(Knowledge for development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2020/2021 ACADEMIC YEAR

SPECIAL/SUPPLEMENTARY EXAMINATION

THIRD YEAR SECOND SEMESTER

FOR THE DEGREE OF BACHELOR OF EDUCATION ARTS

COURSE CODE: GEO 321

COURSE TITLE: GEOGRAPHIC INFORMATION SYSTEMS

DATE: JANUARY 18, 2022   **TIME: 2 – 4 PM**

INSTRUCTIONS TO CANDIDATES

1. **Answer Question ONE (Q1) Compulsory**
2. Answer any other TWO (2) Questions
3. Use illustration where appropriate

This paper consists of 3 printed pages.   Please Turn Over.

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QUESTION 1 (COMPULSORY)

a. State the advantages of using GIS Map over paper map in geographic research

(10 Marks)

b. Describe the procedure of adding marginal information on a map to be used in a word document

(10 Marks)

c. Describe the process of creating a digital elevation model (10 Marks)

QUESTION 2

You are provided with a Kenyan shapefile and a shapefile on Kenyan water bodies. Using ArcGIS 10.5, describe the procedure of creating multiple buffers on Lake Victoria as a mechanism of conserving the water body. (20 Marks)

QUESTION 3

Using Arc GIS 10.5, describe the procedure of carrying out unsupervised classification on landsat imageries using ArcGIS 10.5 (20 Marks)

QUESTION 4

Discuss the advantages of GIS and Remote sensing in mapping Kenyan forest resources

(20 Marks)

QUESTION 5

Discuss the challenges facing the use of GIS in mapping Kenyan natural resources

(10 Marks)