

MIO 109-P AGRICULTURE MICROBIOLOGY [P]

Practical Course Credit : 1

Contact Hours : 30

1. Detection of enzymes – amylase, lipase, protease, catalase, urease from various soils such as sandy soil and garden soil.
2. Morphological characterization of cyanobacteria, extraction and estimation of cyanobacterial pigments (chlorophyll a, carotenoids, phycocyanin, allophycocyanin, phycoerythrin).
3. Isolation of microbial plant pathogen(s).

References (Composite list for theory and practicals):

1. Alexander, M., Introduction to Soil Microbiology, Wiley.
2. Dadarwal, K. R., Biotechnological Approaches in Soil microorganisms for sustainable crop production, Scientific Publishers.
3. Subba Rao, N. S., Advances in Agricultural Microbiology, Oxford & IBH Publishers.
4. Carr, N. G. and Whitton, B. A., The Biology of Blue-green algae, University of California Press.
5. Mahanta, K. C., Fundamentals of Agricultural Microbiology, Oxford & IBH Publishers.
6. Veeresh, G. K. and Rajagopal, D., Applied Soil Biology and Ecology, Oxford & IBH Publishing Company Pvt. Limited.
7. Somani, L. L., Biofertilizers in Indian Agriculture, Concept Publishing Company.
8. Subba Rao, N. S., Biofertilizers in Agriculture and Forestry, International Science Publishers.
9. Bilgrami K. S. (1987) Plant Microbe Interactions, Proceedings of Focal Theme Symposium, Indian Science Congress Association, Narendra Publishing House.
10. Madigan, M. T., Martinko, J. M., Bender, K. S., Buckley, D. H. and Stahl, D. A., Brock Biology of Microorganisms, Pearson Education Limited.
11. Kumar, H. D., Modern Concepts of Microbiology, Vikas Publishing House Pvt. Ltd.

