Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov / Dec – 2019**

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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 (20 X 1 = 20 MARKS)** | | | |
| 1. | Name the scientist who discovered penicillin. | CO1 | 1 |
| 2. | Who disproved the Spontaneous generation theory? | CO1 | 1 |
| 3. | Define tyndallization. | CO1 | 1 |
| 4. | What are pili? | CO1 | 1 |
| 5. | What is generation time? | CO1 | 1 |
| 6. | Name the process of phage mediated gene transfer in bacteria. | CO1 | 1 |
| 7. | What is cosmid? | CO1 | 1 |
| 8. | Name the important bacteria involved in transformation of nitrite to nitrate. | CO2 | 1 |
| 9. | What are heterocysts? | CO2 | 1 |
| 10. | Name one nitrogenous bacterial fertilizer used for rice. | CO2 | 1 |
| 11. | What is Hartignet? | CO3 | 1 |
| 12. | Define AM fungi. | CO3 | 1 |
| 13. | Name the bacterial agent to control *Heliothis armigera.* | CO2 | 1 |
| 14. | Name one non symbiotic free living blue green algae. | CO2 | 1 |
| 15. | Name the symbiotic organism used for Groundnut nitrogen fixation. | CO2 | 1 |
| 16. | What is caulosphere? | CO3 | 1 |
| 17. | Name one use of *Trichoderma viridae.* | CO3 | 1 |
| 18. | What is the biowaste largely used for ethanol production in India? | CO3 | 1 |
| 19. | Name one Sulphur oxidizing bacteria. | CO3 | 1 |
| 20. | What are coliforms? | CO3 | 1 |

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| **PART – B (10 X 5 = 50 MARKS)**  **(Answer any 10 from the following)** | | | |
| 21. | Differentiate between the prokaryotes and eukaryotes. | CO1 | 5 |
| 22. | Explain the process of conjugation. | CO1 | 5 |
| 23. | Explain transposons. | CO1 | 5 |
| 24. | Draw the phosphorous cycle. | CO2 | 5 |
| 25. | What is rhizosphere? Explain. | CO2 | 5 |
| 26. | Explain the process of silage making. | CO3 | 5 |
| 27. | Write short notes on *Mettarhium anisopliae.* | CO3 | 5 |
| 28. | Name some bacterial biocontrol agents. | CO2 | 5 |
| 29. | Write short notes on *Azolla* production. | CO2 | 5 |
| 30. | What is the process of agro waste degradation? | CO2 | 5 |
| 31. | What are chemoautotrophs? | CO3 | 5 |
| 32. | Write briefly on characteristics and functions of plasmids. | CO1 | 5 |

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| **PART - C (2 X 15 = 30 MARKS)**  **(Answer any 2 from the following)** | | | | |
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| 33. | a. | Draw and discuss the bacterial growth curve. | CO1 | 8 |
| b. | Explain the factors influencing the bacterial growth. | CO1 | 7 |
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| 34. | a. | Explain the importance and processes of Nitrogen Cycle. | CO2 | 10 |
| b. | Discuss the classification of nitrogen fixers with examples. | CO2 | 5 |
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| 35. | a. | Write briefly the structure, types and importance of mycorrhizae in agriculture and forestry. | CO3 | 10 |
| b. | How phyllosphere microflora are influencing the crop growth? | CO3 | 5 |