Uganda Martyrs University

FACULTY OF EDUCATION
BACHELOR OF EDUCATION (PRIMARY) YEAR ONE
SEMESTER ONE EXAMINATIONS, 2022/23
AGRICULTURE EDUCATION
PAPER TWO: SOIL AND WATER ENGINEERING AND SOIL FERTILITY

DATE: Thur 12/01/2023   3hrs   Time: 9:30 AM-12:30 PM

Instructions:
- Do not write anything on this question paper.
- Answer **Four** questions choosing two Questions from each of the sections A and B.
- Begin each selected question on a new page in the answer booklet.
- Follow instructions on this question paper and answer booklet carefully.
- Each question carries a total of 25 marks

SECTION A: SOIL AND WATER ENGINEERING

1. a) As an agriculture teacher, how would you explain the process of soil formation to a P.7 class? (15 marks)

    b) Discuss the characteristics of loam soil (10 marks)

2. a) Define soil sampling? (02 marks)

    b) Explain the important to sample soil (09 marks)

    c) Describe the procedure for soil sampling (14 marks)

3. a) Identify the factors that influence the distribution of organic matter in the soil (05 marks)

    b) Discuss the roles of organic matter in the soil (10 marks)

    c) Describe the characteristics of an ideal green plant (10 marks)

4. Write short notes on the following:

a) Soil texture (05 marks)

b) Soil structure (05 marks)

c) Soil drainage (05 marks)

d) Porosity (05 marks)

e) Soil profile (05 marks)

SECTION B: SOIL FERTILITY

5. a) Discuss the factors that influence the distribution of organic matter(05 marks)

   b) Explain the roles of organic matter in the soil (10 marks)

   c) Describe the characteristics of an ideal green plant (10 marks)

6. a) Explain the characteristics of a good cover crop (10 marks)

   b) Mention the factors that contribute towards a fertile soil. (15 marks)

7. a) Explain the sources of soil nutrients? (10 marks)

   b) What are ways in which nutrients are lost from the soil? (15 marks)

8. a) Describe the procedures for making farmyard manure. (15 marks)

   b) Explain how fertiliser leaching can be reduced. (10 marks)

END