

The Open University of Sri Lanka
B.Sc./B.Ed Degree Programme-Level 05-2010/11
BTU 3105/BTE 5105 – Soils and Plant Growth
Assessment Test I (Open Book Test)

Duration – One (01) hour

Reg.No.

Date: 26th February 2010

Time: 11.00 a.m.– 12.00 noon

Answer all questions on this paper itself.

There are four (04) questions and five (05) pages in this question paper.

01. a. Illustrate in the space below how different types of rocks are related each other with respect to their origin, formation and processes they go through.

b. Distinguish between peat and muck.

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c. "Kaolinite clay does not exhibit colloidal properties of a high order magnitude" Why?

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02. a. What kind of changes would you expect to have in a soil profile of a land with high slopping topography? Explain your answer with reasons.

[illegible]

b. What is the importance of the soil structure in maintaining soil quality?

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c. List three ways through which soil structure can be altered during agricultural activities.

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03. a. “Most of the Nitrogen in soil are organic and undergo very slow decomposition”. Justify this statement.

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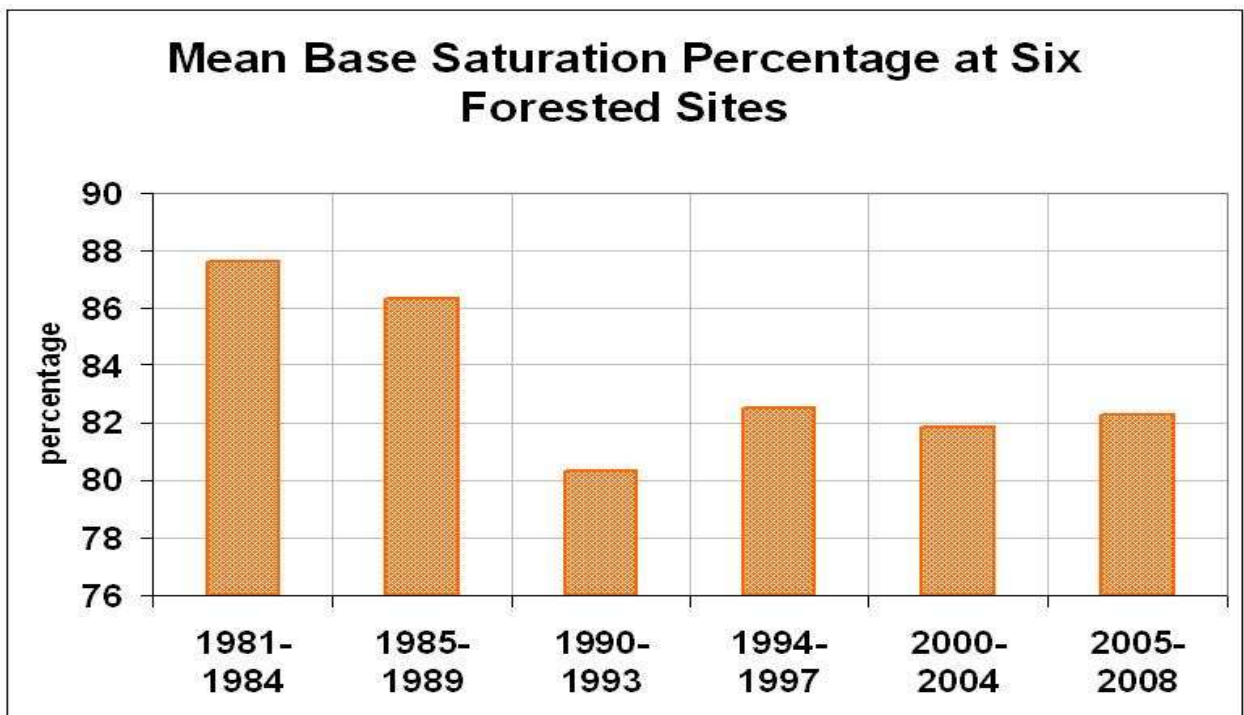
b. Why do we take fresh soil core samples in bulk density measurements?

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04. The mean base saturation of six forested sites is given below.



a. How do you explain the variation of Electrical Conductivity (EC) of the above soils?

Give three possible reasons for the variations over the years.

b. If the Cation Exchange Capacities (CEC) have remained equal (88% m eqs/100g) over the years, what can you say about the pH of above forest soil during different periods?

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c. What do you mean by Phosphorus retention in soil?

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d. List the factors which affect on Phosphorus retention in soil.

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