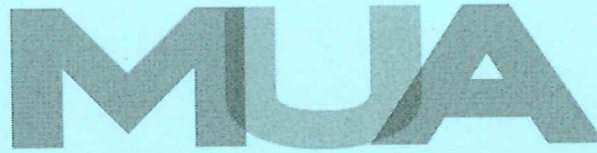


The
Management
University
of Africa



Sponsored by the Kenya Institute of Management

UNDERGRADUATE UNIVERSITY EXAMINATIONS
SCHOOL OF MANAGEMENT AND LEADERSHIP
DEGREE OF BACHELOR OF ARTS IN DEVELOPMENT STUDIES/
BACHELOR OF COMMERCE

**BDS 211/UCU 108 : ENVIRONMENTAL SCIENCE /ENVIRONMENT AND
DEVELOPMENT/**

DATE: 10TH DECEMBER 2024

DURATION: 2 HOURS

MAXIMUM MARKS: 70

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **THREE** questions.
6. Question **ONE** carries **25 MARKS** and the rest carry **15 MARKS** each.
7. **Write all your answers in the Examination answer booklet provided.**

QUESTION ONE

Read the Case Study below carefully and, answer the questions that follow:

WE ARE GOING TO EAT SOIL AS PERMANENT CLIMATE CHANGE TAKE TOLL

Some of the current issues related to environment are global warming and depletion of natural resources. Global warming refers to the permanent climate change the earth owing to industrial pollution, degradation of the environment, greenhouse gas emission, depletion of the ozone layer which means a decline in the total amount of ozone on earth's stratosphere. Scientists have proven that the temperature of the earth is increasing and if necessary precautions are not being taken, the situation will be worse which will cause further negative impact on the environment and human health.

Depletion of natural resources is another major concern. With the overpopulation, the consumption of earth's natural resources is taking place at a faster rate even before they could be replenished. Global warming leads to the low rate of production of agricultural products and with depletion of natural resources adding to it, very soon the mass population of earth will face not only a shortage of food but also shortage of resources to carry out any development process. In order to overcome the shortage, chemicals are used to increase the production of agricultural products. This not only decreases the value of soil, but also affects human health in a negative way. If the process continues, the inhabitants of the earth are going to face serious issues. In all these years, plenty of damages have been caused to earth's environment and its resources. If necessary activities and measures are taken to protect the environment, there is hope that much worse condition could be postponed if not totally avoided.

In order to reduce global warming, protection of forests and wetlands are important. Trees should not be cut until and unless they are absolutely necessary. In such cases, it is required to plant as many trees wherever possible. A single step taken by a huge part of the population can play a major role in protecting the environment. It is also important to conserve natural resources, biodiversity, and wildlife. Apart from that, every inhabitant of the earth should play their part in preventing ozone layer from

depletion. The main ozone-depleting substances are widely used in refrigerators, air conditioners and fire extinguishers. Many refrigerators and air conditioners use Hydro chlorofluorocarbon (HCFC) and Chlorofluorocarbon (CFC) as a refrigerant. These are important elements in causing depletion to the earth's ozone layer.

It is hence important to not use products that use HCFC and CFC as refrigerants. It is also advisable to avoid using aerosol products that use HCFCs and CFCs as propellants. Apart from all these above-mentioned measures, precaution should be taken to emit less carbon to the environment.

<https://www.indiacelebrating.com/>

Required:

- a) From the case study discuss any five causes of climate change (5 Marks)
- b) Based on the above critical evidence of possible destruction of the earth's ozone layer, state and explain the five basic principles for sustainable development that will help reverse the damages (10 Marks)
- c) Biodiversity and ecosystems are already more stressed than at any comparable period of human history, discuss (5 Marks)
- d) There is increasing evidence of population declines and localized extinctions that can be directly attributed to climate change. Discuss with five points (5Marks)

QUESTION TWO

- a) Ecosystem is a community of different species interacting with one another , what are the five principles that enable ecosystems be self-sufficient (5 Marks)
- b) The environment is our life support system. It includes everything that we rely on during our lifetime such as air, water, metals, soil, rock and other living organisms. It is important to remember that the state of our environment is influenced by our behaviour. Explain five (5) Environmental issues of global concern attributed to human (5 Marks)
- c) Explain five reasons why we should conserve our forests ecosystem (5 Marks)

QUESTION THREE

- a) Citing relevant examples, discuss five community based natural resource management concept of investing in environmental improvement (5 Marks)
- b) The Critical Triangle of Development enables visualization of sustainable development with three Es and currently added Culture. Briefly illustrate how culture interaction with the others (5 Marks)
- c) Rural-urban migration has caused poor building and construction planning to meet demand for housing. Discuss (5) challenges in relation to environment and Development as a unit of study (5 Marks)

QUESTION FOUR

- a) Describe key links between the environment and each Millennium Development Goals (8 Marks)
- b) Environmental change has resulted due to various types of Pollution in the world, explain one key pollutant for each you identify (7 Marks)

QUESTION FIVE

- a) Sub-Sahara Africa is facing numerous Challenges to Sustainable Development address. Discuss any five (5 Marks)
- b) Analyse five factors that lead to degradation of forests (5 Marks)
- c) Discuss five reasons why we need carbon market to address climate change effects (5 Marks)

QUESTION SIX

- a) Discuss any five sources of each Greenhouse gases (5 Marks)
- b) Demonstrate how Population Dynamics matters for Sustainable Development with five examples (5 Marks)
- c) Explain five innovative ways of water harvesting for sustainable Agriculture (5 Marks)