F–8525

Sub. Code
7MBO2E1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Second Semester

Botany

Elective – HERBAL BOTANY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Folklore.
2. Chemotaxonomy.
3. Toxocity.
4. Uses of *Senna* leaf.
5. Pharmacognosy.
6. Chemical composition of *Acorus calamus*.
7. Rejuvenating herbs.
8. Serpentine.
9. Herbal shampoo.
10. Bath oil.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) List out the importance and relevance of herbal drugs in Indian system of medicine.

Or

(b) Evaluate Taxonomy study of some selected herbals.

12. (a) Collection and preparation of natural drugs - Discuss.

Or

(b) Analyze the pharmaceutical uses of *Centella* and *Eugenia*.

13. (a) Simplify the definition and scope of Pharmacognosy.

Or

(b) Write brief notes on Phytochemical investigation.

14. (a) Outline the cultivation practices of *Cassia senna*.

Or

(b) Propose of National Medicinal Board of India.

15. (a) List out future prospects of Herbal cosmetic industry in India.

Or

(b) Estimation of vitamin - C from any two herbal plants.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Elaborate notes on AYUSH.

17. Formulate poisonous plants.

18. Briefly explain about Adulteration and its types.

19. Demonstrate the Medicinal gardening in India.

20. Discuss - Herbal cosmetology.

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F–8526

Sub. Code
7MBO2E3

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022.

Second Semester

Botany

Elective : FOOD PROCESSING TECHNOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Nutrition

2. Thermogenesis

3. Stabilizers

4. Define Antioxidants

5. What is diet?

6. Define Drugs.

7. Preservation

8. Scalers

9. Define – BIS

10. Food quality

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write brief notes on factor affecting BMR.

Or

(b) Describe the various kinds of food groups.

12. (a) Explain the importance of nutrient supplement in Food production.

Or

(b) Describe the types of fiber in plant foods.

13. (a) List out the principles of diet therapy.

Or

(b) Write short notes on review of hospital diets.

14. (a) Describe the chemical methods in food processing.

Or

(b) Explain the preservation processes in food by sugar.

15. (a) List out the importance of food quality documentation.

Or

(b) Write brief notes on HACCP.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Discuss in detailed about the physiochemical properties of food.

17. Write an essay on food adulteration.

18. Describe the classification and importance of drugs.

19. Briefly explain the physical methods of food processing.

20. Write an essay on food laws.

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F–8528	Sub. Code
	7MBO3C1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Third Semester

Botany

PLANT PHYSIOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Transpiration
2. Hydroponics
3. Nif-gene
4. Leg haemoglobin
5. Solar radiation
6. Energy transfer
7. Abscissic acid
8. Seed Dormancy
9. Cell death
10. Define senescence

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write brief notes on hydroponics and its importance.

Or

(b) Describe the loading and unloading mechanism of photoassimilates.

12. (a) Write short notes on Emerson's enhancement effect.

Or

(b) Describe the mechanism of Electron tranport system.

13. (a) Give an account on mechanism of photoperiodism.

Or

(b) Write short notes on activities of coenzymes.

14. (a) Describe the role of Auxins and ethylons in plants.

Or

(b) List out the mechanism of agri-horticulture.

15. (a) Write brief notes on nitrogenous compounds and its importance

Or

(b) Give an account on responses of plants to biotic compounds.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Give an account on micro and macro, elements role in plant life.

17. Write briefly explain the pigment system I and II.

18. Discuss in detailed about the mechanism of stomatal movements.

19. Describe the role of fruit and seed physiology.

20. Give the brief notes on importance of secondary metabolities.

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F–8529

Sub. Code
7MBO3C2

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Third Semester

Botany

DEVELOPMENTAL BIOLOGY AND PLANT BIOTECHNOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is cell fate?
2. Define embryo sac.
3. Phyllotaxy
4. Trilocunar node
5. Ti-Plasmid
6. Microinjection
7. Define - E-coli
8. Define - RAPD
9. Biosafety
10. Golden rice

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write brief notes on double fertilization and its significance.

Or

(b) Describe the methods of seed formation and seed germination.

12. (a) Give an account on shoot and root development.

Or

(b) Explain the secondary structure of dicot root.

13. (a) Write short notes on DNA library.

Or

(b) Describe the methods of gene transfer and its importance.

14. (a) Write brief notes on Western blotting.

Or

(b) List out the principles and importance of DNA foot printing.

15. (a) Write short notes on role of IBR.

Or

(b) Explain the principles and issues of genetically modified organisms.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the development of megas porogenesis.

17. Explain the Organization of shoot and root apical meristem.

18. Give an account on enzymes in genetic engineering.

19. Write an essay on recombinant DNA technology.

20. Write briefly explain the application of biotechnology in the field of Plant-Science.

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F–8530

Sub. Code
7MBO3C3

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022.

Third Semester

Botany

PLANT ECOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define energy flow.

2. Dynamism.

3. Overlap of ecology.

4. Allelopathy.

5. Population regulation.

6. Population growth curve.

7. Positive species interaction.

8. Belt transect.

9. Toxins.

10. Define – biofueling.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Describe the general account of plant ecology.

Or

(b) Write brief notes on nitrogen cycle.

12. (a) Give an account on climatic factors of the environment.

Or

(b) Write short notes on habitat and riche concept.

13. (a) Describe the population growth curve.

Or

(b) Write brief notes on concept of meta population.

14. (a) Explain the structure and nature of community ecology.

Or

(b) Describe the various methods is studying vegetation.

15. (a) List out the effect of radioactive pollution.

Or

(b) Write short notes on bioindicators and biomonitoring.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write an essay on synecology.

17. Explain the effects and importance of biotic environment.

18. Describe the characteristics features of population ecology.

19. Give an account on nature and structure of community ecology.

20. Explain the source, effect and causes of Air Pollution.

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F–8531	Sub. Code
	7MBO3E1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Third Semester

Botany

Elective : BIODIVERSITY CONSERVATION, PHYTOGEOGRAPHY AND REMOTE SENSING

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Biodiversity

2. Accumulation of biodiversity

3. Exsitu conservation

4. National Parks

5. Indian Forest Act - 1927

6. Sustainable Forest management

7. Migration of species

8. Evergreen forest

9. Satellite images

10. Landscape mapping

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write short notes on Shannon – Weiner index.

Or

(b) Explain the measurement of biological diversity and its importance.

12. (a) Write brief notes on Social forestry and Agro forestry.

Or

(b) List out the role and importance of seed bank.

13. (a) Explain the application of Indian Penal Code to Forestry.

Or

(b) Describe the Indian Forest Policy of 1894 and 1990.

14. (a) Give an account on Botanical regions of India.

Or

(b) Write short notes on major habitat of Indian Subcontinent.

15. (a) Write the importance of remote sensing system.

Or

(b) Give an account on geological information system.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Give an account on endangered plants in India.

17. Explain the need for conservation and conservation biology.

18. Give an account on role of forest and forest conservation act.

19. Write an essay on vegetational types of Tamilnadu.

20. Discuss in detailed about the Indian Remote Sensing Satellites.

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F–8532	Sub. Code
	7MBO3E2

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022.

Third Semester

Botany

Elective : HORTICULTURE AND LANDSCAPING

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define layering

2. Horticulture pests

3. Hydroponics

4. Lawn making.

5. Foliage plants.

6. Outdoor garden.

7. Write any two commercial flower crops.

8. Olericulture.

9. Define fruit setting.

10. Mention any two importance of mango.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Describe the branches and classification of horticulture.

Or

(b) Write brief notes on methods of plant propagation.

12. (a) Give an account on hydrophonics and its importance.

Or

(b) Explain the design and maintenance of landscape.

13. (a) Explain the cultivation of water plants.

Or

(b) List out the elements of home garden.

14. (a) Describe the cultivation and importance of tomato and brinjal.

Or

(b) Give the notes on layout for a model kitchen garden.

15. (a) Describe the cultivation and importance of teak.

Or

(b) Write short notes on pomology.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Describe the scope and importance of horticulture.

17. Write brief notes on management of a greenhouse.

18. Explain the principles and methods of designing outdoor garden.

19. Write an essay on floriculture.

20. Describe the cultivation and importance of fruit crops.

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F–8533	Sub. Code
	7MBO3E3

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Third Semester

Botany

Elective – COMMERCIAL PLANT TISSUE CULTURE

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Differtiation
2. Dedifferntiation
3. Explant Exudation
4. Suface sterilants.
5. Diploidization
6. Embryo rescue.
7. Synchronization.
8. FDA
9. Elicitors
10. Hairy root.

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Write notes on scope of plant tissue culture.

Or

(b) Write notes on various sterilization methods employed in plant tissue culture.

12. (a) Write notes on role of growth regulators on organogenesis.

Or

(b) Write notes on somaclonal and gametoclonal variations.

13. (a) Write notes on in vitro pollination techniques and their importance.

Or

(b) Write notes on techniques of anther culture.

14. (a) Write notes on simultaneous method of enzymatic isolation of plant protoplasts.

Or

(b) Write notes on protoplast culturing techniques.

15. (a) Write notes on methods of in vitro production of secondary metabolites.

Or

(b) Write notes on various modes of cryopreservation.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write an essay on types plant tissue culture media, their composition and preparation methods.

17. Elaborate about production of virus free plants by employing micropropagation techniques for commercial exploitation of the plant of interest.

18. Write an essay on haploid production, haploid mutants and utilization of haploids in plant breeding.

19. Write an essay on various culture techniques employed in plant cell culture.

20. Write an essay on applications of tissue culture in forestry, horticulture, agriculture and various industries.

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F–8534

Sub. Code
7MBO3E4

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Third Semester

Botany

Elective – PLANT BREEDING

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Fertilization
2. Gametogenesis
3. Heterosis
4. Hybrid plants
5. Acclimatization
6. Pureline
7. Acridine dyes
8. Base Analogues
9. Heterobeltiosis.
10. Hybrid vigour.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Give an account of undesirable consequences happened due to plant breeding practices.

Or

(b) Write notes on objectives of plant breeding.

12. (a) Write notes on breeding methods for cross pollinated plants.

Or

(b) Write notes on breeding methods for vegetatively propagated plants.

13. (a) Write notes on merits and demerits of mass selection.

Or

(b) Write note on effect of self-pollination on genotype.

14. (a) Write notes on mutagens.

Or

(b) Write notes on distant hybridization.

15. (a) Write notes on monogenic traits.

Or

(b) Write notes on genetic basis of heterosis.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write an essay on Genetic variability and its role in plant breeding.

17. Write an essay on classification of Apomixis and their role in plant breeding.

18. Write an essay on pure line selection, its advantages and disadvantages.

19. Write an essay on role of biotechnology in crop improvement.

20. Write an essay on Back- crossing methods.

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F–8535

Sub. Code
7MBO3E5

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Third Semester

Botany

Elective – RESEARCH METHODOLOGY, BIOINFORMATICS, BEHAVIOUR AND TEACHING SKILLS

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Monographs
2. Short Communication
3. Probability
4. Standard deviation
5. BLAST
6. AVI
7. Kin Selection
8. Maternal Care
9. CAI
10. Set induction

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write notes on Scientific Writing.

Or

(b) Illustrate Research Design.

12. (a) Write notes on classification and tabulation of data .

Or

(b) Write notes on frequency polygons and frequency curves.

13. (a) Explore various data bases available for primary sequences.

Or

(b) Write note on protein sequences data bases.

14. (a) Write notes on biological clocks.

Or

(b) Write notes on neural control of sleep and arousal.

15. (a) Write notes on evaluation of teaching skills.

Or

(b) Write notes on skill of blackboard writing in microteaching.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on various types of research.

17. Write an essay on Tests of Significance.

18. Illustrate various ICT tools and their applications in classroom and in research.

19. Illustrate neural basis of learning and memory.

20. Write an essay on lecture method as teaching strategy.

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