



# MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR  
BACHELOR OF ENVIRONMENTAL STUDIES (RESOURCE CONSERVATION)

ERC 215: NATURAL RESOURCE MAPPING AND CARTOGRAPHY

DATE: 20/01/2021

TIME: 8.30-10.30 AM

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## INSTRUCTIONS:

Answer question ONE and any other TWO questions

### QUESTION ONE (30 MARKS)

- a) Explain the following terms as they relate to natural resource mapping and cartography:
- Thematic map (2 marks)
  - General-reference map (2 marks)
  - Cartography (2 marks)
  - Vector data (2 marks)
  - Raster data (2 marks)
- b) Discuss the key factors that should be considered when creating land cover maps (10 marks)
- c) Explain the key operations used to carry out generalization in the mapping of natural resources (10 marks)

### QUESTION TWO (20 MARKS)

As a consultant in a project for mapping of land cover changes in your county, discuss the key steps that you would adopt in the development of maps for different stakeholders

### QUESTION THREE (20 MARKS)

Using appropriate illustrations, explain how different of spatial data types affect the symbolization of geographic features in mapping

**QUESTION FOUR (20 MARKS)**

- a) Explain the elements which affect visual weight in map composition (10 marks)
- b) Discuss the main goals that an effective map design should achieve in mapping of natural resources (10 marks)

**QUESTION FIVE (20 MARKS)**

Citing relevant examples, discuss the main forms of geographic phenomena encountered in the mapping of natural resources