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School of Agriculture
Bachelor of Science Honours in Agriculture
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem II - A1UA202B - Agricultural Microbiology

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Tell me the differences between plasmid and transposon? K1 (2)
- 2) Interpret the bacteria participate in the carbon cycle? K2 (4)
- 3) Illustrate the chemoautotrophy and photoautotrophy process? K2 (6)
- 4) Construct any two flow chart biogeochemical cycle? K3 (9)
- 5) Construct the efficacy of biopesticides in pest control compared to chemical pesticides? K3 (9)
- 6) Evaluate the role of rhizosphere microbes in soil nutrient cycling? K5 (10)
- 7) Analyze the Azolla, blue green algae and mycorrhiza and their importance? K4 (12)
- 8) Justify the cellular structure of bacteria, highlighting key features such as the cell wall, plasma membrane, and organelles. Compare and contrast chemoautotrophy and photoautotrophy in bacteria, detailing the mechanisms by which they obtain energy and carbon. Additionally, explain how these metabolic processes contribute to bacterial growth and survival in various environments? K5 (15)
- 9) Justify any three important biofertilizers and their importance in agriculture? K5 (15)
- 10) Design the role of microbiology in soil fertility and crop production and explain Carbon, Phosphorus and Sulphur cycles? K6 (18)