



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF SCIENCE AND
TECHNOLOGY
(MMUST)**

MAIN CAMPUS AND KISUMU CAMPUS

**UNIVERSITY SUPPLEMENTARY/SPECIAL EXAMINATIONS
2018/2019 ACADEMIC YEAR**

FIRST YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN DISASTER MITIGATION AND
SUSTAINABLE DEVELOPMENT (DMSD)**

COURSE CODE: DSM 105

COURSE TITLE: BIODIVERSITY AND ECOLOGY

DATE: 26/9/2019

TIME: 12 - 2PM

INSTRUCTIONS TO CANDIDATES

- i) This Paper contains FIVE Questions.
- ii) Answer Question ONE and any other two Questions.

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over. ►

QUESTION ONE

a). Explain the following terms as used in ecology:

vii) Community [1 Marks]

viii) Biosphere [1 Marks]

ix) Species diversity [2 Marks]

x) Endemic species [2 Marks]

xi) Ozone layer [2 Marks]

xii) Biodiversity [2 Marks]

b). Describe the key characteristics of an ecologically stable community [5 Marks]

c). Differentiate among the following terms: "critically endangered", "endangered" and "vulnerable" species? [5 Marks]

d). Discuss how human interventions in Africa have exacerbated species extinction. [10 Marks]

QUESTION TWO

i). Explain the term climate change. [3 Marks]

ii). Outline how carbon dioxide contributes to climate change? [4 Marks]

iii). Explain the term carbon tax. [3 marks]

iv). Examine the arguments currently being advanced for the carbon tax [5 marks]

v). Discuss the problems associated with a carbon tax. [5 marks]

QUESTION THREE

i). Explain the term Ecosystem services [3 Marks]

ii). With examples, state the four broad categories of Ecosystem services. [7 Marks]

iii). State five types of Environmental ecosystems. [3 marks]

iv). Briefly discuss the pros and cons of Payment for Ecosystem Services (PES). [7 marks]

QUESTION FOUR

i). Explain the term "REDD". [2 Marks]

ii). Differentiate among the terms REDD+ and REDD+ readiness? [4 Marks]

iii). Evaluate how much carbon is emitted by deforestation and forest degradation to the atmosphere. [2 Marks]

iv). Discuss the strategies that can be used to identify and deal with the drivers of deforestation in Africa? [6 Marks]

v). Examine the role of forests in the developing world. [6 Marks]