



THE OPEN UNIVERSITY OF SRI LANKA

B.Sc. DEGREE PROGRAMME – LEVEL 5

FINAL EXAMINATION - 2014/2015

BOTANY

BOU 3100/BOE5100/BTU 3101/BTE 5101- ENVIRONMENTAL AND APPLIED

MICROBIOLOGY

DURATION – TWO (02) HOURS

Date – 16th October 2015

Time – 9.30 am – 11.30 am

ANSWER ANY FOUR (04) QUESTIONS.

1.
 - (a). What is rhizosphere and why is it important for soil microorganisms?
 - (b). Citing suitable examples, explain the mutualistic associations that occur in soil between plant roots and soil microorganisms.
2.
 - (a). Differentiate between planktonic and benthic communities of microorganisms in aquatic environments.
 - (b). Give a concise account on two (02) major factors that determine the growth and distribution of microorganisms in an inland water body.
 - (c). Name and explain briefly the steps involved in purification of municipal water supplies.
3. Write short notes on **any three (03)** of the following.
 - (a). Membrane filter technique
 - (b). Restriction endonucleases
 - (c). Action of interferons on viruses
 - (d). Trickling filter process
4.
 - (a). Differentiate between primary pathogens and opportunistic pathogens.
 - (b). Describe briefly the major reservoirs of infectious diseases.
 - (c). Give an account on various types of acquired immunity seen in the human body.

5.
 - (a). Why do we need to preserve food?
 - (b). Write a short account on principles of food preservation.
 - (c). Discuss the use of high temperature and antibiotics as methods of preservation of food.

6. Write briefly on the use of microorganisms in
 - (a). production of yoghurt
 - (b). bioremediation
 - (c). production of antibiotics
 - (d). production of single cell proteins