

THE OPEN UNIVERSITY OF SRI LANKA  
B.Sc./B.Ed DEGREE PROGRAMME  
BOTANY – LEVEL 05  
FINAL EXAMINATION – 2010/11  
BTU3105/BTE5105 – SOILS AND PLANT GROWTH



DURATION – TWO AND A HALF HOURS

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Date – 5<sup>th</sup> July 2011

Time – 9.30 a.m. – 12.00 noon.

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Answer any four (04) questions.

01. a. What is parent material?  
b. How do we classify parent material?  
c. Briefly explain why montmorillonite clay is more suitable than kaolinite clay in improving quality of soil.
  
02. a. What is meant by “Constructive Processes” in soil development?  
b. Explain briefly how soil development after soil formation is influenced by biological activities.
  
03. a. In what ways does soil air differ from air in the atmosphere?  
b. What are the factors which affect on the composition of soil air?  
c. Discuss the adverse effects of poor aeration in soil on soil biota and higher plants
  
04. a. What is humus?  
b. List the major characteristics of humus.  
c. Explain the major functions of organic matter in soil
  
05. a. What are the effects of trees on soil?  
b. Explain with examples how some properties of trees and shrubs help to improve soil.
  
06. Write short notes on any **two (02)** of the following.
  - a. Methods by which soil microorganisms resist unfavourable conditions
  - b. Porosity and weight of soil
  - c. Improvement of acidic and saline soils