

UNIVERSITY EXAMINATIONS

1ST SEMESTER 2022/2023 ACADEMIC YEAR

**FIRST YEAR EXAMINATION FOR THE DEGREES OF
BACHELOR OF SCIENCE (AGED), BACHELOR OF
SCIENCE (BIOMED), BACHELOR OF AGRIBUSINESS
MANAGEMENT**

ENSC 111: INTRODUCTION TO ENVIROMENTAL SCIENCE

STREAM: R

TIME: 2 HRS

DAY: WED [8.30AM – 10.30AM]

DATE: 07/12/2022

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO.

INSTRUCTIONS: - Answer **QUESTION ONE** and any other **TWO** questions

QUESTION ONE

- (a) Define the following concepts as used in Environmental Science
- i. Anthropocentrism (2 marks)
 - ii. Secondary succession (2 marks)
- (b) Write short notes on each of the following:
- i. The Hetch Hetchy Debate (3 marks)
 - ii. Modern Environmentalism (2 marks)
 - iii. Bio magnification (2 marks)
- (c) Briefly give three justifications why there is a need for biodiversity conservation in Kenya (3 marks)
- (d) Identify **THREE** characteristics of temperate (mid-latitude) deciduous forests (3 marks)
- (d) Discuss how the phenomena of greenhouse effect occurs. (3 marks)
- (e) Identify and explain the **FOUR** factors that have contributed to demographic transition (4 marks)
- (f) Identify and explain **THREE** human impacts on the nitrogen cycle (3 marks)
- (g) On average, a patch of savanna grassland covering an area of 1 km² is estimated to contain 1,800 kg of biomass. Calculate the gross primary production of this grassland patch. Give your answer in g m⁻². (3 marks)

QUESTION TWO

- (a) Identify **FIVE** major causes of rural-urban migration. (5 marks)
- (b) Suggest measures to 'a' above to mitigate against rural – urban migration. (5 marks)
- (c) Identify and explain **FIVE** ways that can be used to control the effects of ozone layer depletion. (10 marks)

QUESTION THREE

- (a) Identify and discuss **SIX** main categories of hazards. (12 marks)
- (b) Explain **FOUR** practical strategies for solving wood fuel crisis in Kenya. (8 marks)

QUESTION FOUR

- a) Identify and explain **FIVE** major ozone depleting substances (10 marks)
- b) Examine **FIVE** concerns in relation to sustainable development (10 marks)

QUESTION FIVE

a) Explain **FIVE** characteristic of a grazing food chain (10 marks)

b) Briefly explain **FIVE** ways to manage hazards at the workplace (10 marks)

