

E.M.G.YADAVA WOMEN'S COLLEGE, MADURAI -14

(An Autonomous Institution - Affiliated to Madurai Kamaraj University)

(Re-Accredited with (3rd cycle) A⁺ & CGPA 3.51 Grade by NAAC)

CBCS**DEPARTMENT OF CHEMISTRY**

(w.e.f. 2017 – 2018 Batch onwards)

Certificate Course

- This course is open to all U.G second year
- Duration of the course : one year

S.NO	Subject Code	Title of the Paper	Exam Duration Hours	Maximum Marks
1.	17KC1	Chemistry of Consumer Products	3	100
2	17KCP	Consumer Products Practicals	3	100

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CERTIFICATE COURSE

Title of the paper : Chemistry of consumer products

Semester : III & IV

Contact hours: 4

Sub code : 17KC1

Credits : 4

Objectives:

1. Students gain the basic knowledge in consumer product Chemistry and modern trends in the industry.
2. To provide the practical training to the students in consumer product analysis.

Unit: I SOAPS: Saponification of oils and fats - Manufacture of soaps - Formulation of toilet soaps - Different ingredients used - Their functions - Medicated soaps - Herbal soaps - Mechanism of action of soap - soft soaps - Shaving soaps and creams-ISI specification - Testing procedures/ limits.

Unit: II DETERGENTS: Anionic detergents: Manufacture of LAB (linear alkyl benzene) - Sulphonation of LAB - Preparation of acid slurry - Different ingredients in the formulation of detergent powders and soaps - Liquid detergents - Foam boosters - AOS (alpha olefin sulphonates) - Cationic detergents: Examples - Manufacture and applications-Non-ionic detergent : Examples - Manufacture of ethylene oxide condensates -Mechanism of action of detergents - Comparison of soaps and detergents - Biodegradation- environmental effects-ISI specification - Testing procedures/ limits.

Unit: III SHAMPOO: Manufacture of SLS and SLES ingredients- functions - Different kinds of shampoos - Antidandruff- Antilice - Herbal and baby shampoos - Hair dye - Manufacture of conditioners - Coco betaines or Coco diethanolamides- ISI specification - Testing procedures/ limits.

Unit: IV SKIN PRODUCTS PREPARATION: Face and skin powders -Ingredients - Functions - Different types - Snows and face creams - Chemical ingredients used - Anti perspirants - Sun screen preparations - UV absorbers - Skin bleaching agents - Depilatories - Turmeric and Neem preparations - Vitamin oil - Nail polishes: Nail polish preparation - Nail polish removers - Article removers- Lipsticks - Roughs - Eyebrow pencils - Ingredients and Functions - Hazards-ISI specification.

Unit: V MARKETING : Leading firms, brand names, choosing the right product - Packing regulations - Marketing - Licensing - Drug license - Legal aspects - ISO 9000/12000 - Consumer education - Evaluation of the product - Advertisements.

Text Books:

1. Chakravarthy B.N, "*Industrial Chemistry*" Oxford & IBH Publishing & Co. Pvt Ltd., New Delhi, 1998.
2. Sawyer.W, Experimental cosmetics, Dover publishes, New York, 2000
3. Sharma B.K., "*Industrial Chemistry*" Tenth Edition, Krishna Prakashan Media (P) Ltd., Meerut, 1999.

Reference Books:

1. Gobala Rao.S , Outlines of chemical technology, Affiliated East West Press,1998.
2. Kafaro, Wasteless Chemical Processing, Mir Publishers, 1995.
3. Mahapatra G., "*Elements of Industrial Chemistry*", Kalyani Publishers, New Delhi, 2001.

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CERTIFICATE COURSE – PRACTICAL

Title of the paper: Consumer products practicals

Semester : III & IV

Time: 3hrs

Sub code : 17KCP

Total: 100 Marks

(At the end of the second year)

Objective:

In this course, students will be given training in the laboratory preparation of the consumer products.

Training in the laboratory preparation of the following products:

1. Soap
2. Detergent powder
3. Face powder
4. Shampoo
5. Isolation of Citric Acid from Lemon
6. To identify the food adulterants in the food stuff

Reference Books:

1. Mohan Malhotra, Lastet Cottage Industries, 20th Edition Edu, Vishal publishers, 1980, Meerut.
2. Analytical chemistry - S.M.Khopkar - New Age International.
3. Analytical chemistry - R.Gopalan - Suhan Chand.
4. Fundamental of analytical chemistry - A.Skoog and M.West.

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Question Pattern for the Certificate Courses

Time: 3 Hrs

Max. Marks : 100

I.Theory Papers

PART – A (25 X 2= 50)

Answer all the Questions

1. Fill in the Blanks (13 x 2 = 26)
2. Choose the Correct Answer (12 x 2 = 24)
 - a) Four choices of answer for each Question
 - b) No “ None of these” choice

PART – B (5 X 10= 50)

3. Answer any **Five** Questions out of **Eight**

II. Practical

Practical exam for 3 hours for 100 marks