



**MACHAKOS UNIVERSITY**  
University Examination for 2023/2024 Academic Year  
**SCHOOL OF AGRICULTURE AND NATURAL RESOURCES**  
**DEPARTMENT OF ENVIRONMENTAL SCIENCES**  
**FIRST YEAR FIRST SEMESTER EXAMINATION FOR**  
**BACHELOR OF ARTS (SPECIAL NEEDS EDUCATION)**  
**BACHELOR OF EDUCATION (ARTS)**  
**BACHELOR OF ARTS**  
**AGE 100: INTRODUCTION TO CARTOGRAPHY AND MAP ANALYSIS**

**DATE:**

**TIME:**

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**INSTRUCTIONS: Answer QUESTION ONE and any other TWO QUESTIONS.**

**QUESTION ONE**

- a) Distinguish between the following concepts:
- i. Cartography and draftsmanship (4marks)
  - ii. Map reading and map analysis (4marks)
- b) Explain why cartography is defined as an art, science and technology (12marks)
- c) Describe five uses of maps in the geographical field today (10marks)

**QUESTION TWO**

- a) Explain how modern technological developments have influenced cartography (10marks)
- b) Discuss advantages of digital maps over paper maps (10marks)

**QUESTION THREE**

- a) Using contour lines and values draw; river valley, hill, mountain range, escarpment and a depression (10 marks)
- b) Explain any five methods of representing relief in topographic maps (10marks)

**QUESTION FOUR (20 MARKS)**

Describe the factors that govern map design and explain five map design principles

**QUESTION FIVE (20 MARKS)**

Describe the basic characteristics of base maps and explain its basic elements