GARISSA UNIVERSITY

UNIVERSITY EXAMINATION 2017/2018 ACADEMIC YEAR ONE FIRST SEMESTER EXAMINATION

SCHOOL OF EDUCATION, ARTS AND SOCIAL SCIENCES

FOR THE DEGREE OF BACHELOR OF EDUCATION (ARTS)

COURSE CODE: GEO 111

COURSE TITLE: INTRODUCTION TO REMOTE SENSING AND GIS

EXAMINATION DURATION: 3 HOURS

DATE: 01/12/17   **TIME: 09.00-12.00 PM**

INSTRUCTION TO CANDIDATES

- **The examination has SIX (6) questions**

- **Question ONE (1) is COMPULSORY**

- **Choose any other THREE (3) questions from the remaining FIVE (5) questions**

- **Use sketch diagrams to illustrate your answer whenever necessary**

- **Do not carry mobile phones or any other written materials in examination room**

- **Do not write on this paper**

This paper consists of TWO (2) printed pages   *please turn over*

QUESTION ONE (COMPULSORY)

(a) Define the following terms as used in remote sensing. **[8 marks]**

    i. Earth observation

    ii. White light

    iii. Satellite

    iv. Electromagnetic spectrum

(b) Trace the major historical developments of remote sensing. **[10 marks]**

(c) Outline any seven capabilities of a GIS. **[7 marks]**

QUESTION TWO

(a) Describe the four components of GIS. **[8 marks]**

(b) Explain why satellites are preferred more than cameras in remote sensing. **[7 marks]**

QUESTION THREE

(a) Discuss four types of interactions that occurs when energy strikes an object **[12 marks]**

(b) Differentiate between scanning and table digitizing . **[3 marks]**

QUESTION FOUR

(a) Using examples, describe any two types of scattering. **[6 marks]**

(b) Discuss any three causes of error during imagery detection in remote sensing. **[6 marks]**

(c) Differentiate between air point sampling and ground trothing. **[3 marks]**

QUESTION FIVE

Discuss any five the applications of GIS **[15 marks]**

QUESTION SIX

(a) Discuss any three types of resolutions used in remote sensing **[9 marks]**

(b) Differentiate between raster and vector data model **[6 marks]**