D 13101 (Pages : 2) Name.....

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY) EXAMINATION, NOVEMBER 2021

(CBCSS)

Botany

BOT 1C 03—ANGIOSPERM ANATOMY, ANGIOSPERM EMBRIOLOGY, PALYNOLOGY AND LAB TECHNIQUE

(2019 Admission onwards)

Time : Three Hours Maximum : 30 Weightage

General Instructions

1. *In cases where choices are provided, students can attend* **all** *questions in each section.*
2. *The minimum number of questions to be attended from the Section / Part shall remain the same.*
3. *The instruction if any, to attend a minimum number of questions from each sub section / sub part / sub division may be ignored.*
4. *There will be an overall ceiling for each Section / Part that is equivalent to the maximum weightage of the Section / Part.*

Part A

Answer any **four** *questions.*
Each question carries 2 weightage.

1. Explain pollen culture and its significance.
2. Differentiate dicot and monocot embryos with diagrams.
3. Explain maceration and its significance.
4. Give an account on the common fixatives used in microtechnique.
5. Describe the preparation of specimen and working of sledge microtome.
6. What is Histochemistry ? What are the histochemical tests to localise plant metabolites ?
7. Write a note on activity of cambium in the secondary thickening of root.

(4 × 2 = 8 weightage)

Turn over

Part B

Answer any **four** *questions.*
Each question carries 3 *weightage.*

8. Give an account on the evolution in the anatomy of nodes.
9. Write a general account on wood anatomy. Add a note on the properties.
10. What is Palynology ? Explain the significance.
11. Differentiate microsporogenesis and megasporogenesis.
12. Describe the anomalous secondary growth in an arborescent monocot.
13. Give an account on mounting media. Write the composition of any *one*.
14. Explain the process of dehydration and clearing.

(4 × 3 = 12 weightage)

Part C

Answer any **two** *questions.*
Each question carries 5 *weightage.*

15. With neat diagrams explain embryo culture. How is it different from ovule culture ?
16. What is Polyembryony ? Explain its classification and applications.
17. Describe seedling anatomy with diagrams and examples.
18. Enumerate the microtechnique steps involved in the preparation of a permanent section.

(2 × 5 = 10 weightage)

D 13100 (Pages : 2) Name.....

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY) EXAMINATION, NOVEMBER 2021

(CBCSS)

Botany

BOT1C02—MYCOLOGY, LICHENOLOGY, MICROBIOLOGY AND PLANT PATHOLOGY

(2019 Admission onwards)

Time : Three Hours Maximum : 30 Weightage

General Instructions

1. *In cases where choices are provided, students can attend* **all** *questions in each section.*
2. *The minimum number of questions to be attended from the Section / Part shall remain the same.*
3. *The instruction if any, to attend a minimum number of questions from each sub section / sub part / sub division may be ignored.*
4. *There will be an overall ceiling for each Section / Part that is equivalent to the maximum weightage of the Section / Part.*

Part A

Answer any **four** *questions.*

1. What are the general characaters of zygomycetes ?
2. Write a note on fruiting bodies of ascomycetes.
3. What are clamp connections ? How are they formed ?
4. Write an account on biopesticides and comment on their significance.
5. Give an account on actinomycetes and add a note on its economic importance.
6. What is bioremediation ? Explain the role of microbes in it.
7. Explain the organization and structure of TMV with the help of a diagram.

(4 × 2 = 8 weightage)

Part B

Answer any **four** *questions.*

8. Give an account on microbial production of steroids, antibiotics and vaccines.
9. What is SCP ? Describe its significance.

Turn over

10. Describe biochemical defense mechanism in plants.
11. Give an account on the symptoms, casual organism, disease cycle and control measures of blister blight of tea.
12. Write a note on general characters and classification mitosporic fungi.
13. Give a comparative account of characters of ascomycetes and basidiomycetes.
14. Give an account on the ecological and economic significance of lichens.

(4 × 3 = 12 weightage)

Part C

Answer any **two** *questions.*

15. Write an essay on food spoilage and the prevention methods.
16. Give a detailed account on mycorrhizae and its significance.
17. Describe the different types of asexual and sexual spores in fungi.
18. Give an account on the salient features, morphology and ultra structure of cyano bacteria. Add a note on its economic importance.

(2 × 5 = 10 weightage)

D 13099 (Pages : 2) Name.....

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY) EXAMINATION, NOVEMBER 2021

(CBCSS)

Botany

BOT 1C 01—PHYCOLOGY, BRYOLOGY, PTERIDOLOGY AND GYMNOSPERMS

(2019 Admission onwards)

Time : Three Hours Maximum : 30 Weightage

General Instructions

1. *In cases where choices are provided, students can attend* **all** *questions in each section.*
2. *The minimum number of questions to be attended from the Section / Part shall remain the same.*
3. *The instruction if any, to attend a minimum number of questions from each sub section / sub part / sub division may be ignored.*
4. *There will be an overall ceiling for each Section / Part that is equivalent to the maximum weightage of the Section / Part.*

Part A

Answer any **four** *questions.*
Each question carries 2 *weightage.*

1. Discuss the phylogenetic criteria for algal classification giving an example.
2. Comment on the biological importance of phytoplanktons.
3. Give an account of progressive sterilization of sporogenous tissue in bryophytes.
4. Write a general account of fossil bryophytes and their affinities.
5. Write notes on the cytology in Pteridophytes.
6. Discuss the evolutionary and phylogenetic significance of Psilopsida.
7. List the important characters of Pteridospermales.

(4 × 2 = 8 weightage)

Part B

Answer any **four** *questions.*
Each question carries 3 *weightage.*

8. Write an account of various modes of reproduction in Chlorophyta.
9. Describe the fine structure of a) Chloroplast and pyrenoid ; b) Flagella ; and c) Eye spot in algae.
10. Discuss the general account of anatomy, reproduction and phylogeny of Sphagnales.
11. Write a detailed account on the evolutionary trends in the gametophyte of pteridophytes.
12. Give an account on the economic importance of pteridophytes.
13. Discuss the distribution of gymnosperms in India.
14. Describe the morphology, reproduction and interrelationship of Gnetales.

(4 × 3 = 12 weightage)

Part C

Answer any **two** *questions.*
Each question carries 5 *weightage.*

15. 'There exists a definite range and wide variety of thalli in algae'. Elaborate the statement.
16. Write a detailed account on the economic importance of bryophytes.
17. Bring out detailed account of the origin and evolution of sporangia in pteridophytes.
18. Write an essay on the reproductive structures in different orders of gymnosperms mentioned in the syllabus.

(2 × 5 = 10 weightage)