MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
THIRD YEAR FIRST SEMESTER

SCHOOL OF TOURISM AND NATURAL RESOURCE MANAGEMENT

BSC ENVIRONMENTAL MANAGEMENT

COURSE CODE: EEM 3123
COURSE TITLE: REMOTE SENSING AND IMAGE INTERPRETATION

DATE: 4TH DECEMBER 2018 **TIME: 1100 AM – 1.00AM**

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in section **A** and any other **THREE** in section **B.**

This paper consists of 2 printed pages. Please turn over

SECTION A (25 MARKS)

1. Most remote sensing systems can collect data in both a panchromatic and a multispectral mode. Explain briefly one advantage of each mode? **(4 marks)**
2. Discuss briefly using examples two reasons for the proliferation of aircraft as remote sensing platforms **(4 marks)**
3. (i) With examples, describe two basic types of optical multispectral or hyperspectral imaging sensors commonly used in airborne remote sensing **(8 marks)**
   (ii) Explain one major disadvantage of the whiskbroom scanner **(2 marks)**
4. How might a geologist use a hyperspectral sensor (specifically what type of study or application)? **(3 marks)**
5. Enumerate and describe briefly the different types of geologic structures. **(4 marks)**

SECTION B (45 MARKS)

6. (i) Describe four different film types used in aerial photography, and for each give its application **(10 marks)**
   (ii) Explain how a film as a sensor works in airborne remote sensing **(5 marks)**
7. (i) Discuss at least three advantages and two limitations of using airborne remote sensing systems **(10 marks)**
   (ii) Describe destructive forces and the landforms that they create? **(5 marks)**
8. Identify five agents of change in geomorphology and for each agent cite an example of how it acts to influence the landscape development and explain how the agent is involved **(15 marks)**
9. (ii) Explain three ways where the use of remote sensing as can be applied as a tool to in geological applications **(9 marks)**

(ii) Using a specific case study, discuss in detail the role of remote sensing in an area of your choice. Your description should include a statement of the problem, how the data would be collected and analysed, and how the results would be presented. **(6 marks)**

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