

SEMESTER III
COSMETIC CHEMISTRY & FOOD TECHNOLOGY
THEORY

Program: B.Sc.

Course Code: U20/CHE/GE/301

No. of Credits: 3

Course Type: GE-1

Max. Hours: 45

Max. Marks: 50

Hours per week: 3

COURSE OBJECTIVES:

- To learn the chemistry involved in cosmetics, water purification and food.
- To prepare cosmetics, analyze water samples and identify the adulterants in food samples.

COURSE OUTCOMES:

CO1: Identify the types of cosmetics and learn about their chemistry

CO2: Articulate the ingredients present in personal care products and apply it in their preparation.

CO 3: Understand water purification process, food sources and analyze adulterants food.

MODULE I: CHEMISTRY OF COSMETICS**(15 Hrs)**

History of cosmetics, classification of cosmetics, professional image of self grooming, beauty and wellness. Cosmetics emulsions: cream, cleansers, powders, moisturisers, sun screen, acne and anti aging creams. Chemical peels and peeling agents, lasers and light devices, Electro Chemistry, bath salts, gels, soaps, bubble baths and scrubs

MODULE II: PERSONAL CARE**(15 Hrs)**

Skin Care

General Anatomy and Physiology of skin, Structure of skin, Growth and nutrition, dermal fillers

Hair Care

Structure of hair, growth of hair, Cosmetics used for hair – Shampoos, conditioners, Bleaches, hair dyes, hair gels, hair perms and hair relaxers/straighteners.

Nail Care

Structure of nail, cosmetics used for nail – Nail lacquer, nail polish remover, Manicure and Pedicure, nail care techniques.

Eye Care

Cosmetics used for eye – eye brow pencil, eye liner, eye shadows, mascaras. Eye concealer and eye creams.

Practical – Cosmetics Preparations

1. Preparation of Cold cream
2. Preparation of Talcum Powder.
3. Preparation of Bath salt.
4. Preparation of Lip Balm
5. Preparation of Nail Polish Remover
6. Preparation of Hand Wash.

Module III: INTRODUCTION TO FOOD, WATER PURIFICATION & FOOD**ADULTERATION****(15 Hrs)**

Introduction: Sources and functions of food- food groups- food guide- basic five food groups, usage of the food guide- food in relation to health- objectives of cooking.

Water Purification processes: Ion exchangers, reverse osmosis, activated charcoal treatment. Uses of chlorination, ozone and UV light disinfection. Specifications of drinking water.

Food Adulteration: Common adulterants in different foods- milk and milk products, vegetable oils, and fats, spices and condiments, cereals, pulses, sweetening agents and beverages. Contamination with toxic chemicals- pesticides and insecticides. Methods involved in the analysis of detection and prevention of food adulteration.

Practical:

1. Estimation of total hardness of water.
2. Testing for the presence of adulterants in food samples.

Reference Books:-

- Perry Romanowski, *Beginning Cosmetic Chemistry*, Allured Pub Corp.2009.
- Dr. Ramesh Kumari, *Chemistry of Cosmetics*, Prestige Publishers.
- Srilakshmi B., *Food Science*, New age International Pvt. Ltd. Publishers, III ed. 2003.
- Shakuntala Manay N. and Shadaksharaswamy M. *FOODS: Facts and Principles*. New Age International Pvt. Ltd. Publishers, II ed. 2002.
- Norman N. Potter, *Food Science*, CBS publishers and distributors, New Delhi. 1994.
- Swaminathan M. *Text Book on Food Chemistry*, Printing and Publishing CO., Ltd., Bangalore. 1993.
- Swaminathan M. *Advanced Text Book on Food and Nutrition*, volume I and II Printing and Publishing CO., Ltd., Bangalore. 1993.

SEMESTER – III
GENERAL ELECTIVE
MODEL QUESTION PAPER

Course Code: U20/CHE/GE/301
Credits: 3

Max. Marks: 30
Max. Time: 1 Hr

Answer the following

3x10 = 30 M

1. Give the classification of cosmetics based on Raw materials. (CO 1)

OR

2. What are Chemical Peels and the types of peeling agents? (CO 1)

3. Explain the structure of the nail with the help of a neat diagram. (CO 2)

OR

4. Explain the structure, composition and growth cycle of hair with the help of a neat diagram. (CO 2)

5. What is meant by food adulteration and explain the different types of Food adulteration with suitable examples. (CO 3)

OR

6. Emphasize the significance of Chlorination of water. (CO 3)