

Semester Lecture Plan (Theory)							
Name of the college: Government College of Arts, Science and Commerce, Sanquelim Goa							
Name of Faculty: Dr. Nisha Kevat			Subject: Botany – (Plants in Everyday Life)				
Paper code: BOT - 111			Program/Course: F.Y B.Sc.		Division: - - -		
Academic year: 2024 - 2025			Semester: I		Total Lectures: Theory (30)		
Course Objectives: <ul style="list-style-type: none"> This course is designed to give an overview of how plants are indispensable to humans. It gives a broad exposure to the various aspects of plant resource & its utilization. 							
Course Learning Outcome: <ol style="list-style-type: none"> Recall various economically and medicinally important plant species used in day-to-day life. Explain the uses of economically important plants and illustrate the processing of various plant parts. Analyze the utilization of various plant resources in day-to-day life. Apply theoretical knowledge in utilization, and report generation of economical and medicinal plants. Create awareness on conservation of medicinal plants and use of natural plant products as alternatives to synthetic products. 							
Month	Lectures From: To:		No. of lectures allotted	Topic, Subtopic to be covered	Exercise/Assignment	ICT Tools	Reference books
June 2024	28/06/	30/06	02 h	Lecture 1: Module 3: Plant resources and utilization-II (including brief description of plant and/or plant parts used). a. Spices: Chillies, Nutmeg, Clove, Black pepper,	Name 2 spices used daily. Identify 1 spice from today's lecture.	Power point presentation You tube Videos Google forms for	<ul style="list-style-type: none"> Billings S and Collingwood S (2013). The Big book of home

				Lecture 2: Cardamom, Star anise (Chakriful) and Dagad phul (<i>Parmotrema perlatum</i>).		quiz	remedies. Lulu.com publisher.
July 2024	01/07/	06/07	02 h	Lecture 3: b. Beverages: Tea (including processing). Lecture 4: b. Beverages: Coffee (including processing).	Describe tea processing briefly List 2 steps in coffee processing.	Power point presentation You tube videos	<ul style="list-style-type: none"> • Buckley, C (2020). Plant Magic: Herbalism in Real Life. Roost Books Publishers, New York.
July, 2024	08/07	13/07	02 h	Lecture 5: c. Eco-friendly use of plant parts: Banana fresh leaves, Arecanut spathe, Kumyo leaves (<i>Carea arborea</i>), Lecture 6: Jackfruit leaves and Bamboo culm	Name 1 eco-friendly use of Banana leaves Identify 1 use of Jackfruit leaves.	Power point presentation You tube videos	<ul style="list-style-type: none"> • Chrispeels, MJ and Sadava, DE (1994). Plants, Genes and Agriculture. Jones & Bartlett Publishers.
July, 2024	15/07	20/07	02 h	Lecture 7: d. Oils: Eucalyptus, Rose Lecture 8: ISA	Name 2 plants that give oil. Write 1 key point from today's ISA.	Power point presentation You tube videos	<ul style="list-style-type: none"> • Fuller, KW and Gallon, JA (1985). Plant Products and New Technology. Clarendon Press, Oxford, New York.
July, 2024	22/07	27/07	02 h	Lecture 9: I Orange peel (including methods of extraction) Lecture 10: Fibres: Coir Including method of separation, drying and storing of fibre	How do you extract oil from orange peel? Name 1 step in coir processing.	Power point presentation You tube videos	<ul style="list-style-type: none"> • Hill, AF (1952). Economic Botany: A Textbook of Useful Plants and Plant Products. McGraw Hill Publishing Company Ltd., New Delhi.
August, 2024	05/08	10/08	02 h	Lecture 11: Cotton, Jute, Banana (Including method of separation of spathe, drying and storing of fibre) Lecture 12: Sisal Including method of separation of spathe,	Identify 1 fibre plant Mention 1 method to process sisal fibre.	Power point presentation You tube videos	<ul style="list-style-type: none"> • Kochhar, SL (2012).

				drying and storing of fibre			Economic Botany in the Tropics. MacMillan India Ltd., New Delhi.
August, 2024	12/08	17/08	02 h	<p>Lecture 13: Collection, drying, processing and extraction of fibre from Agave leaf (demonstration/video)</p> <p>Lecture 14: f. Timber: Teak (Sailo), Rose wood</p>	Describe 1 step in Agave fibre extraction. Name 1 type of timber discussed today.	Power point presentation You tube videos	<ul style="list-style-type: none"> • Purohit, SS and Vyas, SP (2008). Medicinal Plant Cultivation: A Scientific Approach. Agrobios, India.
August, 2024	19/08	24/08	02 h	<p>Lecture 15: Timber: Matti and Bamboo.</p> <p>Lecture 16: g. Rubber: <i>Hevea brasiliensis</i> (including demonstration of rubber extraction process)</p>	List 2 uses of Bamboo. Write 1 step in rubber extraction.	Power point presentation You tube videos	<ul style="list-style-type: none"> • Rao, RS (1985-1986). Flora of Goa, Diu, Daman & Nagar-Haveli. 2 Volumes. Botanical Survey of India.
August, 2024	26/08	31/08	02 h	<p>Lecture 17: Herbal based hair dyes: Role of ingredients used in formulation;</p> <p>Lecture 18: ISA II</p>	Name 1 ingredient in herbal hair dye. Write 1 key point from today's ISA.	Power point presentation You tube videos	<ul style="list-style-type: none"> • Shailesh, R (2019). Everyday Ayurveda: The complete book of Ayurvedic home remedies. Notion Press, India.
September, 2024	02/09	07/09	02 h	<p>Lecture 19: preparation of herbal dyes; application of hair dye; evaluation and uses of hair dye (Henna, Bhringaraj, Hibiscus, Amla). Including</p> <p>Lecture 20: Demonstration on preparation of herbal hair dye and evaluation/testing on hair wig.</p>	Identify 1 plant used in hair dye. Mention 1 step in testing hair dye.	Power point presentation You tube videos	<ul style="list-style-type: none"> • Sambamurty AVSS and Subramanyam NS (1989). A Textbook of Economic

September, 2024	09/09	14/09	02 h	<p>Lecture 21: Herbal cosmetics and aromatics: Introduction and scope, tinctures,</p> <p>Lecture 22: Extraction Methods-Maceration, infusion, decoction, distillation and</p>	<p>List 2 uses of herbal cosmetics. Name 1 extraction method.</p>	<p>Power point presentation</p> <p>You tube videos</p>	<p>Botany. Wiley Eastern Ltd., New Delhi.</p> <ul style="list-style-type: none"> • Sen, S (2009). Economic Botany. NCBA Publishers, New Delhi. • Sharma, OP (1996). Hill's Economic Botany. Tata McGraw Hill Publishing Company Ltd., New Delhi. • Simpson BB and Conner-Ogorzaly M (1986). Economic Botany - Plants in Our World. McGraw Hill, New York. • Singh V, Pande PC and Jain DK (2009). A Text Book of Economic Botany. Rastogi Publications, Uttar Pradesh. • Trivedi, PC (2006). Medicinal Plants: Ethnobotanical Approach.
September, 2024	16/09/	21/09	02 h	<p>Lecture 23: Types of herbal preparations.</p> <p>Lecture 24: Plants used in cleansers (Neem, Cucumber, Rose), scrubs (Marigold, Neem), wash (Rose –face wash, hibiscus & amla- hair wash & oil), packs (Neem, Tulsi, Sandalwood, Turmeric) and creams (Rose, Jasmin, Marigold).</p>	<p>Identify 1 type of herbal preparation.</p> <p>Name 1 plant used in face wash.</p>	<p>Power point presentation</p> <p>You tube videos</p>	
September, 2024	23/09	28/09	2 h	<p>Lecture 25: Extraction of essential oil from lemon grass / orange peel or citrus fruit peel. Preparation of Henna powder from Henna leaves and Aloe gel from Aloe vera</p> <p>Lecture 26: Preparation of plant based holi colours.</p>	<p>List 2 steps to extract essential oil.</p> <p>Identify 1 plant-based Holi color.</p>	<p>Power point presentation</p> <p>You tube videos</p>	
October, 2024	23/09	28/09	2 h	<p>Lecture 27: Paper making from plants: Paper industry and paper manufacturing; Raw materials, Processing and kinds of paper.</p>	<p>Name 1 raw material for paper.</p>	<p>Power point presentation</p> <p>You tube videos</p>	

				Lecture 28: ISA III			Agrobios, India.
September/ October, 2024	30/09	5/10	2 h	Lecture 29: paper Industry in India Lecture 30: Method of making of handmade paper with demonstration/video	Identify 1 fact about the Indian paper industry. Describe 1 step in handmade paper making.	Power point presentation You tube videos	<ul style="list-style-type: none"> Upadhyay, R (2024). Botany for B.Sc. students, Economic Botany, Ethnomedicine and phytochemistry/Commercial Botany and phytochemical Analysis. S. Chand and Company Ltd. Publishers, India.
October, 2024	7/10	12/10	2 h	Lecture 31: Demonstration on preparation of herbal formulation/herbal tea Lecture 32: Field visit in the campus to identify the plants of economic importance and report preparation	List 2 ingredients in herbal tea. Name 1 plant of economic importance found during the field visit.	Power point presentation You tube videos	<ul style="list-style-type: none"> Wickens, GE (2001). Economic Botany: Principles & Practices. Kluwer Academic Publishers, The Netherlands
October, 2024	14/10	19/10	2h	Lecture 33: Revisions Lecture 34: Revisions			

***Assessment Rubrics**

Component	Maximum Marks
ISA I	10
ISA 2	10
ISA 3 (Two best of 3 ISA)	10
Practical	NA
Project	NA
Semester End Exam	80
Total	100