

C 80922-B

(Pages : 2)

Name.....

Reg. No.....

**FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION  
APRIL 2020**

**Microbiology**

**MBG 4B 04—SOIL AND AGRICULTURAL MICROBIOLOGY**

(2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

*Draw diagrams wherever necessary*

**Section A**

*Answer all questions.  
Each question carries ½ marks.*

1. Name one bacteria oxidizing ammonium to nitrite.
2. The angular leaf spot of cotton is caused by \_\_\_\_\_
3. The luminescent bacterial species in marine environment are grouped under \_\_\_\_\_ genera.
4. Define amensalism
5. The soil type that has smallest particle size and good water storage qualities is \_\_\_\_\_
6. What is Hartignet ?
7. Differentiate parasitism and predation.
8. What is rhizoplane ?
9. What is biological weathering ?
10. What is nematophagy ?
11. Name a free living nitrogen fixing bacteria.
12. What are biofilms ?

(12 × ½ = 6 marks)

**Section B**

*Answer all questions.  
Each question carries 2 marks.*

13. How soil inhabiting fungi are different from root inhabiting fungi ?
14. What are phosphatases ?

Turn over

15. What is the aim of soil fertility test ?
16. Describe endoparasites with an example.
17. What is the use of Bordeaux mixture ?
18. Write on Nod factors.
19. What are endophytes ?
20. What is protoco-operation ?
21. Write on red rot of sugarcane.
22. Differentiate clay and sandy soil.

(10 × 2 = 20 marks)

### Section C

*Write short notes on any six questions.*

*Each question carries 5 marks.*

23. Soil microflora.
24. Carbon cycle.
25. Microbial interactions between populations.
26. Ruminant microflora in animals and its significance.
27. Papaya ring rot disease.
28. Azolla-Anabaena interaction.
29. Effect of pesticides on soil microflora.
30. Role of micro-organisms in biogeochemical cycles.

(6 × 5 = 30 marks)

### Section D

*Write essay on any two questions.*

*Each question carries 12 marks.*

31. Write a note on rhizosphere effect.
32. Write a note on biopesticides. Discuss the advantages and disadvantages of biopesticides over chemical pesticides.
33. Write a etiology, symptoms and management of early blight of potato and bacterial blight of rice.

(2 × 12 = 24 marks)