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**End Semester Examination – Nov/Dec– 2018**

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| **Code :** | **18AG1005** | **Duration :** | **3hrs** |
| **Sub. Name :** | **AGRICULTURAL MICROBIOLOGY** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | **Course Outcome** | **Marks** |
|  | **PART-A(20X1=20 MARKS)** | | |
| 1. | Who invented microscope? | CO1 | 1 |
| 2. | What is the use of pilus? | CO1 | 1 |
| 3. | Who discovered streptomycin? | CO1 | 1 |
| 4. | Name the function of ribosomes. | CO1 | 1 |
| 5. | Define transduction. | CO1 | 1 |
| 6. | Who invented episomes? | CO1 | 1 |
| 7. | Who proved first about the bacterial transformation? | CO1 | 1 |
| 8. | Which group is the dominating microorganism in any soil type? | CO2 | 1 |
| 9. | Name the nitrogen fixing cell in BGA? | CO2 | 1 |
| 10. | What is the enzyme responsible for biological nitrogen fixation? | CO2 | 1 |
| 11. | Name the endophytic dinitrogen fixer associated with sugarcane. | CO2 | 1 |
| 12. | Who coined the term *Rhizosphere*? | CO2 | 1 |
| 13. | Name one genus of *AM* fungi. | CO2 | 1 |
| 14. | What is *Rhizoplane*? | CO2 | 1 |
| 15. | Name any one *Phyllosphere* microorganism. | CO2 | 1 |
| 16. | What is silage? | CO2 | 1 |
| 17. | Name any one viral biocontrol agent for *Lepidopteran*pests. | CO3 | 1 |
| 18. | What is the use of *Metarhiziumanisopliae*? | CO3 | 1 |
| 19. | Name one PGPR organism. | CO3 | 1 |
| 20. | Give an example for biofuel producing algae. | CO3 | 1 |

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|  | **PART B(10 X 5= 50 MARKS)**  **(Answer any 10 from the following)** | | |
| 21. | How the theory of spontaneous generation was disproved? | CO1 | 5 |
| 22. | Discuss about the chemoautotrophy and photoautotrophy in bacteria. | CO1 | 5 |
| 23. | How bacterial growth is measured? | CO1 | 5 |
| 24. | Give an account of bacterial plasmids. | CO1 | 5 |
| 25. | Write short notes on transposans. | CO1 | 5 |
| 26. | List out factors affecting soil microorganisms on soil fertility. | CO1 | 5 |
| 27. | Draw carbon cycle. | CO2 | 5 |
| 28. | Explain the phosphorous cycle. | CO2 | 5 |
| 29. | Write short notes on *Azolla* and its uses. | CO2 | 5 |
| 30. | Write briefly on bacterial biocontrol agents. | CO3 | 5 |
| 31. | Give an account on NPV. | CO3 | 5 |
| 32. | What is the role of microbes in agro-wastes degradation? | CO3 | 5 |

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|  | **PART C(2 X 15= 30 MARKS)**  **(Answer any 2 from the following)** | | | |
| 33. | a. | Draw and explain about the bacterial growth curve. | CO1 | 10 |
| b. | Draw label and explain the bacterial cell and its parts. | CO1 | 5 |
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| 34. | a. | Explain the types of bacterial transduction. | CO1 | 10 |
| b. | Discuss about the fungal biofertilizers and their role in crop nutrition. | CO2 | 5 |
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| 35. | a. | Explain about the nitrogen cycle and how it is useful in soil fertility. | CO2 | 8 |
| b. | Discuss about the types of dinitrogen fixers and their role in crop production. | CO2 | 7 |