

THE OPEN UNIVERSITY OF SRI LANKA
B.Sc. DEGREE PROGRAMME
BOTANY – LEVEL 05
FINAL EXAMINATION – 2012/13
BOU3104/BTU3105/BTE5105 – SOILS AND PLANT GROWTH



DURATION – TWO HOURS

Date – 12th December 2013

Time – 09.30 a.m. – 11.30a.m.

Answer any four (04) questions.

1.
 - a. How do you define a “soil profile”? (5min)
 - b. Distinguish between eluvial and illuvial horizons in a soil profile. (10min)
 - c. Briefly explain how time and topography influence soil formation and soil development. (15min)
2.
 - a. Explain concisely the importance of texture and structure of soil to have better plant growth. (20min)
 - b. How do soil tillage operations affect granulation? (10min)
3.
 - a. What are the factors that influence on the abundance and distribution of microorganisms in soil? (10min)
 - b. Explain the functions of fungal spores and fruit bodies in surviving under unfavourable environmental conditions. (15min)
 - c. How does humus form in soil? (5min)
4. Write an essay on “role of microorganisms in cycling of bio elements”. (30min)
5.
 - a. What do you mean by “sustainable land use”? (10min)
 - b. Explain the contribution of agro forestry practices in maintaining sustainable land use. (20min)
6. Write short notes on **any two (02)** of the following.
 - a. Nutrient deficiency symptoms in plants (15min)
 - b. Effects of inorganic fertilisers on the chemical and physical properties of soil (15min)
 - c. Methods in controlling water erosion (15min)