



MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

FOURTH YEAR FIRST SEMESTER

**SCHOOL OF NATURAL RESOURCE, TOURISM &
HOSPITALITY**

**BACHELOR OF SCIENCE IN WILDLIFE
RESOURCE MANAGEMENT**

COURSE CODE: WRM 4108-1

**COURSE TITLE: ENGINEERING FOR WILDLIFE
MANAGEMENT**

DATE:

TIME:

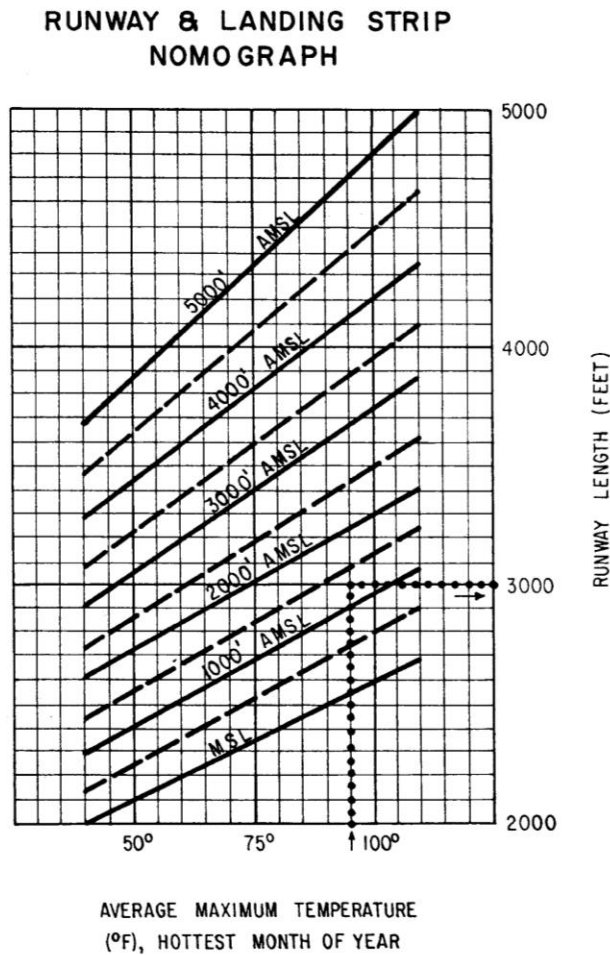
INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions

1. a) Describe any 4 types of infrastructure found in conservation areas (2 marks)
b) Mention any 2 types of machinery or equipment used in the management of conservation areas. (2 marks).
c) Briefly explain the roles of a perimeter road in relation to conservation areas? (2 marks)
2. a) Outline the role of a nature trail in conservation areas? (2 mark)
b) Mention the 3 main activities involved in constructing nature trails? (3 marks).
3. a) Give 2 reasons why protected areas should be fenced (2 marks)
b) Classify the 3 main types of fencing used for securing protected areas? (3 marks)
c) Describe 3 types of wire fencing used to restrict wildlife movement (3 marks)
4. Mention any two types of infrastructural development in conservation areas that require EIA, their negative impacts and what mitigation measures are required. (4) marks)
5. a) List the four (4) main campsite planning phases. (4 marks)
6. a) Why is site assessment necessary in campsite development? (2 marks)
b) What is a site capability map in relation to campsites. (4 marks)
7. a) Describe 'site design' and 'site plan' in relation to campsites? (4 marks).
b) Outline the basic principle procedures of Site construction. (4 marks)
c) Give any two considerations during the 'right of way clearing' (2 marks)
8. Define 'Recreational Opportunity Spectrum (ROS)' and state the planning phase where it is considered in recreation site development? (5 marks)

9. Relate 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 3000 feet above sea level and average temperatures of 90 degrees Fahrenheit (5 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 any 3 activities in landing strip preparations (3 marks)

1. a) Sketch and briefly describe the importance of basic components of a road (4marks)

b) Give two reasons for using coarse material in camp roads (1 mark)

13. a) List any 2 main problems associated with road surfaces? (2 marks)

b) For any 2 of the problems listed in 13(a), give causes and possible remedial actions. (4 marks)

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

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