MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 - Meru-Kenva.

Tel: 020-2069349, 061-2309217. 064-30320 Cell phone: +254 712524293, +254 789151411

Fax: 064-30321

Website: www.mucst.ac.ke Email: info@mucst.ac.ke

University Examinations 2012/2013

SECOND YEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN HORTICULTURE

AHS 2208: SOIL GENESIS, PHYSICS AND CLASSIFICATION

DATE: APRIL 2013

INSTRUCTIONS: Answer question **one** and any other **two** questions

QUESTION ONE – 30 MARKS

a.	Explain what is soil genesis.	(4 Marks)
b.	Explain the factors that influence soil formation.	(5 Marks)
c.	What are the sources of organic matter in soil.	(8 Marks)
d.	Highlight the various physical weathering.	(6 Marks)
e.	Explain the characteristics of A-horizon.	(3 Marks)
f.	Explain the following:	(4 Marks)

- Eluviations i.
 - Iluviation ii.
- iii. Soil profile
- Soil texture iv.
- g. Explain how soil consistence is described and determined at the three moisture conditions. (wet soils, moist soils and dry soils) (3 Marks)

QUESTION TWO – 20 MARKS

a. Describe the characteristics of the soil orders according to USDA soil classification. (14 Marks)

b. What are hydormorphic soils.

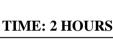
QUESTION THREE – 20 MARKS

- a. Explain how P-Horizon and E-Horizon occur in a soil profile horizonation. (4 Marks)
- b. Biological weathering is a soil developing process, rather than a soil forming process. Discuss.

(8 Marks)

(6 Marks)

c. Explain how you would determine the class textural of a soil using the textural triangle. (8 Marks)



- + IVIAIKS

QUESTION FOUR – 20 MARKS

a. By using an illustration, describe the soil structure by types. (9 Marks)
b. Explain how soil water is classified in relation to the plant growth. (4 Marks)
c. Describe the factors that affect the water holding capacity of the soil. (7 Marks)

QUESTION FIVE - 20 MARKS

- a. Explain the ways land is classified and characterized according it different capacity. (8 Marks)
- b. Explain the characteristics features of diagnostic surface epipedons. (10 Marks)
- c. How does soil colour influences the soil fertility of a place. (2 Marks)