



*(University of Choice)*

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

SCHOOL OF NURSING MIDWIFERY AND PARAMEDICAL SCIENCES

**UNIVERSITY EXAMINATIONS  
2021 / 2022 ACADEMIC YEAR**

**SUPPLEMENTARY / SPECIALS**

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN GLOBAL  
HEALTH AND EMBRORIATICS**

**COURSE CODE: NCG 315  
COURSE TITLE: CLIMATE CHANGE**

**DATE: TUESDAY 04/10/2022**

**TIME: 8AM-11AM**

---

INSTRUCTIONS TO CANDIDATES

All questions are compulsory

**DURATION: 3 Hours**

MMUST observes ZERO tolerance to examination cheating

This paper consists of 4 (four) printed pages. Please turn over.

**SECTION A: Multiple choice questions; 20 Marks**

*Choose the most appropriate answer*

1. The solar radiation that bounces off the Earth back toward the atmosphere is mostly \_\_\_\_\_.
  - (a) gamma radiation
  - (b) x-ray radiation
  - (c) nuclear radiation
  - (d) infrared radiation
2. Things you can do to help decrease global warming include:
  - (a) Keep your air conditioner on high.
  - (b) Turn off your lights when you're not using them.
  - (c) Keep your freezer door open.
  - (d) Eat more ice cream
3. Earth's temperatures are stable because we are surrounded by \_\_\_\_\_ which allows the right amount of sunlight in to warm the Earth.
  - (a) a cloud layer
  - (b) an atmosphere
  - (c) biosphere
  - (d) Cryosphere
4. How are humans making greenhouse gases of their own?
  - (a) burning fossil fuels in our cars
  - (b) burning forests
  - (c) with large-scale agriculture
  - (d) all of these
5. Global warming affects human health by;
  - (a) Increasing illnesses directly
  - (b) Increasing illnesses indirectly
  - (c) Cause illness
  - (d) All of the above
6. Human activities that causes climate change on Earth surface includes
  - (a) burning of forests
  - (b) agricultural activities
  - (c) use of aerosol cans
  - (d) all of above
7. Considering climate change, increased global temperatures causes the
  - (a) desertification
  - (b) destruction of human settlements
  - (c) destruction of infrastructure
  - (d) endangering of species
8. The greenhouse effect is caused by;
  - (a) Greenhouse gases in the lower atmosphere absorbing solar radiation
  - (b) Greenhouse gases in the lower atmosphere absorbing radiation from the Earth's surface, and preventing much of it escaping into space
  - (c) Too much heat in the atmosphere
  - (d) Too much sunshine reaching Earth

9. Which of these natural events affect the climate significantly in case it occurs?
- (a) Thawing permafrost
  - (b) The path of the Earth around the sun
  - (c) Volcanic eruptions
  - (d) Earthquakes
10. Which of these greenhouse gases is most abundant in the atmosphere?
- (a) Water vapour
  - (b) Methane
  - (c) Nitrous oxide
  - (d) Carbon dioxide
11. Which one of the following is not a major greenhouse gas
- (a) Nitrogen dioxide
  - (b) Water vapour
  - (c) Carbon dioxide
  - (d) Methane
12. Arrange the greenhouse gases below from the most to the lowest significant global warming contributor
- (a) CO<sub>2</sub> , CH<sub>4</sub> , H<sub>2</sub>O vapour, NO<sub>2</sub>
  - (b) CH<sub>4</sub>, NO<sub>2</sub>, CO<sub>2</sub> , H<sub>2</sub>O vapour,
  - (c) CO<sub>2</sub> , NO<sub>2</sub>, CH<sub>4</sub> , H<sub>2</sub>O vapour,
  - (d) H<sub>2</sub>O vapour, CO<sub>2</sub> , CH<sub>4</sub> , NO<sub>2</sub>
13. What greenhouse gas was not present in the atmosphere in pre-industrial times (before 1750)?
- (a) Carbon dioxide
  - (b) Nitrous oxide
  - (c) Trichlorofluoromethane
  - (d) Methane
14. Which of the following activities contributes the most to carbon emissions globally?
- (a) Agriculture
  - (b) Energy supply
  - (c) Forestry
  - (d) Transport
15. The solar energy that warms the Earth includes visible light, infrared and \_\_\_\_\_ coming from the sun.
- (a) gamma rays
  - (b) ultraviolet radiation
  - (c) microwaves
  - (d) sunspots
16. Which one of the following does not increase carbon emissions responsible for global warming significantly,
- (a) Solar cells
  - (b) Wind mills

- (c) Gasoline
- (d) Nuclear plants

17. The status of atmosphere over an area at any point of time is known as
- (a) Weather
  - (b) Climate
  - (c) Heat
  - (d) Cold

True / false statements

18. Global warming is primarily as result of human activities.
- (a) True
  - (b) False
19. Global warming and climate change are synonymous
- (a) True
  - (b) False
20. Global temperature has risen by 1 degree Fahrenheit (0.5 degree C) over the last 100 years.
- (a) True
  - (b) False

**Section B: Short Answer Questions (SAQs); 40 Marks**

1. Explain the effects of climate on coastal low lands ( 8 Marks)
2. Describe any **four (4)** health conditions/ that come as result of climate change ( 8 Marks)
3. By use of an illustration describe the greenhouse effect ( 8 Marks)
4. Describe your role as a global health specialist in mitigating the issues of climate change (8 Marks)
5.
  - (a) What is ozone depletion (2 Marks)
  - (b) What is responsible for ozone depletion? (4 marks)
  - (c) What are the health effects ozone layer depletion? (2 Marks)

**Section C: Long Essay Questions (LEQs); 40 Marks**

1.
  - (a) Describe at least some 6 evidences, that shows that climate change is real in the world today ( 12 Marks)
  - (b) Other than major volcanic activity, explain other four (4) natural causes of climate change (8 marks)
2. Discuss the objectives and guiding principles of climate change policies in Kenya (20 marks)

END