Roll No. : .....

Total No. of Questions : **25**] [Total No. of Printed Pages : **3**

SMIC–321

M.Sc. (IIIrd Semester) Examination, 2021

MICROBIOLOGY

Paper – MB–302

(Soil and Agricultural Microbiology)

*Time : **1½** Hours*] [*Maximum Marks : **40***

Section–A **(Marks : 1 × 10 = 10)**

Note :– Answer all *ten* questions (Answer limit **50** words). Each question carries **1** mark.

Section–B **(Marks : 3 × 5 = 15)**

Note :– Answer any *five* questions by selecting at least *one* question from each Unit (Answer limit **200** words). Each question carries **3** marks.

Section–C **(Marks : 5 × 3 = 15)**

Note :– Answer any *three* questions by selecting *one* question from each Unit (Answer limit **500** words). Each question carries **5** marks.

Section–A 1 each

1. Name any *free* living nitrogen fixer.

2. Name any *two* microbes associated with rhizosphere.

3. What do you mean by Phyllosphere ? Define.

4. What is TMV ?

5. Name any plant disease caused by bacteria.

6. What is Smut ? Why is it called so ?

7. Name the microbe cause Witches broom of Potato.

8. What is PSM ? Name any one.

9. Name any carrier material used in Biofertilizers.

10. What is BT-cotton ?

Section–B 3 each

Unit–I

11. What do you mean by Soil Profile ?

12. What is 'Bioleaching' ?

13. What is Vermicompost ?

Unit–II

14. What is Parasitism ? Explain with example.

15. What is 'Papaya Leaf Curl' ? Name the causative agent and means of spread of disease.

16. What is 'Green Ear of Bajra' ? Describe its symptoms and causative agent.

Unit–III

17. What is 'Azola' ? Why it is important ?

18. What is VAM ? Explain with suitable example.

19. Name any one microbial pesticides and its signification.

Section–C

5 each

Unit–I

20. What is Phosphorus Cycle ? Explain with suitable example.

21. What is 'Vermicompost' ? Explain the process of production with suitable flow chart.

Unit–II

22. How plant resist disease ? Explain the various mechanisms involved.

23. What is Crown Gall ? Describe its microbiology.

Unit–III

24. What is Nitrogenase Enzyme ? Explain its biochemistry in short.

25. Describe the mass production techniques involved in microbial insecticides.