



National Open University of Nigeria
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Science
2025_2 EXAMINATIONS

COURSE CODE: ESM 345

COURSE TITLE: Applied Climatology.

CREDIT: 2 Units

TIME ALLOWED: 2 Hours

Instruction: Attempt question number ONE (1) and any other TWO (2) questions. Question number one (1) is compulsory and carries 30 marks, while the other questions carry equal marks (20) each.

- 1a. What is climate conditioning? **(5marks)**
- 1b. With relevant examples discuss the potential impacts of climate change on human settlements **(10marks)**
- 1c. Briefly highlight the 4 weather variables (or combination of variables) that are considered important during the construction phase of a building. **(4marks)**
- 1d. Identify any 5 programs or strategies that can be adopted to minimize the emission of carbon from human settlements. **(5marks)**
- 1e. List 6 weather control/modification activities employed by man. **(6marks)**
- 2a. Identify 2 positive effects of wind in the growth and yield of crops. **(4marks)**
- 2b. Briefly enumerate 4 major ways by which wind may constitute a hazard to agriculture. **(8marks)**
- 2c. Discuss any 4 ways in which the knowledge of climate can be useful in agricultural planning and development. **(8marks)**
- 3a. Briefly describe the causes of acid rain. **(5marks)**
- 3b. Briefly explain the concept of weather modification **(6marks)**
- 3c. Enumerate the 3 major reasons why humans attempt to modify weather **(9marks)**
- 4a. Briefly describe the terms climatic vulnerability and climatic resilience. **(4marks)**
- 4b):
- i: Highlight the 5 factors that determines a society's vulnerability to climatic impacts. **(5marks)**

ii: Highlight the 3 factors that determines a society's resilience to the impacts of climate

(6marks)

4c. Briefly describe the 5 major types of floods.

(5marks)

5a. Briefly describe the environmental problems associated with the drought phenomenon

(4marks)

5b. Discuss the impacts of any four weather conditions on flight operations and safety in the aviation industry.

(16marks)