MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR
FIRST YEAR FIRST SEMESTER

SCHOOL OF NATURAL RESOURCES, ENVIRONMENTAL STUDIES AND AGRICULTURE

BACHELOR OF ARTS IN GEOGRAPHY AND GEOSPATIAL TECHNIQUES

COURSE CODE: GEO 1104-1
COURSE TITLE: FUNDAMENTALS OF GEOSPATIAL TECHNIQUES

DATE: 6/2/2024 **TIME: 0830-1030 HOURS**

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in Section A, and any **THREE** questions in Section B. use illustrations where appropriate.

This paper consists of 2 printed pages. Please turn over

SECTION A – 20 MARKS

Q1. Write a brief overview on the historical development of geospatial technologies and how it has evolved over time **(2 marks)**

Q2. With specific examples, explain the significance of geospatial technologies in various fields **(2 marks)**

Q3. Differentiate between Geographic Information Systems (GIS), Global Positioning Systems (GPS) and Remote Sensing. Provide an example scenario where each of these technologies would be most effectively utilized. **(4 marks)**

Q4. Outline the steps you would take to find, evaluate and analyze the relevant geospatial data. **(2 marks)**

Q5. Identify three common geospatial data problems and propose solutions for each. Provide specific examples to illustrate your points. **(2 marks)**

Q6. Name two popular geospatial software packages and briefly describe their primary applications. **(3 marks)**

Q7. Define Geographic Information System (GIS) and provide an example of a real-world application where GIS technology is used **(2 marks)**

Q8. Explain the importance of using appropriate field techniques and equipment in geospatial data collection. **(3 marks)**

SECTION B – 30 MARKS

Q9. You are working on a project that requires accurate GPS data. Outline the steps you would take to ensure high precision and accuracy in the data collection process. **(10 marks)**

Q10. Compare and contrast different geospatial software packages, highlighting their strengths and weaknesses. Provide examples of industries or applications where specific software might be preferred. **(10 marks)**

Q11. Discuss the importance of data quality in geospatial technologies and provide at least three examples of how poor data quality can negatively impact decision-making in GIS applications. **(10 marks**

Q12. Imagine that you have been tasked with creating a map for a city's transportation system. Describe which geospatial technologies you would use, and explain the role of each in this project. **(10 marks)**

Q13. Discuss the different sectors within the geospatial technology industry and highlight the specific roles they play in various applications. Provide examples of industries that heavily rely on geospatial technology. **(10 marks)**

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