



NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF SCIENCES
DEPARTMENT OF ENVIRONMENTAL SCIENCE AND RESOURCE MANAGEMENT
Plot 91, Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja
2024 1 EXAMINATION

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) carries 30 marks, while the other questions carry (20) marks each.

Question 1 (Compulsory)

- 1(a) What factors are considered in the location of an airport? (2 marks)
- (b) Define soil conservation (3 marks)
- (c) State the environmental impact of drought (2 marks)
- (d) i Name the types of flood (3 marks)
ii Define the term flood (3 marks)
iii Enumerate the importance of solar radiation (3 marks)
- (e) i Explain briefly the concept of photoperiodism (4 marks)
ii What are the effects of frost on agricultural production? (3 marks)
- (f) Explain briefly the term volcanic ash (7 marks)

Total Mark Question 1=30 marks

Question 2

- (a) Itemize the major effects of flooding to the environment (3 marks)
- (b) What is water conservation? (4 marks)
- (c) Enumerate the effects of drought on the environment (5 marks)
- (d) Itemize the causes of flooding (3 marks)

(e) How can flooding be prevented in the environment? (5 marks)

Total Mark Question 2= 20 marks

Question 3

(a) Enumerate the effects of in-flight icing (3 marks)

(b) How does weather affect the aviation industry? (4 marks)

(c) Describe the benefit-cost analysis (5 marks)

(d) Define econo-climate (3 marks)

(e) What are thunderstorms? (5 marks)

Total Mark Question 3= 20 marks

Question 4

(a) What are the challenges faced by aircrafts as a result of turbulence? (3 marks)

(b) Explain how industrial production is dependent on climatic cost (4marks)

(c) Enumerate the pH of various types of water (5 marks)

(d) How does climate affect livestock production? (3 marks)

(e) Explain briefly the term wind (5 marks)

Total Mark Question 4= 20 marks

Question 5

(a) Define the term weather modification (3 marks)

(b) State the predictions for economic analysis of weather (4 marks)

(c) What are the reasons for weather modification? (5 marks)

(d) How can evaporation be minimized? (3 marks)

(e) State the problems of weather modification (5 marks)

Total Mark Question 5=20 marks