



**National Open University of Nigeria**  
**Plot 91, Cadastral Zone, NnamdiAzikiwe Expressway, Jabi - Abuja**  
**Faculty of Science**  
**2020\_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 THREE (3) questions. Question number one (1) carries 25 marks, while the other questions carry (15) marks each.

1. a. Explain Climate-Crop Relations (5 marks)  
b. Explain linear programming and benefit-cost analysis in assessing economic impacts of weather and climate (10 marks)  
c. Briefly explain the influence of climate on the mining industry (5 marks)  
d. Discuss motivations for weather modification by man (5 marks)
2. a. With relevant examples, explain why most crops cannot be grown successfully unless the temperature exceeds some critical values. (4 marks)  
b. Critically examine the role of wind in agriculture (6 marks)  
c. With relevant examples, explain any two hazards on agriculture (5 marks)
3. a. Describe the various ways high winds can serve as hazard to agriculture (5 marks)  
b. Explain how weather influences crop pests and diseases (7 marks)  
c. Discuss simulation analysis as it relates to assessment of economic impacts of weather and climate. (3 marks)
4. a. Climate knowledge is useful in Agricultural planning and development. Discuss (6 marks)  
b. What are the areas of consideration of climatic costs in industrial production? (3 marks)  
c. Explain the direct and indirect ways climate affects animal husbandry (6 marks)
5. a. What are the relevance of climate in commercial activities (service industry)? (6 marks)  
b. What are the implications of ground de-icing on aircraft? (5 marks)  
c. Discuss the relationship between climate and construction industry (4 marks)