QP Code: P25DRIS030

Reg. No : .....
Name : .....

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

I SEMESTER (CBCSS - PG) DEGREE EXAMINATIONS, NOVEMBER 2025
(Regular/Improvement/Supplementary)
M. Sc. Microbiology
MBG1C04 : Agricultural Microbiology and Plant Pathology
2024 Admission Onwards

Time: 3 Hours **Maximum Weightage: 30**

Part A
*Short answer type questions. Answer **any four**. Weightage **2** for each.*
(4x2 = 8 Weightage)

1. Write a note on soil microflora.
2. What is Ericoid mycorrhiza?
3. How does the Ti plasmid cause crown gall disease in plants?
4. How does BBTV influence banana plant physiology and productivity?
5. List out the adaptations of Nitrogen fixers to protect nitrogenase enzyme from oxygen.
6. Explain the symptoms of Ratoon Stunting Disease (RSD) in sugarcane.
7. What are plantibodies?

Part B
*Short essay-type questions. Answer **any four**. Weightage **3** for each.*
(4x3 = 12 Weightage)

8. Give an account of various mycorrhizal associations.
9. Explain biofortification and its advantages? Give examples.
10. Examine about the symptoms, epidemiology and control of Late blight of potato.
11. Analyse the lifecycle and impact of *Globodera pallida* on potato crops.
12. Explain the importance of bioluminescence in bacteria with suitable examples.
13. Explain the role of phyllosphere microflora in plant health.
14. What steps would you take to substitute chemical pesticides with biopesticides in a large-scale farming operation to ensure long-term ecological balance?

Turn Over

Part C

*Essay-type questions. Answer **any two**. Weightage **5** for each.*
(2x5 = 10 Weightage)

15. Describe the methods used for enumeration and isolation of soil microbes. Add a note on different media used for culturing soil microorganisms.
16. Compare and contrast symbiotic and nonsymbiotic bacterial nitrogen fixation with suitable examples.
17. Explain how different management strategies help in controlling sheath blight of rice, and discuss the methods that are more sustainable.
18. Explain about etiology, symptoms, epidemiology and control of mycoplasmal disease which affects coconut.

****