



**RAJARATA UNIVERSITY OF SRI LANKA  
FACULTY OF APPLIED SCIENCES**

**B.Sc. (General) Degree in Applied Sciences**

**Second Year– Semester II Examination – April/May 2016**

**BIO 2205 –GENERAL MICROBIOLOGY**

**Time: Two (2) hours**

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**Answer four (4) questions only.**

1. a. Contrast an obligate aerobe and an obligate anaerobe in terms of sensitivity to oxygen and ability to grow in the presence of oxygen.  
b. Explain why facultative anaerobe has survival advantage over an obligate anaerobe.  
c. Compare photosynthesis in cyanobacteria and green sulfur bacteria.
2. What key features could be used to differentiate the following genera of bacteria: *Bacillus*, *Escherichia* and *Mycobacterium*?
3. a. Describe the growth cycle of a population of bacterial cells indicating all possible stages of growth.  
b. Discuss the lytic cycle and lysogenic cycle of replication in bacteriophage viruses.  
c. Explain the methods that can be used to control microorganisms in canned foods.
4. Discuss the important microbial activities in processes of geochemical cycling.
5. Write short notes on the following.
  - a. Microbial biofilms
  - b. Actinomycetes
  - c. Prions causing diseases
  - d. Lichens