



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

SECOND YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF ENVIRONMENTAL STUDIES (RESOURCE MANAGEMENT)

ERC 215: MAPPING AND CARTOGRAPHY

DATE: 30/11/2020

TIME: 8:30 – 10:30 AM

INSTRUCTIONS

Answer question ONE and any other TWO questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Explain the following terms:
 - i) Cartography (2 marks)
 - ii) Generalization (2 marks)
 - iii) Spatial entities (2 marks)
 - iv) Thematic map (2 marks)
 - v) General-reference map (2 marks)
- b) Discuss the role of maps in community-based natural resources management (10 marks)
- c) As a consultant in a project on mapping of forest degradation in Machakos county, explain the key steps that you would adopt in the development of maps for communicating with different stakeholders (10 marks)

QUESTION TWO (20 MARKS)

- a) Discuss the main goals of an effective map design using suitable examples in natural resource management (10 marks)
- b) Explain the key operations used to carry out generalization in the mapping of natural resources. (10 marks)

QUESTION THREE (20 MARKS)

- a) Explain the main forms of geographic phenomena encountered in the mapping of natural resources. (8 marks)
- b) Using appropriate illustrations, explain how the different levels of measurement of spatial data affect the symbolization of geographic features in mapping. (12 marks)

QUESTION FOUR (20 MARKS)

- a) Explain the elements which affect visual weight in map composition (10 marks)
- b) Explain the different types of spatial data sets you would use in mapping of the relationships between human population density and vegetation cover. (10 marks)

QUESTION FIVE (20 MARKS)

Using a suitable illustration, discuss the key elements of an effective map composition for Machakos university and its environs