

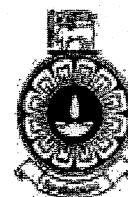
THE OPEN UNIVERSITY OF SRI LANKA

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

BOU2103/BOE4103- PRINCIPLES OF MICROBIOLOGY

FINAL EXAMINATION – 2014/2015

DURATION: TWO (02) HOURS.



DATE : 20th May 2015

TIME : 9.30 a.m. – 11.30 a.m.

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

1.
 - a) Briefly describe the asexual method of bacterial reproduction and state how genetic variability could occur.
 - b) Write an account on generalized transduction in bacteria and state how it differs from specialized transduction.
2.
 - a) Briefly describe the cell characters used in systematic examination of bacteria
 - b) Discuss methods used to obtain viable counts and total counts of bacteria (consider two methods from each). Briefly state the merits and demerits of each method you discussed.
3. Write short notes on the following.
 - a) Lytic cycle of replication of viruses
 - b) Louis Pastuer's contribution to microbiology
 - c) Methods used to sterilize liquids in the laboratory
4.
 - a) Write briefly on the nutritional categories of microorganisms.
 - b) Give an account on the effect of environmental factors on the growth and activities of microorganisms.
5. Write a comprehensive account on the energy generation processes of organotrophic bacteria.

6.
 - a) State the constituents you consider as basic and essential requirements in a culture medium.
 - b) Discuss the different types of media used in cultivation of bacteria and fungi in a microbiological laboratory.
 - c) Describe the use of selective and differential media using 'Mac Conkeys medium' as an example.