



MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE ENVIRONMENTAL SCIENCE

BACHELOR OF ENVIRONMENTAL STUDIES (RESOURCE CONSERVATION)

ENS 233: SOIL HABITATS

DATE: 23/3/2021

TIME: 8.30-10.30 AM

INSTRUCTIONS:

Answer question ONE and any other TWO questions

QUESTION ONE (30 MARKS)

- a) Explain the following concepts:
- i. Soil habitat (2 marks)
 - ii. Soil horizons (4 marks)
 - iii. Soil biodiversity (4 marks)
- b) Discuss the role of soil microbial communities in ensuring sustainable soil habitats (10 marks)
- c) Explain the main steps you would adopt in the restoration of degraded soil habitats in your county (10 marks)

QUESTION TWO (20 MARKS)

- a) Citing relevant examples, discuss the link between soil habitats and agricultural productivity (10 marks)

- b) Citing suitable examples, explain how human activities can affect the functioning of soil microbial communities (10 marks)

QUESTION THREE (20 MARKS)

- a) Citing relevant examples, write short notes on soil horizons (10 marks)
- b) Discuss the potential effects of desertification on soil habitats (10 marks)

QUESTION FOUR (20 MARKS)

Discuss the key physical, chemical and biological factors which determine the resilience of soil habitats to degradation

QUESTION FIVE (20 MARKS)

Discuss the potential effects of climate change on soil habitats