



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR
SECOND YEAR FIRST SEMESTER**

**SCHOOL OF SCIENCE
BACHELOR OF SCIENCE IN BOTANY AND
ZOOLOGY**

COURSE CODE: FEM 2110

**COURSE TITLE: INTRODUCTION TO SOIL
SCIENCE**

DATE: 4TH DECEMBER 2019

TIME: 0830 – 1030 HRS

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in section **A** and any other **THREE** in section **B**.

This paper consists of 2 printed pages. Please turn over

SECTION A (25 MARKS) ANSWER ALL QUESTIONS IN THIS SECTION

1. Define the following terms as used in this course **(5 marks)**
- i) Soil
 - ii) Pedogenesis
 - iii) Soil structure
 - iv) Bulk density
 - v) Humus
2. a) Explain major components of soil **(2 marks)**
b) Highlight **anthropogenic** activities that help in reducing soil erosion and improve water holding capacity in the soil **(4 marks)**
3. Briefly explain importance of soil and water to the plants **(5 marks)**
4. a) Which equipment is used to determine soil colour **(1 mark)**
b) Explain how soil PH influences the production of plants **(3 marks)**
5. Briefly describe ways of increasing organic matter content in the soils **(5 marks)**

SECTION B (45 MARKS) ANSWER ANY THREE QUESTIONS IN THIS SECTION

- 6 a) Define weathering **(2 marks)**
b) Using examples, discuss major types of weathering **(13 marks)**
7. Discuss factors that leads to soil formation **(15 marks)**
8. Describe **major** soil nutrients and how they influence plants growth **(15 marks)**
9. Discuss **major** classification of soil organisms and describe their functions **(15 marks)**
10. Discuss in details natural factors influencing amount of organic matter in the soil **(15 marks)**

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