S–5321

Sub. Code
22MBO1C1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

First Semester

Botany

PLANT DIVERSITY – I
THALLOPHYTES AND BRYOPHYTES

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions

1. Blepharoplasts.
2. Frog spawn.
3. Coprophilous Fungi
4. Ascocarps.
5. Breathing pores.
6. Cephalodia.
7. Pseudo perianth
8. Amylome
9. Ethanol
10. FISH.

Part B (5 × 5 = 25)

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

11. (a) How would you define algae? Give characteristics features of this diversified group of plant kingdom

Or

(b) Give the Cellular structure of prokaryotic algae.

12. (a) Describe the features of special interest in the structure and methods of reproduction in Deuteromycotina.

Or

(b) Give the occurrence, distribution and various ecological groups of Fungi.

13. (a) Describe briefly the economic importance of lichens.

Or

(b) With the help of labelled diagrams, briefly explain the internal structure of lichen thallus.

14. (a) Give an account of spore dispersal mechanisms and spore germination patterns of bryophytes.

Or

(b) Differentiate the sporophytes of marchantia and porella.

15. (a) Write notes on:

(i) Synthetic media

(ii) Biofuel

Or

(b) Describe briefly the economic importance of algae.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Give the distinguishing characters of the chlorophyta and illustrated account of Reproduction and life cycle.

17. Write an account of various mode of a sexual and sexual reproduction in Ascomycotina.

18. Give a comprehensive account of classification and thallus structure of lichens.

19. Write an account of evolution of gametophytes and sporophytes of Anthocerotopsida.

20. Write obtained note on various types of molecular techniques used for identification of Thallophytes.

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M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Second Semester

Botany

FUNDAMENTAL PROCESSES, CELL COMMUNICATION AND CELL SIGNALING

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

Write relevant short notes on the following

1. Okazaki fragments
2. Methyl capping
3. Wobble hypothesis
4. Operons
5. Integrins
6. Chemotaxis
7. IgM
8. Precipitation reaction
9. Attenuated vaccines
10. Cluster of differentiation

Part B (5 × 5 = 25)

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

11. (a) Illustrate the mechanisms of splicing.

Or

(b) Give a brief account on eukaryotic RNA polymerases.

12. (a) Explain aminoacylation of tRNA.

Or

(b) Elucidate how gene expression is controlled at the transcriptional level.

13. (a) Highlight the roles of plant hormones in cell signalling.

Or

(b) Explain how neurotransmission is being regulated.

14. (a) Give a brief account on B and T cell epitopes.

Or

(b) What do you mean by monoclonal antibodies? Enumerate its applications.

15. (a) Discuss the immune response during HIV infections.

Or

(b) Enunciate the types of immune modulation.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Expound the significant steps in the replication of DNA.

17. Narrate the critical events in prokaryotic ribosomal protein synthesis.

18. Explain hemotopoiesis and its regulation.

19. Describe the structure and enumerate the functions of major antibodies.

20. Give an elaborate account on complement system.

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M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Fourth Semester

Botany

RESEARCH METHODOLOGY

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Bibliography.
2. What is Reprints?
3. Define Chi-square test.P.
4. Define Coefficient.
5. Define MIPS.
6. What is DDBT?
7. What is SEM?
8. Define EDAX.
9. Define Micrometry.
10. What is fixation?

Part B (5 × 5 = 25)

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

11. (a) Explain the differences between oral and poster presentation.

Or

(b) Explain about literature collection through resources.

12. (a) Explain the differences between mean and median.

Or

(b) Write short notes on student 't' test.

13. (a) Write short notes on SWISS PORT.

Or

(b) Briefly explain about BLAST.

14. (a) Write short notes on Radioisotopes.

Or

(b) Explain the application of spectrophotometry.

15. (a) Explain about Relative importance of species.

Or

(b) Write short notes on Camera lucida.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. What are the significance of citation styles in research publication? Enlist the major citation styles.

17. Write an essay on graphical and diagrammatic representation of data.

18. Describe the principle and applications of GC-MS.

19. Write an essay on SDS-PAGE.

20. Write an essay on Micrometry.

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