

S.No. 5681

16 SNMEMB 2

(For candidates admitted from 2016–2017 onwards)

U.G. DEGREE EXAMINATION, APRIL 2022.

Part IV — Microbiology – Non Major Elective

BIO FERTILIZER TECHNOLOGY

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20)

Answer ALL questions.

1. Define biofertilizers.
2. Enlist any two bacterial biofertilizers.
3. Give any two carriers used in the bioinoculum preparation.
4. What is the difference between compost and fertilizer?
5. Which is the suitable medium for Azotobacter?
6. Give any two examples for Non Symbiotic nitrogen fixers.
7. Write short note on phosphofungi.

8. Name any two phosphate solubilising bacteria.
9. What is the full form of VAM?
10. What does Endomycorrhizae mean?

PART B — ($5 \times 5 = 25$)

Answer ALL questions choosing either (a) or (b)

11. (a) What are the methods of application of biofertilizer? Explain each in brief.

Or

- (b) Describe in detail about storage, shelf life and quality control of biofertilizers.

12. (a) Explain about mass inoculum production of Rhizobium.

Or

- (b) Give a brief note on Cyanobacteria and mention its role on nitrogen fixation. (5)

13. (a) Explain about mass inoculum production of azotobacter

Or

- (b) How do bioinoculants treated with seeds? Explain in brief.

14. (a) Write in brief about isolation of phosphate solubilizers.

Or

- (b) Discuss in brief about use of carrier materials in the formulation of biofertilizer.

15. (a) Discuss in detail about Arbuscular Mycorrhiza.

Or

- (b) Write a brief note on Mycorrhizal biofertilizer.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

16. What are biofertilizers? Justify in what sense are they better than chemical fertilizers?
17. Give a detailed account on the cultivation, mass production and application of algal bio fertilizers.
18. Justify how Azotobacter as an inoculants to increases soil fertility? Explain.
19. What is the significance of phosphate solubilizing bacteria in soil fertility? Explain in brief.
20. Illustrate in detail about the use of VAM as a biofertilizers.