



National Open University of Nigeria
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Science
OCTOBER 2019_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) each marks.

- 1a) Mention the three broad classes under which the impact drought in Southern Africa may be classified **(3marks)**
1b) State the scope entailed in Econoclimatic models **(4marks)**
1c) List 7 general features of acid rain **(7marks)**
1d) Give 3 reasons for weather modification according to Ayoade, 2004 **(6marks)**
1e) Highlight the manmade factors that cause floods **(5marks)**

- 2a) Describe flooding as a concept **(2marks)**
2b) Name the principal types of flood **(6marks)**
2c) Discuss the typical effects of flood under the following **(7marks)**
 i) Primary effects
 ii) Secondary effects
 iii) Tertiary/long-term effects

3a) What is Drought? **(2marks)**

3b) Complete the table on the geographical distribution of major drought **(8marks)**

Year	Place	Cause	Destruction
1931 - 1938	(1mark)	(1mark)	Cars, homes and farms destroyed in dust storms
(1mark)	Australia	No rain for more than one year	(1mark)
1972 - 1974	(1mark)	(1mark)	The countries financial business went down
(1mark)	Britain	It did not rain from June 1975 to September 1976. Droughts are very rare in England	(1mark)

3c) List 5 drought mitigation measures **(5marks)**

4a) What is Econoclimte? **(3marks)**

4b) State notions on which the idea of economic analysis of weather is predicated **(4marks)**

4c) Describe four basic categories or types of drought we have **(8marks)**

5a) What is Acid rain? **(3marks)**

5b) Under other econo-climatic models discuss the following techniques of assessment. **(12marks)**

- (i) Input-output analysis;
- (ii) Simulation analysis;
- (iii) Linear programming; and,
- (iv) Benefit-cost analysis.