

THE OPEN UNIVERSITY OF SRI LANKA
B.Sc./B.Ed. DEGREE PROGRAMME - BOTANY - LEVEL 04
BTU 2104/BTE 4104/BTI 4104 – PRINCIPLES OF MICROBIOLOGY
FINAL EXAMINATION - 2008/2009



DURATION: TWO AND A HALF (2 ½) HOURS.

DATE : 19th December 2008

TIME: 1.30 p.m. – 4.00 p.m.

ANSWER ANY FOUR (04) QUESTIONS.

01. Write an account of the major events in the historical development of microbiology.
02. Outline the basic requirements of culture media for microorganisms. Differentiate the following culture media and indicate their usage in microbiology.
 - a) Natural and synthetic media
 - b) Liquid and solid media
 - c) Basal and enriched media
03.
 - a) Describe the major phases of a typical growth curve of bacteria in a closed system.
 - b) Outline the methods by which the growth of bacteria can be estimated.
04. Give a concise account of energy yielding processes in bacteria and state the practical/commercial applications of the processes mentioned above with examples.
05.
 - a) Explain what is meant by antibiotic resistance.
 - b) State the ways of minimizing antibiotic resistance in microorganisms.
 - c) Describe the major groups of antibiotics based on their chemical structure.
06. Write short notes on the following.
 - a) Anaerobic respiration in bacteria.
 - b) Symmetry in viruses
 - c) The role of microbial vectors in genetic engineering.