

THE OPEN UNIVERSITY OF SRI LANKA
B.Sc. DEGREE PROGRAMME
BOTANY – LEVEL 05
FINAL EXAMINATION – 2013/14
BOU3104/BTU3105/BTE5105 – SOILS AND PLANT GROWTH

DURATION – TWO HOURS

Date – 26th November 2014

Time – 1.30 p.m. – 3.30 p.m.

Answer **any four (04)** questions.

1.
 - a. Define the term “secondary minerals”. (5min)
 - b. Distinguish between Kaolinite and Montmorillonite clays. (10min)
 - c. Explain briefly the importance of clay minerals in plant growth. (15min)

2.
 - a. What are the conditions that give rise to poor aeration in soil? (10 min)
 - b. List the factor that affect on composition of soil air. (05min)
 - c. Discuss the effects of poor soil aeration on biota. (15min)

3.
 - a. What are the functions of bacteria in decomposing starch, cellulose and pectin? (10min)
 - b. “Microorganisms are capable of degrading crude oils and tars” . Elaborate on this statement. (10min)
 - c. Explain how the environmental and agricultural practices affect on the cycling of Nitrogen in nature. (10min)

4. Write an essay on “Effects of farm manure in agriculture”. (30min)

5.
 - a. What do you mean by the term “Agro forestry”? (05min)
 - b. Explain the contribution of rotational practices in maintaining sustainable land use. (15min)
 - c. State the functions of tree cover on soil erosion control. (10min)

6. Write short notes on **any two (02)** of the following.
 - a. Control of wind erosion (15min)
 - b. Phosphorus retention in soil (15min)
 - c. Functions of microorganisms in the Sulphur Cycle (15min)