



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF HUMANITIES AND SOCIAL SCIENCE**

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF  
EDUCATION (ARTS) WITH IT**

**2<sup>ND</sup> YEAR 1<sup>ST</sup> SEMESTER 2016/2017 ACADEMIC YEAR**

**MAIN CAMPUS (REGULAR)**

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**COURSE CODE: NGE 202**

**COURSE TITLE: CLIMATOLOGY**

**EXAM VENUE:**

**STREAM (Bed Arts)**

**DATE:**

**EXAM SESSION:**

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**TIME: 2 HOURS**

### **Instructions to students**

1. Answer question **ONE**(Compulsory) and any other **TWO** questions
2. Candidates are advised not to write on the question paper.
3. Candidates must hand in their answer booklets to the invigilator while in the examination room.

1. a) Discuss FIVE evidences which show that the Earth is getting warmer (10 marks)  
b) Using suitable diagrams, explain three types of rainfall (10marks)  
c) “Urban areas experience different climates from surrounding rural areas”. Discuss (10 marks)
  
2. a) Explain factors that influence horizontal distribution of temperature over the Earth’s surface (10 marks)  
b) Using a vertical profile of the atmosphere showing changes in different layers, describe the characteristics of the layers (10 marks)
  
3. a) Identify two source regions of global air masses and discuss the characteristics of the air masses that originate from the two source regions you have identified (10 marks)  
b) (i) Explain the causes of atmospheric pressure (4 marks)  
(ii) Using annotated diagrams, explain the difference between geostrophic and gradient winds (6 marks)
  
4. Outline ways by which energy is produced and redistributed over the Earth (20 marks)
  
5. Critically examine this statement: “Modernity is the cause of global warming” (20 marks)