
	Structure of active ingredients, uses, dosage, side effects and their natural remedies: 1. Analgesics and antipyretics 2. Antihistamines or antiallergics 3. Antidiabetics 4. Antihypertensive 5. Diuretic 6. Antidepressant 7. Antacids 8. Anaesthetics	
	Unit Outcomes: UO1. Define various types of drugs for non-infectious diseases such as antidiabetics, antipyretics, antacids, etc. UO2. Write the structure and uses of these drugs.	

Learning Resources:

1. Textbook of Human Histology by Inderbir Singh, Jaypee brother's medical publishers, New Delhi.
2. H.C. Ansel et al., Pharmaceutical Dosage Form and Drug Delivery System, Lippincott Williams and Walkins, New Delhi.
3. Wilson and Giswold's Organic medicinal and Pharmaceutical Chemistry.
4. Foye's Principles of Medicinal Chemistry.
5. Burger's Medicinal Chemistry, Vol I to IV.
6. Introduction to principles of drug design- Smith and Williams.
7. Remington's Pharmaceutical Sciences.
8. Martindale's extra pharmacopoeia.
9. Organic Chemistry by I.L. Finar, Vol. II.
10. The Organic Chemistry of Drug Synthesis by Lednicer, Vol. 1-5.
11. Indian Pharmacopoeia.
12. Text book of practical organic chemistry- A.I.Vogel.

Rajarshi Shahu Mahavidyalaya, Latur

(Autonomous)

Department of Chemistry

Course Type: GE-I
Course Title: GE Lab, Course -I
Course Code: 101CHE1402
Credits: 01 **Max. Marks: 50** **Lectures: 30 Hrs.**

Learning Objective:

LO 1. To gain thorough knowledge regarding inorganic pharmaceuticals- Boric Acid Potash alum

LO 2. To learn about the Analysis of Various Organic Compounds qualitatively & quantitatively

Course Outcomes:

CO 1. Prepare regarding inorganic pharmaceuticals- Boric Acid Potash alum.

CO 2. Estimation of Zinc, Calcium, Sugar Content in Solution etc.

CO 3. Qualitative analysis of carbohydrates, Proteins etc.

Practical No.	Unit
1	Identification test-Magnesium hydroxide, Sodium bicarbonate, Calcium gluconate.
2	Preparation of inorganic pharmaceuticals- Boric Acid Potash alum.
3	Determination of sugar content in the given solution.
4	Estimation of zinc and calcium in a given solution.
5	Qualitative analysis of carbohydrates (Glucose, Fructose, Lactose, Maltose, Sucrose).
6	Qualitative tests for Proteins.
7	Qualitative analysis of vitamin C.
8	Isolation of paracetamol (API) from a commercial tablet.

Learning Resources:

1. A.H. Beckett & J.B. Stenlake's, Practical Pharmaceutical Chemistry Vol I & II, Stahlone Press of University of London.
2. A.I. Vogel. Practical Organic Chemistry.
3. D.V. Jahagirdar, Experiments in chemistry.
4. Dr. O.P. Panday, D.N. Bajpai & Dr. S.Giri, Practical Chemistry, Chand & Company, New Delhi.
5. Day & Underwood, Qualitative analysis: A laboratory manual.
6. O.P. Agarwal. Advanced Practical Organic chemistry.
7. N.K. Vishnoi. Advanced Practical Organic Chemistry.
8. A.I. Vogel. Vogels Qualitative Analysis.

9. A.I. Vogel. Vogels Quantitative Analysis.
10. J.N. Gurutu & R. kapoor. Advanced Experimental Chemistry Vol I, II, III.
11. Balwantrai satuja. Practical Chemistry, Physical-Inorganic-Organic & Viva Voce.

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