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S – 6320

Reg. No. :

Name :

First Semester M.Sc. Degree Examination, April 2024

Botany

BO 211 : PHYCOLOGY, MYCOLOGY, MICROBIOLOGY AND PLANT
PATHOLOGY

(2019 Admission Onwards)

Time : 3 Hours

Max. Marks : 75

Instruction : Draw diagrams and illustrate with examples wherever necessary.

- I. Answer the following questions.
 1. What are Actinomycetes?
 2. Distinguish rusts and smuts.
 3. Identify Gongrosira stage.
 4. What is Aethalium?
 5. What is crozier?
 6. What are mollicutes?
 7. What are natural pesticides? Cite and example.
 8. Name any two bacteria responsible for food poisoning.

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9. What are coliforms?
10. What is apothecium?

(10 × 1 = 10 Marks)

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

11. (a) Write a note on red rot of sugar cane.

OR

- (b) Contrast brown spot and sheath blight of paddy.

12. (a) Comment on the role of free-living Nitrogen fixing bacteria in agriculture.

OR

- (b) Why immune system fails to tackle AIDS virus?

13. (a) Comment on water blooms.

OR

- (b) What are mesokaryotes?

14. (a) Write a note on edible macroalgae.

OR

- (b) Why algae are used as biofuel?

15. (a) Describe the basic thallus structure of a lichen.

OR

- (b) Write a note on the secondary metabolites of fungi.

(5 × 2 = 10 Marks)

- III. Answer the following questions in not more than 150 words.
16. (a) Write down the thallus characteristics of *Draparnadiopsis*.
OR
(b) Illustrate the thallus structure of *Hydrodictyon*.
17. (a) Write an account on fossil algae with special reference to *Rafatasmia*.
OR
(b) Comment on the reproductive structure of *Halimeda*.
18. (a) Illustrate hyphal septum.
OR
(b) Distinguish sclerotium and rhizomorph with suitable example.
19. (a) Write an account on asexual spores of fungi.
OR
(b) Comment on holocarpic phycomycetes.
20. (a) Write a note on Firmicutes according to Bergey's manual.
OR
(b) Comment on Spirochaetae.
21. (a) What is 'steady state' culture of bacteria? What are its advantages?
OR
(b) What is bioremediation? What is its significance?
22. (a) Explain the different steps involved in waste water treatment.
OR
(b) Comment on Archaeobacteria with suitable examples.

(7 × 5 = 35 Marks)



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

23. (a) Critically evaluate the evolutionary trend found in Volvocales with suitable illustrations and examples.

OR

- (b) Compare and contrast the sexual reproduction in *Phytophthora* and *Aspergillus* with illustrations.

24. (a) Write an account on the contribution of Pasteur, Tyndall and Robert Koch in microbiology.

OR

- (b) Compare the sexual reproduction in *Phytophthora* and *Acetabularia* with suitable illustrations.

(2 × 10 = 20 Marks)

