THE CO-OPERATIVE UNIVERSITY OF KENYA

END OF SEMESTER EXAMINATION NOVEMBER-2022

EXAMINATION FOR THE DEGREE OF BACHELOR OF CO-OPERATIVE BUSINESS

UNIT CODE: BAFS 2108

UNIT TITLE: INTRODUCTION TO SOIL SCIENCE

DATE: FRIDAY 23RD DECEMBER, 2022

TIME: 9:00 AM – 11:00 AM

INSTRUCTIONS:

- **Answer question ONE (compulsory) and any other TWO questions**

QUESTION ONE

(a) Explain FIVE major constraints to the maintenance of organic matter in the soil (5 Marks)

(b) Describe FIVE practices that can be adopted to improve soil tilth (5 Marks)

(c) Explain the TWO step process of mineralization of organic matter (4 Marks)

(d) Outline FOUR factors which affected the temperature of a given soil (4 Marks)

(e) Explain the THREE characteristics of Cation Exchange Reactions (6 Marks)

(f) Explain the roles of Microorganisms in Organic Matter Transformation (6 Marks)

QUESTION TWO

(a) Define the term Soils colloids (2 Marks)

(b) Describe FOUR Conditions that affect Soil Air Composition (8 Marks)

(c) Discuss FIVE important roles played by Soil Organic Matter (10 Marks)

QUESTION THREE

(a) Describe the Soil Forming Process (10 Marks)

(b) Describe FIVE components in the Chemical Process of rock weathering (10 Marks)

QUESTION FOUR

(a) Describe the THREE Factors of soil formation (6 Marks)

(b) Explain THREE factors that cause Biological Weathering of rocks (6 Marks)

(c) Describe Relief as a PASSIVE soil forming factor (8 Marks)

QUESTION FIVE

(a) Describe FIVE factors that affect the decomposition of Organic Matter in the Soil (8 Marks)

(b) Discuss FIVE factors that cause soil acidification (10 Marks)