

BSC BOTANY MODEL PAPERS 2021 TO 2023 FIRST ,SECOND ,THIRD FOURTH AND FIFTH SEMESTERS MODEL PAPERS



ADIKAVI NANNAYA UNIVERSITY :: AJAHMAHENDRAVARAM
B.Sc Botany Syllabus (w.e.f: 2020-21 A.Y)

MODEL QUESTION COURSE (Sem - End)

B. Sc DEGREE EXAMINATION
SEMESTER: I

Course I: Fundamentals of Microbes and Non-vascular Plants

Time: 3Hrs.

Max. Marks: 7

SECTION - A

Answer any FIVE questions. Each question carries 5 marks

5 x 5 =25M

1. (a) Prions (b) Viroids
2. Archaeobacteria
3. (a) Basidiocarp (b) Ascocarp
4. Economic importance of Lichens
5. Reserve food material in Algae
6. (a) Scalariform conjugation (b) Lateral conjugation
7. General characteristics of Bryophytes
8. Anatomy of thallus in *Marchantia*

SECTION - B

Answer ALL the questions. Each question carries 10 marks

5X10 =50M

9. a) Describe the structure of TMV and Gemini virus with neat labeled diagrams.
(OR)
b) Write a general account on symptoms of plant diseases caused by Viruses.
10. a) Describe the cell structure of a eubacterium with neat labeled diagram.
(OR)
b) Discuss the economic importance of bacteria in agriculture and industrial sectors with suitable examples.
11. a) Explain the life cycle in *Puccinia* with the help of a schematic diagram.
(OR)
b) Discuss the economic uses of fungi in food industry, pharmacy and agriculture.
12. a) Write an essay on sexual reproduction in *Polysiphonia*.
(OR)
b) Discuss the economic importance of Algae with suitable examples.
13. a) Describe the sexual reproduction in *Funaria* with neat labeled diagrams.
(OR)
b) Write an essay on classification of Bryophytes upto classes.



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MODEL QUESTION COURSE (Sem-End)

B. Sc DEGREE EXAMINATION
SEMESTER: II

Course2 : Basics of Vascular plants and Phytogeography

Time: 3Hrs.

Max. Marks: 75

SECTION - A

Answer any FIVE questions. Each question carries 5 marks

5 x 5 =25M

1. a) Eusporangium (b) Leptosporangium
2. Geological time scale.
3. Binomial system
4. (a) Synandrous condition (b) Syngenesious condition
5. Essential organs in flower of Aceptiadaceae family
6. Economic importance of Arecaceae family
7. (a) Wides (b) Discontinuous species
8. Vegetation types in Andhra Pradesh

SECTION - B

Answer ALL the questions. Each question carries 10 marks

5X10 =50M

- 9.a) Describe the sexual reproduction in Lycopodium with neat labeled diagrams.
(OR)
b) Explain the stellar evolution in Pteridophytes with neat labeled diagrams and suitable examples.
10. a) Write an essay on general characteristics of Gymnosperms.
(OR)
b) Discuss the structure of ovule in *Gnetum* with a neat labeled diagram.
11. a) What is a herbarium? Explain the techniques of herbarium.
(OR)
b) Discuss the vegetative and floral characters of Annonaceae family. Add a note on economic importance of that family.
12. a) Discuss the vegetative and floral characters of Asteraceae family.
(OR)
b) Discuss the vegetative and floral characters of Poaceae family. Add a note on economic importance of that family.
13. a) Explain different types Endemism and causes for it.
(OR)
b) Describe different phytogeographic regions of India with examples of flora.



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MODEL QUESTION COURSE (Sem-End)

B. Sc DEGREE EXAMINATION
SEMESTER: III

Course 3: Anatomy and Embryology of Angiosperms, Plant Ecology and Biodiversity

Time: 3Hrs.

Max. Marks: 75

SECTION - A

Answer any FIVE questions. Each question carries 5 marks

5 x 5 =25M

1. (a) Xylem tracheids (b) Xylem vessels
2. (a) Periplasmodial tapetum (b) Glandular tapetum
3. (a) Helobial endosperm (b) Ruminant endosperm
4. Pyramids of numbers
5. (a) Ecotypes (b) Ecads
6. P/R ratio
7. Earth Summit.
8. Role of NBPGR in conservation of Biodiversity

SECTION - B

Answer ALL the questions. Each question carries 10 marks

5X10 =50M

9. a) Write an essay on organization of apical meristems with theories proposed.
(OR)
b) Discuss the anomalous secondary growth in stem of *Boerhaavia* with the help of a neat labeled diagram.
10. a) Explain monosporic and bisporic types of embryosac development in angiosperms.
(OR)
b) Describe the embryogeny in a dicot plant with neat labeled diagrams.
11. a) Explain various effects of light factor plants and their communities?
(OR)
b) Define ecological succession. Discuss hydrosere with suitable diagrams and examples.
12. a) Describe Raunkiaer's life forms with suitable examples.
(OR)
b) Write an essay on primary productivity.
13. a) Write an essay on value of biodiversity with appropriate examples.
(OR)
b) Define biodiversity hotspot. Discuss the biodiversity in Western Ghats of India.



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MODEL QUESTION COURSE (Sem-End)

B. Sc DEGREE EXAMINATION

SEMESTER: IV

Course 4: Plant Physiology and Metabolism

Time: 3Hrs.

Max. Marks: 75

SECTION - A

Answer any FIVE questions. Each question carries 5 marks

5 x 5 =25M

1. (a) Diffusion (b) Imbibition
2. (a) Macro nutrients (b) Micro nutrients
3. (a) Anaerobic respiration (b) Aerobic respiration
4. (a) Absorption spectrum (b) Action spectrum
5. C2 pathway
6. Fatty acids
7. Physiological effects of Brassinosteroids
8. Sigmoid growth curve

SECTION - B

Answer ALL the questions. Each question carries 10 marks

5X10 =50M

9. a) Explain how ascent of sap occur in plants with suitable theory.
(OR)
b) Discuss the phloem transport in plants. Add a note on source-sink relationship.
- 10.a) Write an essay on classification of enzymes.
(OR)
b) Describe the Krebs cycle with the help of schematic diagram.
11. a) Define photophosphorylation. Explain the non-cyclic photophosphorylation with the help of a schematic diagram.
(OR)
b) Discuss the carbon assimilation in CAM plants.
12. a) Write an essay on biological nitrogen fixation.
(OR)
b) Describe the Glyoxylate cycle with the help of a schematic diagram.
13. a) Define photoperiodism. Write an essay on role of phytochrome in photoperiodic responses of plants.
(OR)
b) Discuss the physiological changes in plants during water stress.



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MODEL QUESTION COURSE (Sem-End)

B. Sc DEGREE EXAMINATION
Semester-V (Skill Enhancement Course - Elective)
Course 6C: Plant Tissue Culture

Time: 3Hrs.

Max. Marks: 75

SECTION - A

Answer any FIVE questions. Each question carries 5 marks

5 x 5 =25M

1. Totipotency
2. Types of Cultures
3. Nutrient Media
4. Sub Culture
5. Somaclonal Variations
6. Acclimatization
7. Bioreactors
8. Secondary Metabolites

SECTION - B

Answer ALL the questions. Each question carries 10 marks

5X10 =50M

9. (a) Define Tissue Culture? Write the Scope and Significance
(OR)
(b) Write the Infrastructure and Equipment required to establish a Tissue Culture Lab
10. (a) Write the composition and preparation of Murashige and Skoog Culture Medium.
(OR)
(b) What are the methods followed to maintain Aseptic Conditions in Tissue Culture Lab
11. (a) What is an Explant? Write the different explants used for Tissue Culture
(OR)
(b) What is Callus Culture? Explain various steps in Callus Culture
12. (a) What is Somatic Embryogenesis. Explain the production of Synthetic Seeds.
(OR)
(b) What is Pathogen Indexing. Write its methods and applications.
13. (a) Explain in detail Germplasm Conservation
(OR)
(b) What are Transgenic Plants. Explain the Gene Transfer method in BT Cotton

MODEL QUESTION COURSE (Sem-End)

B. Sc DEGREE EXAMINATION
Semester-V (Skill Enhancement Course - Elective)
Course 7C: Mushroom Cultivation

Time: 3Hrs.

Max. Marks: 75

SECTION - A

Answer any FIVE questions. Each question carries 5 marks

5 x 5 =25M

1. Poisonous Mushrooms
2. Oyester Mushrooms
3. Materials for Compost making
4. Storage of Spawn
5. Culture Maintanance
6. Paddy straw Mushroom
7. Value added products of Mushrooms
8. Waste disposal of various Mushrooms

SECTION - B

Answer ALL the questions. Each question carries 10 marks

5X10 =50M

9. (a) Describe the structure of Mushroom and Write a brief account of its Life Cycle
(OR)
(b) Explain Nutraceutical Value of Mushrooms. Write about any two Medicinal Mushrooms used in South India
10. (a) What is Composting ? Explain the Methods of Composting?
(OR)
(b) Describe in detail the layout of a Mushroom Farm.
11. (a) Define Spawning. What are the facilities required for Spawn preparation
(OR)
(b) Describe different types of Casing mixtures and write its importance
12. (a) Explain the process of Cultivation of Milky Mushrooms.
(OR)
(b) Explain the process of Cultivation of Button Mushrooms
13. (a) What are the methods used for preservation of Mushrooms
(OR)
(b) Explain the Quality assurance and Entrepreneurships in Mushroom Cultivation