

BSBOT – MJ 401

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2025.

Fourth Semester

Botany Major

ANATOMY AND EMBRYOLOGY OF ANGIOSPERMS

(New Regulation)

(w.e.f. 2023–2024 Admitted Batch)

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 5 = 25 marks)

Answer any FIVE of the following questions.

1. Discuss the apical cell theory.
2. Write a note on parenchyma tissue.
3. Structure and economic importance of wood in teak.
4. Discuss the applications of plant anatomy in pharmacognosy.
5. Explain about bisporic embryo sac.

6. Give a brief note on perisperm.
7. Discuss about self-pollination.
8. Describe the applications of apomixis.

SECTION B — (5 × 10 = 50 marks)

Answer ALL questions.

9. (a) Elaborate the structure and functions of xylem tissue.

Or

- (b) Explain the secretory tissues in plants with diagrams and examples.

10. (a) Explain and interpret the anomalous secondary growth in the stem of *Dracaena*.

Or

- (b) Discuss the structure and functions of epidermal tissue system.

11. (a) Explain and infer structure and functions of anther wall.

Or

- (b) Discuss about palynology and its scope.

12. (a) Appraise the methods to overcome self-incompatibility.

Or

- (b) Infer the process and consequences of double fertilization in angiosperms.

13. (a) Elaborate how embryogeny occurs in *Sagittaria sagittifolia*?

Or

- (b) Compile the causes and applications of polyembryony with suitable examples.

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Botany

(Major)

PLANT ECOLOGY, BIODIVERSITY AND PHYTOGEOGRAPHY

(w.e.f 2023-24 Admitted Batch)

(New Regulation)

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 5 = 25 marks)

Answer any FIVE of the following questions.

1. Discuss the relation of plant ecology with other sciences.
2. Explain about food chains and food webs with examples.
3. Write a note on life forms.
4. Give a brief note on secondary production.

5. Discuss the causes and effects of ocean acidification.
6. Write a note on Earth Summit.
7. Discuss about IUCN threat-categories.
8. Write a note on wides and endemic species.

SECTION B — ($5 \times 10 = 50$ marks)

Answer ALL of the questions.

9. (a) Categorize the abiotic and biotic components of an ecosystem with examples.

Or

- (b) Interpret and justify the interactions between plants and animals in a community.

10. (a) Prioritize the seral stages in xerosere and support the ecological succession.

Or

- (b) Discuss how do you assess the primary productivity of an ecosystem.

11. (a) Defend the causes, consequences and management strategies of forest fires.

Or

- (b) Appraise the Montreal and Kyoto protocols.

12. (a) Determine the value of biodiversity with appropriate examples.

Or

- (b) Judge the role of NBPGR and NBA in the conservation of biodiversity.

13. (a) Categorize the types of endemism with supporting causes.

Or

- (b) Elaborate the phytogeographic regions of the world with constituent plant species.

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Fourth Semester

Botany Major

PLANT RESOURCES AND UTILIZATION

(w.e.f. 2023-24 Admitted Batch)

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 5 = 25 marks)

Answer any FIVE of the following Questions.

1. Give a brief note on production and uses of red gram,
2. Discuss the production, and uses of sugar cane.
3. Explain the sources and economic importance of tannins.
4. Write a note on sources and economic importance of narcotics.
5. Discuss about aromatic plants used in cosmetics.

6. Give a brief note on sources and economic value of gums.
7. Explain about biofuels.
8. Discuss about bamboos used in paper industry.

SECTION B — (5 × 10 = 50 marks)

Answer ALL of the questions.

9. (a) Appraise the domestication and introduction of crop plants with suitable examples.

Or

- (b) Summarize the cultivation, production and uses of wheat crop.

10. (a) Evaluate the economic value of oil seed crops with examples.

Or

- (b) Assess the economic importance of rubber and latex with their plant sources.

11. (a) Compile the economic potential of spices and condiments.

Or

- (b) Justify the utilization of ornamental plants with suitable citations.

12. (a) Elaborate the traditional and modern uses of some medicinal plants in India.

Or

- (b) Interpret the potential health benefits of phytochemicals with proper examples.

13. (a) Classify the important timber yielding plants of India with their characteristics.

Or

- (b) Appraise about energy crops and bioplastics.
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