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KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR
FIRST YEAR SECOND SEMESTER
MAIN EXAMINATION

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIORESOURCES
MANAGEMENT AND CONSERVATION**


COURSE CODE: SBC 122
COURSE TITLE: PRINCIPLES OF RANGE AND FOREST ECOLOGY

DATE: MONDAY 6TH August 2018 **TIME:** 9:00 – 11:00 a.m.

INSTRUCTIONS TO CANDIDATES

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over 

KIBU observes ZERO tolerance to examination cheating

SECTION A (30 MARKS)

QUESTION ONE

- a) Define the following terms as used in range ecology
 - i. Carrying capacity (2marks)
 - ii. Limiting factor (2marks)
 - iii. Diversity (2marks)
 - iv. Succession (2marks)
 - v. Range land (2marks)
- b) State any **five** mortality factors that will occur when carrying capacity of the habitat is approached, reached or exceeded (5marks)
- c) Explain how timber stand can be improved (5marks)
- d) Outline any **three** characteristics of a forest ecosystem (5marks)
- e) Outline the causes of Habitat Destruction (5marks)

SECTION B: (40MARKS) ANSWER ANY TWO QUESTIONS

QUESTION TWO

- a) Describe different grazing management systems (12marks)
- b) Outline any four reasons for fencing ranges (8marks)

QUESTION THREE

Hardin's "tragedy of commons" paradigm (Hardin 1968) has been extremely influential both in analysis and communal rangelands in Africa and the design of programs and projects attempting to improve levels of livestock production of the range

- a) What is the tragedy of the commons (6marks)
- b) Differentiate between common property and open access common property regimes (14marks)

QUESTION FOUR

Discuss the four natural laws or principles of operation that apply on range land management

(20marks)

QUESTION FIVE

Discuss the value of biodiversity to humans

(20marks)