

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FOURTH YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR
SCIENCE (WIEM AND NARE)

WIEM 415: ENGINEERING FOR WILDLIFE

STREAMS: WIEM Y4S1

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 5/12/2018

8.30 A.M - 10.30 A.M.

INSTRUCTIONS:

- Answer ALL Questions in Section A and any other TWO in Section B
- Do not write anything on the question paper

SECTION A: [30 MARKS]

1. Write short notes on the following with regard to soil engineering; [6 Marks]
 - (a) Soil compactability
 - (b) Soil cohesion
 - (c) Soil elasticity
2. Briefly explain the criteria to be used when constructing offices within Meru National Park. [5 Marks]
3. Briefly describe three types of bridges to be constructed within a protected area. [6 Marks]
4. Outline the recommended procedure to be followed in the event of a crash landing or aircraft accident within a protected area. [5 Marks]
5. Briefly explain the effects of tarmacked roads on wildlife in protected areas. [4 Marks]
6. Briefly describe four measures you would take to mitigate the impacts of infrastructure development in protected areas. [4 Marks]

SECTION B: [40 MARKS]

7. Discuss the importance of soil as an engineering material. [20 Marks]
8. Having been contracted to construct a road from Chuka to Nanyuki across Mount Kenya National Park, explain the factors you would consider when designing the road. [20 Marks]

WIEM 415

9. You have been appointed the Manager for Mount Kenya Animal Orphanage, discuss the factors you would consider when constructing the cages for the orphaned animals.

[20 Marks]

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