



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS  
2018/2019 ACADEMIC YEAR  
FOURTH YEAR FIRST SEMESTER**

**SCHOOL OF TOURISM AND NATURAL  
RESOURCE MANAGEMENT  
BACHELOR OF SCIENCE IN WILDLIFE  
MANAGEMENT**

**COURSE CODE: WLM 448  
COURSE TITLE: ENGINEERING FOR WILDLIFE  
MANAGEMENT**

**DATE: 10<sup>TH</sup> DECEMBER 2018**

**TIME: 1100-1300HRS**

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**INSTRUCTIONS TO CANDIDATES**

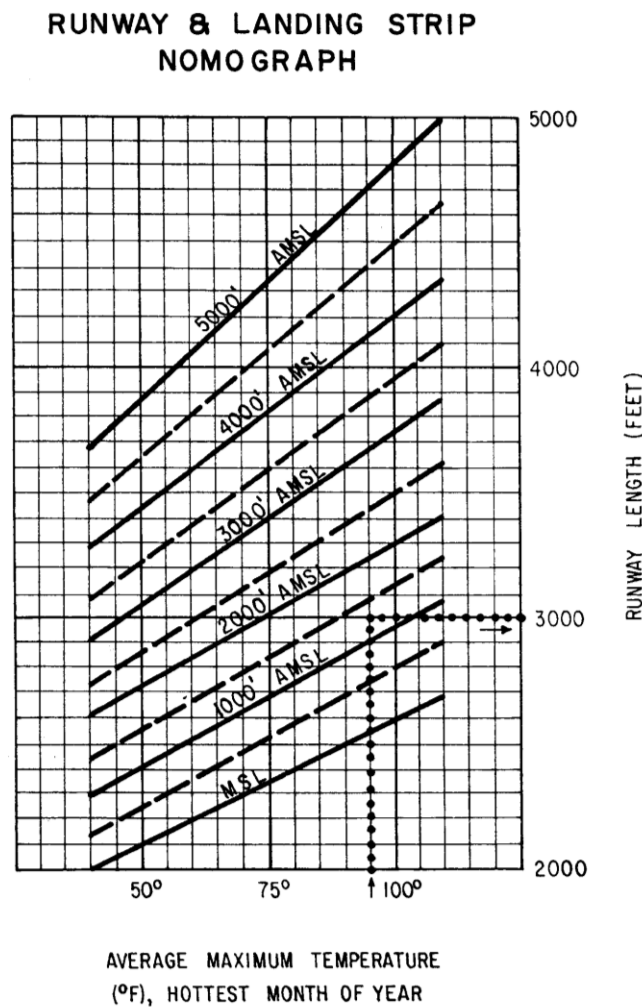
Answer **ALL** questions in section **A** and any other **THREE** in section **B**.

*This paper consists of 4 printed pages. Please turn over*

**(Answer all questions)**

1. a) State and describe any 2 types of machinery or equipment used in the management of conservations areas. **(2 marks)**  
b) Describe any 4 types of infrastructure found in conservation areas **(2 marks)**  
c) List any two roles of a perimeter road in relation to conservation areas. **(2 marks)**
  
2. a) Give two (2) reasons why protected areas should be fenced **(2 marks)**  
b) What are the main types of fencing used for securing protected areas? **(3 marks)**  
c) Describe the 3 types of wire fencing used to restrict wildlife movement **(3 marks)**
  
3. a) What is the role of a nature trail in conservation areas? (2 marks)  
b) Mention the main activities involved in constructing nature trails? **(3 marks)**
  
4. a) State any two types of infrastructural development in conservation areas that require EIA, their negative impacts and what mitigation measures required. **(4 marks)**
  
5. a) List the four (4) main campsite planning phases. **(4 marks)**
  
6. a) Why is site assessment necessary in establishment of a campsite? **(2 marks)**  
b) Describe a site capability map in relation to campsites. **(3 marks)**  
c) List any 3 physical and social elements to be examined on-site during site evaluation. **(3 marks)**
  
7. a) What is a site plan? **(4 marks)**  
b) Outline the basic principle procedures of Site construction. **(4 marks)**

8. Define 'Recreational Opportunity Spectrum (ROS)' and state the planning phase where it is considered in recreation site development? **(5 marks)**
9. Define a landing strip with regard to airstrips. **(3 marks)**
10. Use the figure below to estimate the minimum landing strip length in an area at elevation 2500 feet above sea level and average temperatures of 85 degrees fernheight. **(4 marks)**



11. What is the maximum allowable slope of structures or obstacles from the runway ends for safety of aircrafts? **(3 marks)**

12. List and describe the activities in landing strip preparations **(3 marks)**

13. a) Sketch and briefly describe basic components of a road **(4 marks)**

b) Describe importance of a road crown. **(2 marks)**

14. a) List any three main problems associated with road surfaces? **(4 marks)**

b) For any two **(2)** of the problems listed, give causes and possible remedial actions. **(2 marks)**

c) Describe the roles of ditches and culverts in ensuring durability of roads. **(2 marks)**

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**TOTAL 75 MARKS**