CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE
OF BACHELOR OF EDUCATION ARTS**

GEOG 133: INTRODUCTION TO GIS AND REMOTE SENSING

STREAMS: BED (ARTS) Y1S2   **TIME: 2 HOURS**

DAY/DATE: WEDNESDAY 15/04/2020   **11.30 A.M. – 1.30 A.M.**

INSTRUCTIONS:
- **Answer question ONE and any other TWO questions**
- **Examples, illustrations and diagrams should be used to support an answer when necessary**

1. (a) Discuss the six components of a geographic information systems   [18 marks]

   (b) Examine the THREE types of remote sensing used for earth observation [9 marks]

   (c) State THREE challenges of merging data sets for seamless integration of GIS and Remote sensing   [3 marks]

2. (a) Compare and contrast between vector data structure and raster data structure

                                                                                    [8 marks]

   (b) Explain FOUR types of resolutions that are considered when choosing satellite images.   [8 marks]

   (c) State any FOUR class of GIS softwares available for spatial analysis   [4 marks]

3. Discuss components of remote sensing that assist in spatial data collection   [20 marks]

4. Examine six challenges facing the adoption and implementation of geospatial technologies in Kenya.   [20 marks]

5. (a) Differentiate between geographic object and geographic fields   [4 marks]

   (b) Examine FOUR ways GIS can be used in the contemporaries   [12 marks]

   (c) State FOUR portions of Electromagnetic spectrum used in remote sensing.

                                                                                    [4 marks]