



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

SECOND YEARSEMESTER EXAMINATION FOR

BACHELOR OF ENVIRONMENTAL STUDIES ((RESOURCE CONSERVATION)

BACHELOR OF ENVIRONMENTAL SCIENCES (RESOURCE CONSERVATION)

ENS 233: SOIL HABITATS

DATE:

TIME:

INSTRUCTIONS;

Answer question ONE and any other TWO questions

QUESTION ONE (30 MARKS)

- a) Explain the following concepts:
- i. Soil weathering (2 marks)
 - ii. Habitats (2 marks)
 - iii. Ecology (2 marks)
 - iv. Pedosphere (2 marks)
 - v. Rhizosphere (2 marks)
- b) Citing relevant examples, write short notes on soil horizons (10 marks)
- c) Discuss the key processes in organic matter decomposition and cite the role of organisms in the process (10 marks)

QUESTION TWO (20 MARKS)

- a) Using examples, explain the essential functions of soil microbial communities (10 marks)
- b) Citing applicable examples, discuss the impacts of human activities on the abundance and functioning of soil microbial communities (10 marks)

QUESTION THREE (20 MARKS)

Using appropriate examples, discuss the potential effects of climate change on soil habitats

QUESTION FOUR (20 MARKS)

Explain the key *physical*, *chemical* and *biological* properties used in the assessment of soil habitats

QUESTION FIVE (20 MARKS)

Using suitable examples, discuss how sustainable management of soil habitats can be achieved in Kenya