

G.VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS)

(Re-Accredited with "A" Grade by NAAC)

Department of B.Sc., Chemistry

U23CH6OE - CHEMISTRY IN DAY TO DAY LIFE

Course Code	Course Title	Category	Lecture	Tutorial	Practical	Credit
U23CH6OE	Chemistry in day to day life	Open Elective -Self Study Course	0	0	0	3

Year	Semester	Internal Marks (CIA)	External Marks (ESE)	Total Marks
III	VI	0	100	100

Course Objective

- Knowledge on adulteration and simple methods to detect adulteration
- Knowledge on therapeutic uses of drugs
- Knowledge on the fundamental chemistry behind the utility products like soap, detergents, cosmetics, perfumes
- Types and uses of polymers

Course Outcomes (COs)

On the completion of the course the student will be able to

CO	Course Outcome	Knowledge Level (RBT)
CO1	recall the simple methods to identify the adulteration of milk, food, oils, honey, therapeutic uses of the chemicals used in pharmacy, composition and classification of soaps and detergents and their environmental hazards, composition and toxicology of cosmetics and types and uses of plastics	K1,K2,K3,K4,K5
CO2	understand the basic Chemistry behind the utility products and their uses in daily life	K1,K2,K3,K4,K5
CO3	classify soaps and detergents, creams and polymers, illustrate simple methods to find adulteration of milk, food, oils and honey, illustrate the uses and toxicology of food additives, cosmetics and environmental hazards of plastics	K1,K2,K3,K4,K5
CO4	identify and describe International Universal recycling codes and symbols and identify the uses of utility chemicals used in day to day life	K1,K2,K3,K4,K5
CO5	discuss the toxicology of food additives , food poisoning and its prevention, methods of food preservation, therapeutic uses of the chemicals used in pharmacy, manufacture of soaps and detergents, composition, classification and toxicology of cosmetics, Environmental Hazards of plastics	K1,K2,K3,K4,K5

K1–Remember; K2–Understand; K3–Apply; K4–Analyze; K5–Evaluate; K6–Create

CO-PO and CO-PSO Mapping (Course Articulation Matrix)

COs	POs							PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
Total	0	0	0	0	0	0	0	0	0	0

(3-Strong, 2-Medium, 1-Low, -No Correlation)

Course Content

UNIT-I Adulteration of food

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Simple methods to find adulteration of milk, food, oils (edible and mineral) and honey- food laws- food poisoning and its prevention - Food preservation- Food colours - permitted and non- permitted – Toxicology. Flavours – natural and synthetic – Toxicology – Sweetening agents- Toxicology of other functional additives.

UNIT-II Chemicals in Pharmacy

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Definition, examples and therapeutic uses of the following (an elementary study only) - Antiseptics, Mouth washes, Antibiotics, Antacids, Analgesics, Antipyretics, Antimalarials, Anaesthetics, Haematinics, Laxatives, Sedatives, Cardiovascular drugs, Neoplastic drugs, Hypoglycemic drugs, Anti-convulsant drugs and Sulphonamides.

UNIT-III Soaps and Detergents

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Soaps – Basic chemical composition of soaps- classification of soaps-manufacture of soap by continuous process-Toilet soap, bathing bars, washing soaps, liquid soap manufacture – Batch process, cold process, hot process. Detergents-Introduction- types of detergents – Detergent action- Common detergent chemicals. Enzymes used in commercial detergents- Environmental Hazards.

UNIT-IV Cosmetics

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Basic concept– composition and classification of creams- face creams, sun screen and sun tan lotions, deodorants, talcum powder, skin care products, dental cosmetics, hair dyes, shaving cream, shampoo, lipsticks. General formation for each type - Toxicology of cosmetics.

UNIT-V Plastics in daily use

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Introduction to polymers–types of polymers- thermoplastics and thermosetting plastics - advantages of plastics - uses of LDPE, HDPE, PP, PS, PET, Bakelite and melamine- Recycling of plastics- International Universal recycling codes and symbols for identification. Environmental Hazards of plastics-Biodegradable plastics.

Text Books

1. Coultate, T.P., Food: The Chemistry of its components, Royal Society of Chemistry London, 2002
2. Sharma, B.K., Industrial Chemistry.
3. Chowls, S., Engineering Chemistry, Darpat Rai Publication.
4. Rao, C.N.R., Understanding Chemistry, Universities Press.