

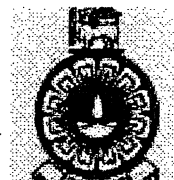
THE OPEN UNIVERSITY OF SRI LANKA

B.Sc. / B.Ed. DEGREE PROGRAMME – LEVEL 04

BOU2103/BOE4103/BTU2104/BTE4104- PRINCIPLES OF MICROBIOLOGY

FINAL EXAMINATION – 2012/2013

DURATION: TWO (02) HOURS.



DATE : 14th June 2013

TIME : 09.30 a.m. – 11.30 a.m.

ANSWER ANY FOUR QUESTIONS. USE FULLY LABELLED DIAGRAMS WHERE NECESSARY.

1. a. What is meant by the term 'Sterilization' in microbiology.
b. Write an account on physical sterilization methods. Your answer should include the basic principles, procedure, precautions, the articles which can be sterilized and the limitations in using these methods.
- 2.a. List the basic constituents of culture media, briefly stating the importance of each constituent in culturing microorganisms.
b. Write an account on the diversity of culture media.
- 3.a. Give a comprehensive account of energy yielding processes in **organotrophs**.
b. Briefly describe practical/ commercial applications of energy yielding processes in **bacteria**.
4. Name the scientists and briefly describe their contributions that led to the historical development of microbiology.
- 5 a. What is meant by the term 'mutation'?.
b. Describe how gene transfer in bacteria takes place through the process of 'transduction'.
c. How does 'conjugation' differ from 'transduction'?
6. Write short notes on the following.
 - a. The 'MPN' method
 - b. The 'Slide culture technique'
 - c. 'Disc diffusion technique' for testing antibiotic sensitivity
 - d. Mycoplasma