

Faculty of Science
Bachelor of Science (B.Sc.)

SUBJECT: BOTANY

VI Semester

Group B- Paper-2

Paper- Biodiversity and Economic Botany (Theory)

Discipline Specific Elective (DSE) 1

(S3-BOTA4D)

Course Outcomes

CO.No.	Course Outcomes	Cognitive Level
CO1	Apprehend plant products used in daily life.	U
CO2	Assess the diversity of plants and the plant products in human use.	U
CO3	Understand core concepts of Economic Botany.	U, A
CO4	Get acquainted with the resources of millets, cereals, pulses, vegetables, flowers, fibre and wild food plants.	U, A
CO5	Recognise the importance of plants for enhancing immunity and their role in various medicinal systems.	K, U

Credit and Marking Scheme

	Credits	Marks		Total Marks
		Internal	External	
Theory	3	40	60	100 (Min. Passing Marks: 35)
Practical	1	40	60	100 (Min. Passing Marks: 35)
Total	4	200		

Evaluation Scheme

	Marks	
	Internal	External
Theory	3 Internal Exams of 20 Marks (During the Semester) (Best 2 will be taken)	1 External Exams (At the End of Semester)
Practical	2 Internal Exams (20 Marks) + Attendance of 10 Marks (During the Semester) (Both will be taken + Attendance)	1 External Exams (At the End of Semester)

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Content of the Course

Theory

No. of Lectures (in hours per week): 2 Hrs. per week

Maximum Marks: 60

Total No. of Lectures: 45 Hrs.

Unit	Topics	No. of Lectures 45
1	1. Concept of Biodiversity- 1.1 Concept, definition, scope and constraints. Genetic 1.2 Types of biodiversity,- Genetic species/Organism Diversity, Ecological/ Ecosystem, Agro and urban Biodiversity 1.3 Centre of Biodiversity 1.4 Brief knowledge of types of plants-Terrestrial, Aquatic, epiphytic, Parasitic and Saprophytic plants.	12
2	2. Threats of Biodiversity- 2.1 Habitat Destruction, Fragmentation, Transformation, Degradation and Loss 2.2 IUCN threatened category, Endangered and endemic species, Invasive species. 2.3 Effect of Pollution- impact of Pesticides, over exploitation. 2.4 Biodiversity indices. 3. Biodiversity conservation 2.1 Strategies of Biodiversity conservation 2.2 Ecosystem services	12
3.	3. Plant Resources 3.1 Resource survey and documentation in local markets 3.2 Checklist of locally used underutilized and discontinued plants. 3.3 Economic potential and Geographical distribution- Minor Millets, Cereals, Pulses, Vegetables, Flowers and wild edible Plant resources. 3.4 Economical potential of Fodders and wild Relatives of cultivated crops 3.5 Traditional water and soil management.	12
4.	4. Other Economical Plant Resources 4.1 Types of Fibers, their marketing potential-Cotton, Coir, Agave, Jute, Banana based products. 4.2 Natural dyes and locally available dye yielding plants 4.3 Herbal cosmetics, (Skin and hair care) 4.4 Sweeteners like Jaggery, Palm, Cane sugars and stevia. 4.5 Differences between stimulating and alcoholic beverages- Coffee, Tea and a range of Herbal Teas.	12
5.	Medicinal Plant Resources: 1.1 Raw drugs and related MFP 1.2 Any 10 plants used in traditional medicine (Ayurveda, Unani, Siddha and Homeopathic)	12

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	1.3 Lower plants like algae and fungi in medicines and Nutraceuticals.	
	1.4 Plants used in common ailments as home remedies.	
	1.5 Plant and herbal products used as Antibiotics and immunity boosters	
Keywords/Tags: Biodiversity, Plant resources, Economical plant resources Medicinal resources		
PART C- Learning Resources		
Text Books, Reference Books, Other resources		
1. Chrispeels, M.J. and Sandava, D. E. Plants, Genes and crop biotechnology, Jones and Bartlett Publishers, ISBN 978-0763715861. (2003) 2. Kochhar S.L. Economic Botany in Tropics, 4 th edn. Macmilan and Co, New Delhi, India, ISBN 978-9350590676. (2012) 3. Sammbamurty, A.V.S.S. Text book of Modern Economic Botany, Ist Edn. CBS publishers. ISBN 978-8123906294. (2008) 4. Simpson B.B and Ogorzaly M.C Economic Botany : Palnts in our world McGraw Hill, USA ISBN 978-0072909388 (2000) 5. Wickens,G.E Economic Botany : Principles and Practices, Panima Publishing Corporation, New Delhi ISBN 978-811285683(2007) 6. Jadhav, Dinesh Medicinal plants of Madhya Pradesh and Chattisgarh, Day Publishing House, Delhi (2008) 7. Dey, S.C, Indoor Gardening, Agrobios (India) Jodhpur (2003)		
Suggested equivalent online course:- www.eshiksha.mp.gov.in		
Part D- Assessment and Evaluation		
Suggested Continuous Evaluation Methods:		
Maximum Marks:100		
Continuous Comprehensive Evaluation (CCE):40 Marks University Exam (UE):60Marks		
Internal Assessment :	Class Test	
Continuous	Assignment/Presentation	40
Comprehensive Evaluation(CCE)	<i>objective</i>	
External Assessment:	Section(A): v... Questions	
University Exam Section Time:	Section(B): Short Questions	60
03.00 Hours	Section (C): Long Questions	
40+60=100		

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