



# TECHNICAL UNIVERSITY OF MOMBASA

## *Faculty of Business & Social Studies*

DEPARTMENT OF HOSPITALITY & TOURISM

UNIVERSITY EXAMINATIONS FOR DEGREE IN  
BACHELOR OF SCIENCE IN TOURISM MANAGEMENT

### **ECV 4240: GEOGRAPHICAL INFORMATION SYSTEMS**

END OF SEMESTER EXAMINATIONS

**SERIES:** DECEMBER 2013

**TIME:** 2 HOURS

#### **INSTRUCTIONS:**

- Answer question **ONE (Compulsory)** in Section **A** and any other **TWO** questions in Section B.

***This paper consists of Two printed pages***

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#### **SECTION A (Compulsory)**

##### **QUESTION 1**

- a) Define GIS. (2 marks)
- b) What are the main advantages of using Database management system? (4 marks)
- c) Differentiate the following terms as used in GIS:
  - i) Database and Database management system
  - ii) Discrete object and continuous field view.
  - iii) Data and Information
  - iv) Geometrical and Arithmetic operations
  - v) Set algebra and Boolean algebra

(10marks)

- d) What are the underlying factors that must be considered when choosing spatial data representations. (14 marks)

**SECTION B (Answer any TWO questions)**

**QUESTION 2**

- a) Describe the main components of a GIS system? (12 marks)  
b) Discuss with an aid of a flow chart, data collecting procedure in GIS (6marks)  
c) What do you understand by the term Remote sensing. (2marks)

**QUESTION 3**

- a) What are the main advantages and disadvantages of using vector data representation? (7 marks)  
b) What are the main GIS tools (sub-systems) that are responsible for data analysis in a GIS system? (7 marks)  
c) Why is it important to code GIS data. (4 marks)  
d) Describe the term attribute data. (2marks)

**QUESTION 4**

- a) Compare vector and raster representation in terms of: source of data, spatial storage, feature representation, topological association and Geographic analysis. (16 marks)  
b) What are the contents of derivative mapping functions? (4 marks)

**QUESTION 5**

- a) Outline the common editing problems. (5 marks)  
b) What are the main advantages and disadvantages of manual digitization. (8 marks)  
c) List down important parameters of evaluating a digitizer. (7 marks)