STATE EDUCATION POLICY-2024-25

(SEP-2024)

BOS appmd

BOTANY SYLLABUS

of 1st to 4th Semester

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The Chairman - BOS
Department of Studies in Botany
Davangere University, Davanagere - 577 007

Submitted

to

Davangere University
Davangere-577 007

Dr. U.S. MAHABALESHWAR
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Bachelor of Science (B.Sc.) Semester Scheme
Curriculum Structure for Undergraduate Programme for 2024-25

Sl. No.	Course/ Paper Code	Title of the paper	Subject Category	Teaching Hours/week	Semester End Exam.	Internal Assessment	Total Marks	Credits	Exam Duration
Semester-I									
1.	MC-I	Diversity of Microorganisms and Thallophytes	MC-T	03	80	20	100	03	3 Hours
	Practical-I	Diversity of Microorganisms and Thallophytes	MC-P	03	40	10	50	02	3 Hours
			Total	**06**	**120**	**30**	**150**	**05**	---
Semester-II									
2.	MC-II	Diversity of Non-flowering Plants	MC-T	03	80	20	100	03	3 Hours
	Practical-II	Diversity of Non-flowering Plants	MC-P	03	40	10	50	02	3 Hours
			Total	**06**	**120**	**30**	**150**	**15**	--
Semester-III									
3.	MC-III	Histology, Plant Anatomy, Embryology and Palynology	MC-T	03	80	20	100	03	3 Hours
	Practical-III	Histology, Plant Anatomy, Embryology and Palynology	MC-P	03	40	10	50	02	3 Hours
	Elective/ Optional-I*	Landscaping and Gardening	EL/OP-I	02	40	10	50	02	2 Hours
			Total	**08**	**160**	**40**	**200**	**07**	---
Semester-IV									
4.	MC-IV	Ecology and Environmental Biology	MC-T	03	80	20	100	03	3 Hours
	Practical-IV	Ecology and Environmental Biology	MC-P	03	40	10	50	02	3 Hours
	Elective/ Optional-II*	Medicinal Plants in Healthcare	EL/OP-II	02	40	10	50	02	2 Hours
			Total	**08**	**160**	**40**	**200**	**07**	---
Semester-V									
5.	MC-VA	Morphology and Systematics of Angiosperms	MC-T	03	80	20	100	03	3 Hours
	MC-VB	Plant Breeding and Biotechnology	MC-T	03	80	20	100	03	3 Hours
	Practical-V	Histology, Systematics of Angiosperms,	MC-P	03	40	10	50	02	3 Hours

		Plant breeding and biotechnology							
			Total	09	200	50	250	08	---
Semester-VI									
6.	MC-VA	Cytology and Genetics	MC-T	03	80	20	100	03	3 Hours
	MC-VB	Plant Physiology	MC-T	03	80	20	100	03	3 Hours
	Practical-V	Cytology, Genetics and Plant Physiology	MC-P	03	40	10	50	02	3 Hours
			Total	**09**	**200**	**50**	**250**	**08**	---
			Grand Total	**46**	**960**	**240**	**1200**	**40**	

MC: Major Course, MC-T: Major Course Theory, MC-P: Major Course Practical, EL/OP: Open Elective/Optional

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Registrar
Davangere University
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PROGRAMME SPECIFIC OUTCOME OF B.Sc. BOTANY

PSO1: Skill development for the proper description using botanical terms, identification, naming and classification of life forms especially plants and microbes.

PSO2: Acquisition of knowledge on structure, life cycle and life processes that exist among plant and microbial diversity through certain model organism studies.

PSO3: Understanding of various interactions that exist among plants and microbes; to develop the curiosity on the dynamicity of nature.

PSO4: Understanding of the major elements of variation that exist in the living world through comparative morphological and anatomical study.

PSO5: Ability to explain the diversity and evolution based on the empirical evidences in morphology, anatomy, embryology, physiology, biochemistry, molecular biology and life history.

PSO6: Skill development for the collection, preservation and recording of information after observation and analysis- from simple illustration to molecular database development.

PSO7: Making aware of the scientific and technological advancements- Information and Communication, Biotechnology and Molecular Biology for further learning and research in all branches of Botany.

PSO8: Internalization of the concept of conservation and evolution through the channel of spirit of inquiry.

BOTANY COURSE OUTCOMES (COs):

Semester I (A-1): Diversity of Microorganisms and Thallophytes

1. Understand the fascinating diversity, evolution, and significance of microorganisms and thallophytes.
2. Comprehend the systematic position, structure, physiology and life cycles of microbes and thallophytes and their impact on humans and environment.
3. Gain laboratory skills such as microscopy, microbial cultures, staining, identification, preservation of microbes and thallophytes for their applications in research and industry.

Semester II (A-2): Diversity of Non- Flowering Plants

1. Understand the diversity and affinities among Bryophytes, Pteridophytes and Gymnosperms.
2. Understand the morphology, anatomy, reproduction and life cycle across, Bryophytes, Pteridophytes and Gymnosperms, and their ecological and evolutionary significance.
3. Obtain laboratory skills/explore non-flowering plants for their commercial applications.

Subject	**Diversity of Microorganisms and Thallophytes**	Semester	I
Number hr/week	4hours	Total hours	56
Duration of the exam	3 hours	Credits	3

Unit	**Content**	**Hours**
I	**Microbial Diversity**: Brief account on microbial diversity, Mycoplasma, Viruses, General characters and properties of TMV, bacteriophage T4, Plant diseases TMV/BMV and sandal spike. Bacteria: General characteristics, reproduction, classification based on morphology and flagellation, ultrastructure, economic importance, bacterial diseases viz., citrus canker, leaf blight of paddy.	14
II	**Cyanobacteria**: General characteristics, types study of Nostoc and Spirulina. Economic importance of cyanobacteria. **Algae**: General characteristics, FE Fritsch system of classification, economic importance, types study of Oedogonium, Chara, Diatoms, Saragassum, Batrachospermum	14
III	**Fungi**: General characteristics, classification based on Alexopoulos type, economic importance, type study of Phycomycetes (Albugo), Zygomycetes (Rhizopus), Ascomycetes (Penicillium), Basidiomycetes (Agaricus), Deuteromycetes (Cercospora).	14
IV	**Plant Pathology**: Brief history of plant pathology (Bengal and Irish famine) Causal agent, transmission, symptoms and controlling measures of following diseases white rust of mustard, root rot of arecanut (koleroga), stem rust of wheat, powdery mildew of cucurbits, tikka disease of ground nut. **Lichens**: occurrence, classification (crustose, foliose, fruticose), internal structure of thallus, structure of apothecium and economic importance	14

*Filed visit and specimen collection is mandatory.

I BSc, I Semester, Paper I

Practical Syllabus

Paper I: **Diversity of Microorganisms and Thallophytes**

Duration of practical: 4 hours

Syllabus based on theory paper syllabus

1. Study of virus and bacteria and its diseases
2. Study of algae
3. Study of fungi and its types
4. Study of plant diseases as per in theory syllabus
5. Study of lichens and its types
6. Collection or photographs of any 05 specimens and their submission.

I BSc, I Semester, Paper I

Practical Internal Assessment (10 Marks)

Paper II: **Diversity of Microorganisms and Thallophytes**

Practical Attendance: 05 Marks Practical Record: 05 Marks

I BSc, I Semester, Paper I

Practical Question Paper

Paper I: **Diversity of Microorganisms and Thallophytes**

Duration of practical: 3 hours Max Marks: 40

Q1	Identify the specimen A, B, and C sketch label and give reason	09 Marks
Q2	Write notes on D and E (Macroscopic)	04 Marks
Q3	Write the pathological aspects of F, G and H	09 Marks
Q4	Identify the slides I, J, K and L	08 Marks
Q5	Viva and Submission	10 Marks

*Collection or photographs of any 05 specimens

Subject	**Diversity of Non-Flowering Plants**	Semester	II
Number hr/week	4hours	Total hours	56
Duration of the exam	3 hours	Credits	3

Unit	**Content**	**Hours**
I	**Bryophyta**: Introduction, general characteristics, classification, structure and reproduction of Hepaticopsida (Marchantia), Anthecerops ida (Anthoceros), Bryopsida (Polytrichum). Brief account on evolution of sporophytes in bryophytes and economic importance.	14
II	**Pteridophyta**: Introduction, general characteristics, classification, structure and reproduction of Psilopsida (Psilotum), Lycopsida (Lycopodium and Selaginella), Sphenopsida (Equisetum), Pteridopsida (Marselia). Brief account on stellar evolution in pteridophytes and economic importance.	14
III	**Gymnosperms**: Introduction, general characteristics, classification, structure and reproduction of Cycadopsida (Cycas), Gnetopsida (Gnetum), Coniferopsida (Pinus). Economic importance.	14
IV	**Paleobotany**: Introduction, geological time scale, process of fossilization, types of plant fossils, radiocarbon dating. Fossil taxa: Rhynia, Lepidodendron, Calamites, Cycadeoidea. Birbal Sahani Institute of paleosciences.	14

*Filed visit and specimen collection is mandatory.

I BSc, II Semester, Paper II
Practical Syllabus
Paper II: **Diversity of Non-Flowering Plants**

Duration of practical: 4 hours

Syllabus based on theory paper syllabus

Study of morphology, anatomy, and reproductive structure of the following types

1. Bryophytes- Marchantia, Anthoceros and Funaria
2. Pteridophytes- Psiolotum, Lycopodium, Selaginella, Equisetum and Marselea
3. GYmnosperms- Cycas, Pinus and Gnetum
4. Fossil plants- Rhynia, Lepidodendron, Calamites and Cycadeoidea

I BSc, II Semester, Paper II
Practical Internal Assessment (10 Marks)
Paper II: **Diversity of Non-Flowering Plants**

Practical Attendance: 05 Marks

Practical Record: 05 Marks

I BSc, II Semester, Paper I
Practical Question Paper
Paper I: **Diversity of Non-Flowering Plants**

Duration of practical: 3 hours

Max Marks: 40

Q1	Identify the specimen A, B, and C sketch label and give reason	09 Marks
Q2	Write notes on D, E and F (Macroscopic)	09 Marks
Q3	Prepare a temporary stained mount of G, identify, sketch and label with reasons. Leave it for observation	06 Marks
Q4	Identify the slides and give reasons of H, I and J.	06 Marks
Q5	Viva and Submission (5+5)	10 Marks

*Collection or photographs of any 05 specimens

B Sc I Semester Degree Examination, 2024-25
(Semester Scheme, New Syllabus: 2024-25)
Subject: **Botany**
Paper: **Diversity of Microorganisms and Thallophytes**
Paper Code:

Time : 3 Hours Max Marks: 80

Instructions to the Students
1. All sections are compulsory
2. Draw neat and labeled diagrams wherever necessary

SECTION-A

1. Answer **ALL** the following questions (2 x 10= 20)

a)
b)
c)
d)
e)
f)
g)
h)
i)
j)

SECTION-B

Answer any **SIX** of the following (5 x 6= 30)

2.
3.
4.
5.
6.
7.
8.
9.

SECTION-C

Answer any **THREE** of the following (10 x 3= 30)

10.
11.
12.
13.

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Semester III (A-3): Plant Histology, Anatomy, Embryology and Palynology

4. Understand the tissue nature and difference in plants.
5. Comprehend the systematic anatomical changes and differences in plants.
6. Gain laboratory skills such as embryology and palynology for their applications in research and industry.

Semester IV (A-4): Ecology and Environmental Biology

4. Understand the scope, importance, soil types, adaptations of plants.
5. Understand the ecosystems and ecological successions.
6. Obtain knowledge on biodiversity, threats, conservation methods.
7. Gain knowledge on air, water, land and noise pollution, forest and forest management strategies, phytogeophraphy.

Subject	**Plant Histology, Anatomy, Embryology and Palynology**	Semester	III
Number hr/week	4hours	Total hours	56
Duration of the exam	3 hours	Credits	3

Unit	**Content**	**Hours**
I	**Histology:** Study of meristematic tissues, classification based on origin, position and function. Permanent tissues- Simple permanent tissues- structure and functions of parenchyma, collenchyma and schlerenchyma. Complex permenent tissues- Xylem, phloem and its functions. Tissue systems- Epidermal tissue system- structure and function of epidermis, stomata, trichomes. Ground tissue systems- cortex, endodermis, pericycle and pith. Vascular tissue system- types of vascular bundles.	14
II	**Anatomy:** Study of internal structures of Dicot root- EG. Cicer Monocot root- Eg. Grass Dicot stems- Eg. Tridax and Cucurbita Monocot stem- Eg. Grass Dicot leaf- Eg. Tridax Monocot leaf- Eg. Grass Normal secondary growth in dictot stem- Eg. *Morus alba* Anomalous secondary growth in dicot stem- Eg. Achyranthus Anomolous secondary growth in monocot stem- Dracena	14
III	**Embryology:** Introduction, contributions of Maheshwari, BGL Swamy, MS Swaminathan Microsporogenesis (in detail): Flowers and its parts, structure of stamen, development of anther, development of malegametophyte and pollen embryosacs. **Megasporogenesis**: types of ovules, structure of prthotropous ovule, formation of arche sporial initials and megaspores, types of tetrads, Types of embryopsacs, monosporic, bisporic and tetrasporic, development of monosporic type of embryosac (polygonum) **Pollination**: self and cross pollination, types, of cross pollination including advantages and disadvantages, contrivances for cross pollination.	14
IV	**Fertilization**: process of fertilization, brief account on double fertilization and triple fusion and its significance. **Endosperms**: Types free nuclear, helobial and cellular, development of cellular endosperm. **Embryo**: types, dicot and monocot embryo, development of dicot embryo- Crucifer type. Apomixis and polyembryony- brief account. **Palynology**- scope, pollen morphology Pollen wall layers, NPC system, pollen kit.	14

*Filed visit and specimen collection is mandatory.

BSc, III Semester, Paper III
Practical Syllabus
Paper I: **Plant Histology, Anatomy, Embryology and Palynology**
Duration of practical: 4 hours

Syllabus based on theory paper syllabus
Histology: Meristematic tissue, parenchyma, collenchyma, sclenchyma (fibres and scleroids), xylem and phloem.
Anatomy: Dicot root- Cicer,
Monocot root- Grass
Dicot stem- Tridax, Cucurbita
Monocot stem- Grass
Dicot leaf- Tridax
Monocot leaf- Grass
Anomalous secondary growth in Dicot stem- Achyranthus
Anomolous secondary growth in Monocot stem- Dracena

Embryology: T/S anther - Cassia, Datura
Mounting of endopsperm- Cucumber
Types of ovules, types of placentation

Palynology: Mounting of pollen- Hibiscus, Ipomea, Grass
Pollen fertility: by hanging drop method- *Vinca rosea*

BSc, III Semester, Paper III
Practical Internal Assessment (10 Marks)
Paper II: **Plant Histology, Anatomy, Embryology and Palynology**

Practical submissions or Photographs: 05 Marks
Practical Record: 05 Marks

BSc, III Semester, Paper III

Practical Question Paper

Paper I: **Plant Histology, Anatomy, Embryology and Palynology**

Duration of practical: 3 hours Max Marks: 40

Q1	Prepare a temporary stained slide **'A'**, identify, sketch and label the parts	05 Marks
Q2	Mount, identify, sketch and label the specimen **B**	03 Marks
Q3	Calculate the percentage of fertility of **C** by hanging drop method	05 Marks
Q4	Mount, sketch and label the endosperm of **D**	05 Marks
Q5	Prepare a temporary stained slide of **E** identify, sketch and label with reasons	07 Marks
Q6	Identify the slides **F, G, H, I**	15 Marks

Subject	**Ecology and Environmental Biology**	Semester	IV
Number hr/week	4hours	Total hours	56
Duration of the exam	3 hours	Credits	3

Unit	**Content**	**Hours**
I	Introduction, scope and importance. Ecological factors: climate factors, light, temperature precipitation and humidity. Edaphic factors, soil and its types, soil profile, soil humus and soil microorganisms. Plant adaptations: classification of plants based on water, morphological and anatomical adaptations of hydrophytes, xerophytes, epiphytes, halophytes.	14
II	Ecosystem definition and types with examples. Terrestrial and aquatic, natural and artificial structure and compounds of ecosystem. Study of pond ecosystem, energy flow in ecosystem, food chain, food web, ecological pyramids. Ecological succession: hydrosere, xerosere.	14
III	Biodiversity: introduction, types, values, threats. Brief account on endangered, threatened, endemic and extinct plants. Conservation of biodiversity by in situ and ex situ types. Environmental Biology: a brief account of renewable and	14
	nonrenewable resource.	
IV	A general account on air, water, land and noise pollution, its effects and their control. Forest and forest management of forest, deforestation and reforestation, social forestry. Phytogeography: brief account on vegetation, types of Karnataka.	14

*Filed visit and specimen collection is mandatory.

BSc Botany-III Semester
Open Elective Course (OEC-3)

Subject	**Landscaping and Gardening**	Semester	III
Number hr/week	3 hours	Total hours	32
Duration of the exam	2 hours	Credits	2

Learning Outcomes:
After the completion of this course the learner will be able to:

- Apply the basic principles and components of gardening
- Conceptualize flower arrangement and bio-aesthetic planning
- Design various types of gardens according to the culture and art of bonsai
- Distinguish between formal, informal and free style gardens.
- Establish and maintain special types of gardens for outdoor and indoor landscaping

Unit-1	Principles of gardening, garden components, adornments, lawn making, methods of designing rockery, water garden etc. Special types of gardens, their walk-paths, bridges, constructed features. Green house. Special types of gardens, trees, their design, values in landscaping, propagation, planting shrubs and herbaceous perennials, importance, design values, planting, climbers and creepers, palms, ferns, grasses and cacti succulents.	8 h
Unit-2	Flower arrangements, importance, production details and cultural operations, constraints, post-harvest practices, bio-aesthetic planning, definition, need, round country planning, urban planning and planting avenues, schools, villages, beautifying, railway stations, dam sites, hydroelectric stations, colonies, river banks, planting material for play grounds.	8 h
Unit-3	Vertical gardens, roof gardens. Culture of bonsai, art of making bonsai, parks and public gardens. Landscape designs, style of garden, formal, informal and freestyle gardens, types of gardens, urban landscaping, landscaping for scientific situations institutions, industries, residents, hospitals, road, sides, traffic islands, dam sites, IT parks, corporate.	8 h
Unit-4	Establishment and maintenance, special types of gardens, bioaesthetic planning, ecotourism, inddor gardening, therapeutic gardening, non-plant components, water scaping, xeri-scaping, hardscaping, computer aided designing (CAD) for outdoor and inddor scaping, exposure of CAD.	8 h

Suggested References

1. Berry F and Kress J. 1991. Heliconia: an identification guide. Smithsonian Books.
2. Butts E and Stensson K. 2012. Sheridan nurseries: one hundred years of people, plans and plants. Dundurn Group Ltd.
3. Russel T. 2012. Nature guide: trees. The world in your hands (Nature guides).

BSc, IV Semester, Paper IV
Practical Syllabus
Paper IV: **Ecology and Environmental Biology**
Duration of practical: 4 hours

Syllabus based on theory paper syllabus

1. Study of ecological groups
   a. Hydrophytes Eg- Hydrilla, Pistia, Eichornia
   b. Xerophytes Eg- Casurina, Euphorbia tirukalli, Opuntia, Asparagus, Aloe vera, Nerium leaf (Anatomy of any two)
   c. Epiphytes: Vanda
   d. Halophytes- Study of pnematophore, vivipary, Eg. Avicennia, Rhizophora
2. Ecological instruments, Dry and wet bulb thermometer, Maximum and minimum thermometer, anemometer, and rain guaze.
3. Water holding capacity of any three difference soils
4. Mapping of vegetation of Karnataka

BSc, IV Semester, Paper IV
Practical Internal Assessment (10 Marks)
Paper IV: **Ecology and Environmental Biology**

Visit to soil testing centre and submission of report: 05 Marks
Practical Record: 05 Marks

BSc, IV Semester, Paper IV
Practical Question Paper
Paper IV: **Ecology and Environmental Biology**
Duration of practical: 3 hours Max Marks: 40

Q1	Prepare a temporary stained mount of A and B, identify, sketch and label with reasons	10 Marks
Q2	Write the critical notes on C and D	06 Marks
Q3	Comment on ecological instruments E	04 Marks
Q4	Determination of pH/Water holding capacity of given soil sample F	06 Marks
Q5	Identify the slides G, H and I, sketch, label with reasons	09 Marks
Q6	Mark and label vegetation types of Karnataka in supplied map	04 Marks

*Collection or photographs of any 05 specimens

BSc Botany-IV Semester
Open Elective Course (OEC-3)

Subject	**Medicinal Plants in Health Care**	Semester	IV
Number hr/week	3 hours	Total hours	32
Duration of the exam	2 hours	Credits	2

Learning Outcomes:
After the completion of this course the learner will be able to:

- Recognize the basic medicinal plants
- Apply techniques of conservation and propagation of medicinal plants
- Setup process of harvesting, drying, and storage of medicinal herbs
- Propose new strategies to enhance growth of medicinal herbs considering the practical issues pertinent to India.

Unit-1	History and Traditional System of Medicine History, scope and importance of medicinal plants, traditional systems of medicine, definition and scope. Ayurveda: History, origin, panchamahabhutas, saptadhatu and tridosha concepts, Rasayana, plants used in ayurveda treatments. Siddha: Origin of Siddha medicinal systems, basis of siddha system, plants used in Siddha medicine. Unani: history, concept, Umoor-e-tabiya, tumors treatments/ therapy, polyherbal formulations.	8 h
Unit-2	Conservation, Augmentation and Ethnobotany and Folk Medicine, Conservation of endemic and endangered medicinal plants, Red list criteria. In situ Conservation: biosphere reserves, sacred gardens, ethnomedicinal plant gardens. Propagation of medicinal plants: Objectives of the nursery, its classification, important components of a nursery, sowing, pricking, use of greenhouse for nursery production, propagation through cuttings, layering, grafting and budding.	8 h
Unit-3	Ethnobotany and Folk medicines: Definition, Ethnobotany in India. Methods to study ethnobotany, applications of ethnobotany, national interacts, paleo-ethno-botany, folk medicines of ethnobotany, ethnomedicine, ethnoecology, ethnic communities of India.	8 h
Unit-4	Medicinal Plants Breif description of selected plants and derived drugs, namely Guggul (Commiphora) for herpercholesterolemia, Boswellia for inflammatory disorders, Arjuna (*Terminalia arjuna*) for cardioprotection, turmeric (Curcuma longa) for wound healing, atioxidant and anticancer properties, Kutaki (*Picrorhiza kurroa*) for hepatoprotection, Opium poppy for analgesic and antitussive, Salix for analgesic, Cincona and Artemisia for malaria, Rauwolfia as tranquilizer, Belladona as anticholinergic, Digitalis as cardiotonic, Podophyllum as antitumour.	8 h

Suggested References

1. Akerele O, Heywood V and Synge H. 1991. The conservation of medicinal plants. Cambridge University Press.
2. AYUSH. About the system, an overview of ayurveda, yoga and naturopathy, Unani, Siddha and Homeopathy, New Delhi. Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH), Ministry and Family Welfare, Government of

India.
3. CSIR. Central Institute of Medicinal and Aromatic Plants, Lucknow. 2016. Aush Gyanya: Handbook of medicinal and aromatic plant cultivation.
4. Dev S. 1997. Ethno-therapeutics and modern drug development. The potential of Ayurveda. Current Science. 73: 909-928.
5. Evans WC. 2009. TRease and Evans Pharmacognosy. 16the edition. Philadelphia, PA.
6. Jain SK and Jain V. 2017. Methods and approaches in ethnobotany: concepts, practices and prospectus. Deep publications, Delhi.
7. Kapoor LD. 2001. Handbook of ayurvedic medicinal plants. Boca Raton, FL: CRC Press.
8. Saroya AS. 2017. Ethnobotany. ICAR publication.
9. Sharma R. 2013. Agro-technique of medicinal plants. Daya Publishing House. Delhi.
10. Thakur RS, Puri HS and Hussain A. 1989. Major medecinal plants of India. Central Institute of Medicinal and Aromatic Plants. Lucknow, India.

B Sc III Semester Degree Examination, 2025-26
(Semester Scheme, New Syllabus: 2024-25)
Subject: **Botany**
Paper: **Plant Histology, Anatomy, Embryology and Palynology**
Paper Code:

Time : 3 Hours Max Marks: 80

Instructions to the Students
- All sections are compulsory
- Draw neat and labeled diagrams wherever necessary

SECTION-A

1. Answer **ALL** the following questions (2 x 10= 20)

a)
b)
c)
d)
e)
f)
g)
h)
i)
j)

SECTION-B

Answer any **SIX** of the following (5 x 6= 30)

2.
3.
4.
5.
6.
7.
8.
9.

SECTION-C

Answer any **THREE** of the following (10 x 3= 30)

10.
11.
12.
13.

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B Sc III Semester Degree Examination, 2024-25
(Semester Scheme, New Syllabus: 2024-25)
Subject: **Botany**
Open Elective Paper: **Landscaping and Gardening**
Paper Code:

Time : 2 Hours Max Marks: 40

Instructions to the Students

1. All sections are compulsory
2. Draw neat and labeled diagrams wherever necessary

SECTION-A

Answer **ALL** the following questions (2 x 5= 10)

1.
2.
3.
4.
5.

SECTION-B

Answer any **SIX** of the following (5 x 6= 30)

6.
7.
8.
9.
10.
11.
12
13.

****

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