



**National Open University of Nigeria**  
**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**  
**Faculty of Science**  
**2021\_2 EXAMINATIONS**

**COURSE CODE: ESM 343**

**COURSE TITLE: Climate Change and Environment.**

**CREDIT: 2 Units**

**TIME ALLOWED: 2 Hours**

**Instruction:** Attempt question number ONE (1) and any other THREE (3) questions. Question number one (1) carries 25 marks, while the other questions carry (15) marks each.

1. (a) Describe 3 processes that modify solar radiation (9marks)  
(b) Describe the uses of solar energy (6marks)  
(c) Describe 3 methods by which air is heated (9marks)  
(d) Define Humidity (1mark)
  
2. (a) In what way do urban climate differs from rural climate (8marks)  
(b) Describe important relationships between temperature, pressure, density and volume (5marks)  
(c) Define the term greenhouse effects (2marks)
  
3. (a) Identify 8 types of green house gases you know (8marks)  
(b) Discuss primary productivity of a community (5marks)  
(c) Define Biological Productivity (2marks)
  
4. (a) Define succession (3marks)  
(b) Identify 7 common mechanisms of disturbance in succession (7marks)  
(c) Discuss the concept of Climax Community (5marks)
  
5. (a) Discuss 5 types of succession (10marks)  
(b) Define the term Ocean Current (3marks)  
(c) Identify 2 causes of Ocean Current (2marks)