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R – 6261

Reg. No. : .....

Name : .....

**First Semester M.Sc. Degree Examination, May 2023**

**Botany**

**BO 211 : PHYCOLOGY, MYCOLOGY, MICROBIOLOGY AND PLANT  
PATHOLOGY**

**(2019 Admission Onwards)**

Time : Three Hours

Max. Marks : 75

Instruction: Draw diagrams and illustrate with examples wherever necessary.

I. Answer the following questions.

1. What are prions?
2. What is rhizosphere?
3. Define oogamy.
4. Why do we consider the branching in *Scytonema* as 'false branching'?
5. What are Diatoms?
6. What is perithecium?
7. Which are the photosynthetic pigments in cyanobacteria?
8. Give the name of the class of bacteria distinguished by the absence of a cell wall.
9. Give the name of a plant-parasitic green alga.
10. What causes the powdery mildew disease in Rubber?

**(10 × 1 = 10 Marks)**

P.T.O.

II. Answer the following questions in not more than **50** words.

11. (a) Explain the significance of seed or crop certification in the control of plant diseases.

OR

- (b) Explain the composition and preparation of Bordeaux mixture.

12. (a) What are extremophiles? Give examples.

OR

- (b) Explain lytic cycle in Bacteria.

13. (a) What are the major contributions of MOP Iyengar?

OR

- (b) Explain the cause and symptoms of anthrax.

14. (a) What is chemostat?

OR

- (b) Distinguish between ascospores and basidiospores

15. (a) What are mesokaryotes? Give examples.

OR

- (b) Briefly describe the thallus structure of *Nitella*.

**(5 × 2 = 10 Marks)**

III. Answer the following questions in not more than **150** words.

16. (a) Compare and contrast between systemic acquired resistance and induced systemic resistance in plants.

OR

- (b) Write a brief account on fossil algae and their importance.

17. (a) Explain the structure of bacterial cell wall

OR

(b) Name the fruiting body of *Polyporus*. Explain its structural organization and characteristic features.

18. (a) Describe the significance of using 16S rRNA sequencing in the classification and identification of Bacteria.

OR

(b) Explain the spore dispersal mechanism found in *Pilobolus*.

19. (a) What is clamp connection? What is its significance?

OR

(b) Evaluate the role of lichens as pollution indicators.

20. (a) Describe the thallus structure in *Drparnaldiopsis*. Draw suitable diagrams.

OR

(b) Explain the benefits claimed for *Spirulina* as a food supplement.

21. (a) Comment on the role of and the advantages of algae as a biofertilizer.

OR

(b) What is algal bloom? Add a note on the causes and effects of algal blooms.

22. (a) Explain the concept of disease triangle and its significance.

OR

(b) Write a brief account on the causes and symptoms of rhizome rot in Ginger.

**(7× 5 = 35 Marks)**

IV. Answer the following questions in not more than **250** words.

23. (a) Write an account on the cause, symptoms and strategies for the management of the diseases, quick wilt of pepper and red rot a sugar cane.

OR

(b) Write an account on the diversity in the thallus organization of algae.

24. (a) Write an essay on industrial microbiology with special reference to the Industrial products produced by microbial fermentation, specified in the syllabus.

OR

(b) Write a brief account on the classification, thallus structure, and reproduction of Lichens.

**(2 × 10 = 20 Marks)**

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