



RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

B.Sc. (General) Degree in Applied Sciences
Third Year – Semester II Examination –October/November 2017

BOT 3203–INDUSTRIAL MICROBIOLOGY

Time: Two (02) hours

Answer any four (4) questions.

1. a) Explain how the process of industrial copper mining is carried out by *Acidithiobacillus ferrooxidans*.
(50 marks)
b) Discuss the microbial anaerobic digestion of biomass used in biogas production.
(50 marks)
2. Describe the factors you should consider when designing a fermentor for alcohol production using yeast (*Saccharomyces cerevisiae*) as the starter culture.
(100 marks)
3. As a microbiologist how would you plan the solid waste composting program to manufacture good quality compost to be used in cultivation of food crops.
(100 marks)
4. a) Explain briefly the methods, which can be applied to bioremediate a heavy metal contaminated soil.
(50 marks)
b) Describe the methods by which an industrial effluent can be treated to be used in agricultural practices.
(50 marks)
5. Evaluate the potential of fungi as biofertilizers and biocontrol agents for plant pathogens in sustainable agriculture practices.
(100 marks)