

S.S. Jain Subodh P.G. College Jaipur

(Autonomous)

Department Of Botany

Multidisciplinary Courses Botany

As Per NEP 2020

w.e.f.-2025

Examination Scheme for EoSE for Semester III

CIA – Continuous Internal Assessment

EoSE – End of Semester Examination

Type of Examination	Course Code and Nomenclature	Duration of Examination		Maximum Marks		Minimum Marks	
Theory	Introduction of Botany	CIA	02 Hr	CIA	30 Marks	CA	12 Marks
		EoSE	03 Hrs	EoSE	70 Marks	EoSE	28 Marks

The theory question paper will have two parts A and B.

Part-A: 14 Marks

Part A will have 10 short answer/objective-type questions of two marks, candidate have to attempt any seven questions.

Part-B: 56 Marks

Part B of the question paper will be divided into four units including question number 2-

5. From each unit there will be two question from each unit ,candidate can choose one question with internal choice. Each question will be of 14 marks.

Syllabus

Multidisciplinary Courses - Botany Introduction of Botany

Semester	Code of the Course	Title of the Course/Paper	Credits
III		Introduction of Botany	4

Objectives of the course- To impart knowledge of Botany to students of other than science. Botany is used in day today life of everyone. It also plays very significant role in

Course Outcomes-

1. To make the students familiar with economic importance of diverse plants that offer resources to human life.
2. To make the students known about the plants used as-food, medicinal value and also plant source of different economic value.
3. To generate interest amongst the students on plants importance in day today life, conservation, ecosystem and sustainability.

Course learning outcomes:

By the end of this course, the student will be able to:

1. Describe plants of different groups
2. Understand plants found in different habitats.
3. Will recognize the plants of economic importance.
4. Recognize that plants, which can be utilized in various forms.

Introduction of Botany

syllabus

Unit-I

Concept to understand plants; history of plant classification; general characteristics of major plant groups-bacteria, algae, fungi, Bryophyte, Pteridophyta, Gymnosperms and Angiosperms, general life cycle of an Angiospermic plant.

8 lectures

Unit-II

Classification of plants on the basis of habit, habitat and longevity with examples; Morphology, function and types of roots, stem and leaves (brief overview); flower structure; basic fruit and seed structure.

7 lectures

Unit-III

Economic importance of plants: Common name, Scientific name, distribution, cultivation practices, part used and uses of- plants used as food (Wheat, Rice, Gram, Arhar); as fruits (Banana, Mango, Watermelon, Papaya, Apple); as oilseed (Mustard, Groundnut)

8 lectures

Unit-IV

Economic importance of plants: Common name, Scientific name, distribution, cultivation practices, part used and uses of- plants used as spices (Cumin, Coriander, Chili, Laung, Asfoetida); as wood (Sal, deodar, Sheesham); as medicine (Tulsi, Neem, *Aloe vera*, Giloy).

7 lectures

Books Recommended

1. NCERT class 11 and 12, Biology
2. A text book of Botany- Singh, Pandey and Jain, Rastogi Publication
2. Pandey, B.P. (1999). Economic Botany. S. Chand, New Delhi.

Examination Scheme for EoSE for Semester IV

CIA – Continuous Internal Assessment

EoSE – End of Semester Examination

Type of Examination	Course Code and Nomenclature	Duration of Examination		Maximum Marks		Minimum Marks	
Theory	Plant and Human health	CIA	02 Hr	CIA	30 Marks	CA	12 Marks
		EoSE	03 Hrs	EoSE	70 Marks	EoSE	28 Marks

The theory question paper will have two parts A and B.

Part-A: 14 Marks

Part A will have 10 short answer/objective-type questions of two marks, candidate have to attempt any seven questions.

Part-B: 56 Marks

Part B of the question paper will be divided into four units including question number 2-

5. From each unit there will be two questions from each unit, candidate can choose one question with internal choice. Each question will be of 14 marks.

Syllabus

Multidisciplinary Courses - Botany

Plant and Human health

Semester	Code of the Course	Title of the Course/Paper	Credits
IV		Plant and Human health	4

Objectives of the course- To understand the medical uses of plants.

- To differentiate use of plants in different natural medical systems.
- To gain understanding of importance of plants for human welfare.
- To be able to active ingredients of medicinal plants.

Course Outcomes-

1. To make the students familiar with economic importance of diverse plants that offer resources to human life.
2. To make the students known about the plants used as-food, medicinal value and also plant source of different economic value.
3. To generate interest amongst the students on plants importance in day today life, conservation, ecosystem and sustainability.

Course learning outcomes:

By the end of this course, the student will be able to:

1. Describe how plants are used to improve human health and nutrition.
2. An appreciation of the contribution of medicinal plants to traditional and modern medicine and the importance of holistic mode of treatment.
3. understanding of the constraints in promotion and marketing of medicinal plants.
4. Developing entrepreneurship skills to establish value addition products, botanical extracts and isolation of bioactive compounds.

Plants and Human Health

Syllabus

Unit I

History, Scope and Importance of Medicinal Plants: Indigenous Medicinal Sciences; Definition and Scope-Ayurveda: plants used in ayurvedic treatments, medicinal plants used in plants used in Unani. **8 Lectures**

Unit II

Herbal medicines: history and scope - definition of medical terms, cultivation - harvesting - processing - storage - marketing and utilization of medicinal plants viz. Aloe vera, Neem ,Haldi ,Amla ,Giloy etc.polyherbal formulations

7 Lectures

Unit III

Pharmacognosy – Active compounds and medicinal uses of the following herbs in curing various ailments- Tulsi, Ginger, Fenugreek, Indian Goose berry, Ashoka, Neem, Babool, Karanj, Ashwagandha, Sarpagandha, Isabgol, Senna, Guggal. **8 Lectures**

Unit IV

Ethnic communities of Rajasthan, Application of natural products to certain diseases- Jaundice, Pain, Fever, infertility, diabetics, Blood pressure and skin diseases. Brief overview of plants can be used as nutritional supplements- Millets, Bajra, Ragi, Rajgiri, Jawar. **7 Lectures**

Suggested Readings:

1. Chaudhry, B.(2019). A Handbook of Common Medicinal Plants Used in Ayurveda. New Delhi, Delhi: Kojo Press.
2. Purohit and Vyas (2008). Medicinal Plant Cultivation: A Scientific Approach, 2nd edition. Jodhpur, Rajasthan: Agrobios.
3. Shrivastava,R, Singh, S, Barwant, MM, Singh, B. 2023. Handbook of Medicinal Plants in Health and Diseases, Bluerose Publishers Pvt. Ltd.

Examination Scheme for EoSE for Semester V

CIA – Continuous Internal Assessment

EoSE – End of Semester Examination

Type of Examination	Course Code and Nomenclature	Duration of Examination		Maximum Marks		Minimum Marks	
Theory	Biodiversity Conservation and Ecotourism	CIA	02 Hr	CIA	30 Marks	CA	12 Marks
		EoSE	03 Hrs	EoSE	70 Marks	EoSE	28 Marks

The theory question paper will have two parts A and B.

Part-A: 14 Marks

Part A will have 10 short answer/objective-type questions of two marks, candidate have to attempt any seven questions.

Part-B: 56 Marks

Part B of the question paper will be divided into four units including question number 2-

5. From each unit there will be two questions from each unit, candidate can choose one question with internal choice. Each question will be of 14 marks.

Syllabus

Multidisciplinary Courses - Botany

Biodiversity Conservation and Ecotourism

Semester	Code of the Course	Title of the Course/Paper	Credits
V		Biodiversity Conservation and Ecotourism	4

Objectives of the Course:

- To impart knowledge of Concept of biodiversity
- Factors affecting biodiversity
- Understanding the major conservation policies
- Getting knowledge on ecotourism with home-stay tourism approach

Course Outcomes-

1. Understanding the fundamental concepts in biodiversity and environmental science.
2. Concept development in conservation, global ecological crisis, Sustainable development and pros and cons of human intervention.
3. Enable the student to appreciate bio diversity and the importance of various conservation strategies, laws and regulatory authorities and global issues related to climate change and sustainable development.

Course learning outcomes:

By the end of this course, the student will be able to:

1. Understand the concepts of biodiversity and conservation
2. Understand the factors impacting biodiversity loss in India and the World
3. Major conservation strategies taken in India
4. Ideas on ecotourism with special emphasis on

Biodiversity Conservation and Ecotourism

Detailed Syllabus

Unit I

Biodiversity and its distribution: Definition & Concept of biodiversity, levels and types of biodiversity; Biodiversity in India and the world; Endemism, Biodiversity hotspots and importance of its conservation.

8 Lectures

Unit II

Threats to biodiversity: Types and causes of biodiversity loss - Land use and Land cover changes, commercial exploitation of species, invasive species, fire, disaster and climate change.

7 Lectures

Unit III

Conservation policies: Importance and major policies – *in situ* and *ex situ* conservation; Major protected areas; National and International institutions for biodiversity conservation; Role of traditional knowledge for conservation; Community-based conservation, concept of Zoo management.

8 Lectures

Unit IV

Eco-Tourism: Types of Tourism; Ecotourism – Concept, Growth and Developments; Impacts and management of ecotourism. Main tourist places of Rajasthan and ecological significance.

7 Lectures

Suggested Readings:

1. Mitra, A.P., Sharma, S., Bhattacharya, S., Garg, A., Devotta, S. & Sen, K. 2004. Climate Change and India. Universities Press, India. Philander, S.G. 2012.
2. Saha T.K. 2010. Ecology and Environmental Biology, Books and Allied (P) Ltd. Kolkata.
3. Sharma, P. D. 2012. Ecology and Environment, Rastogi Publication

