

Semester	IV
Paper Code	<b>BOOE 5</b>
Paper Title	<b>Plant Based Cosmetics</b>
Number of teaching hours per week	03
Total number of teaching hours per semester	45
Number of credits	03

**Objective of the Paper:**

To understand the principles, objectives, scope and Application of Cosmetics. To Understanding and recognition of various raw materials and their properties for preparation of Cosmetics. To formulate plant based cosmetics. To Analysis and testing methods of Plant based cosmetics. Entrepreneurship and Establishment of Small scale Cosmetic industry. To motivate the students to take up cosmetics as a field of research for further education.

<b><u>Content of Theory Course 1</u></b>		<b>45 Hrs</b>
<b>Unit I</b>		<b>4 hours</b>
<b>Chapter 1</b>	<b>Cosmetics-</b> Definition, types and significance. Quality control of cosmetic products from plants.	<b>4</b>
<b>Unit II</b>		<b>18 hours</b>
<b>Chapter 2</b>	Description and Identification of plants used in cosmetics industry. Morphological characters of organized herbs (root, stem, leaf, fruit and seed) and unorganized herbs (mucilage, latex and extracts).	<b>8</b>
<b>Chapter 3</b>	Gums-Acacia, guar gum, pectin, agar, cellulose and their cosmetic applications, Starches-Wheat, maize, rice, potato and their cosmetic applications, Oils-Castor, linseed, olive, sesame, coconut, groundnut oil and their cosmetic applications.	<b>10</b>
<b>Unit III</b>		<b>12 hours</b>
<b>Chapter 4</b>	Plants used in Cosmetics products - Brahmi, Neem, <i>Aloe vera</i> , Liquorice, Henna, Cucumber, Tulsi, soapnut, Amla, Turmeric etc.	<b>8</b>
<b>Chapter 5</b>	Plant crude extract: Different methods of extraction – Maceration, Decoction, Soxhlet, Ultra sonication. Types of Solvents: Polar and non polar solvents used for crude extract preparation	<b>4</b>
<b>Unit IV</b>		<b>11 hours</b>
<b>Chapter 6</b>	Different bases and raw materials used in cosmetics. Basic theory of cream, oils and gels used as cosmetics.	<b>4</b>
<b>Chapter 7</b>	Cosmetic products from Plants:Preparation,Processes, Validation,Marketing,and Quality control of Amla hair oil, Henna hair oil; <i>Aloe vera</i> Gel, Cucumber gel; Liquorice, Neem and Turmeric Cream.	<b>7</b>

**Suggested Readings:**

1. Naturals and Cosmetics – by Dr. Satish Sakharwade
2. Materia Medica – By Nadkarni.
3. Wealth of India – CSIR
4. New Cosmetic Science by Takeo Mitsui
5. Harrys Cosmetology
6. Cosmetic Science and technology by Sagrin C.B
7. Handbook of Cosmetic Science and technology by Marc paye, Andre. O. Barel.
8. Himadri Panda, Herbal cosmetics Handbook .3rd revised edition.
9. Handbook on herbal products.( Vol.1 and 2) NIIR Board of Technologists, New Delhi.
10. Theory and Practice of Industrial Pharmacy by Leon Lachman.
11. New Cosmetic Science
12. Indian Herbs by Chopra