



**Semester I**  
**Chemistry in Daily Life**

Sr. No.	Heading	Particulars
1	<b>Description of the Course</b>	The course focuses on the role of Chemistry in daily life such as in kitchen, as cleaning agents used for household purposes, healthcare, cosmetics and food additives and preservatives
2	<b>Vertical</b>	Open Elective (OE)
3	<b>Type</b>	Theory
4	<b>Credits</b>	2 Credits (1 Credit = 15 Hours for Theory)
5	<b>Hours Allotted</b>	30 Hours
6	<b>Marks Allotted</b>	50 Marks
7	<b>Course Objectives (CO):</b> This course is intended for non-science students to- CO 1: Introduce a subject which has importance in everyday life CO 2: Make them aware of the Chemistry of products used in daily life CO 3: Become well-informed about the connection between Chemistry and environmental impact, health care, nutrition, etc.	
8	<b>Course Outcomes (OC):</b> At the end of the course, students will be able to: OC 1: Understand the Chemistry of the products used in daily life OC 2: Understand the advantages and disadvantages of the products used in daily life OC 3: Make the right choice of the household products	

9	Modules
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Semester	Module	Description	Credits
I	I	<b>Chemistry in Household Activities</b> 1.1 Chemistry in the Kitchen (07L) 1.2 Chemistry of the Cleaning Agents (08L)	02
	II	<b>Chemistry of the Personal Care Products and Food Products</b> 2.1 Chemistry in the Cosmetics (07L) 2.2 Chemistry in the Food Products (08L)	

<b>Module I</b>	<b>Chemistry in Household Activities</b>
<b>1.1</b>	<b>Chemistry in the Kitchen (07L)</b> <b>Chemistry of Cooking:</b> Physical and chemical changes, stability of nutrients during cooking, Microwave and conventional cooking <b>Butter and Cooking Oil:</b> Saturated and unsaturated fatty acids, hydrogenation of oil, trans and cis fatty acids <b>Water Purification:</b> RO and UV-light treatment
<b>1.2</b>	<b>Chemistry of the Cleaning Agents (08L)</b> <b>Soaps:</b> Basic chemical compositions of soap, hard and soft soaps, laundry detergents (Classification as organic and inorganic builders), Difference between soaps and detergents <b>Kitchen Utensils Cleaning Agents:</b> <b>Dry Cleaning:</b> Chemical agents used and their environmental significance <b>Shampoos:</b> Different kinds of shampoos (Antidandruff, anti-lice, herbal and baby shampoos) and their main active compounds <b>Toothpaste:</b> Composition and health effects <b>Shaving Creams and Foams:</b> Composition and health effects

<b>Module II</b>	<b>Chemistry of the Personal Care Products and Food Products</b>
<b>2.1</b>	<b>Chemistry in the Cosmetics (07L)</b> Compositions of- Sunscreen and suntan lotions, Deodorants, Talcum powder, Lipsticks, Face creams, Baby care products, Hair products for bleaching and colouring, Moisturizers, Eyebrow pencils and eye-liners
<b>2.2</b>	<b>Chemistry in the Food Products (08L)</b> <b>Common Adulterants in Different Foods:</b> Milk and milk products, Vegetable oils, Cereals, Tea and Coffee powder, Chilly powder, Beverages <b>Food Additives:</b> Food preservatives like benzoates, Sorbates, Commonly used permitted and non-permitted food colours, Artificial sweeteners like aspartame, saccharin, sucralose

#### 10. Reference Books:

1. B. K. Sharma, Industrial Chemistry, Krishna Prakashan Media, 1991.
2. M. S. R. Winter, A Consumer's Dictionary of Cosmetic Ingredients, 7th Edn., Three Rivers Press, New York, 2009.
3. Drugs and Pharmaceutical Sciences Series, Marcel Dekker, Vol. II, INC, New York.
4. Analysis of Foods – H.E. Cox: 13. Chemical Analysis of Foods – H.E.Cox and Pearson.
5. Foods: Facts and Principles. N. Shakuntala Many and S. Swamy, 4th ed. New Age International (1998) 6
6. Handbook on Fertilizer Technology by Swaminathan and Goswamy, 6th ed. 2001, FAI.
7. Lillian Hoagland Meyer, Food Chemistry, 1st Edn., CBS Publishers & Distributors, New Delhi, 2004.
8. B. A. Fox, A. G. Cameron, E. Arnold, Food Science, Nutrition and Health,

6th Edn., Edward Arnold, London, 1995.

9. H. S. Ramaswamy, M. Marcotte, Food Processing: Principles and Applications, CRC Press, 2005.
10. A. F. Smith, Encyclopedia of Junk Food and Fast Food, Greenwood Publishing Group, 2006.
11. T. A. M. Sagati, The Chemistry of Food Additives and Preservatives, John Wiley & Sons, 2012.
12. S. N. Mahindru, Food Additives, APH Publishing, 2009. 8. Biju Mathew, Anchor India, Info Kerala Communications Pvt. Ltd., 2015.

## QUESTION PAPER PATTERN

<b>Theory</b>	<b>Credit</b>	<b>No. of Hours</b>	<b>Marks</b>
	<b>02</b>	<b>30</b>	<b>50</b>

<b>Internal Continuous Assessment: 40% (20 Marks)</b>	<b>External, Semester End Examination: 60% Individual Passing in Internal and External Examination (30 Marks)</b>
<b>Continuous Evaluation through:</b> Quizzes, Class Tests, presentation, project, role play, creative writing, assignment etc.(at least 3)	As per the Format of Question Paper
<b>Format of Question Paper:</b> for the final examination	

### Question Paper Pattern for 30 Marks:

Semester End Theory Examination:

1. Duration - These examinations shall be of **one-hour** duration.
2. Theory question paper pattern:
  - a. There shall be **02** questions, Question 1 carries 15 Marks based on Unit I and Question 2 carries 15 Marks based on Unit II.
  - b. All questions shall be compulsory with internal choice within the questions.

Question	Particulars	Marks	Questions Based on
Q.1	A) Objective Questions 06 out of 10	06	Unit I
	B) Subjective Questions 03 out of 05	09	
Q.2	A) Objective Questions 06 out of 10	06	Unit II
	B) Subjective Questions 03 out of 05	09	
<b>Total</b>		<b>30</b>	---

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