



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91, Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja
FACULTY OF SCIENCES
DEPARTMENT OF ENVIRONMENTAL SCIENCE AND RESOURCE MANAGEMENT
2025_2 EXAMINATIONS.

COURSE CODE: ESM426

COURSE TITLE: Biogeography

CREDIT: 2Units

TIME ALLOWED: 2 Hours

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

- 1a) Describe primary biological production in an ecosystem **(9marks)**
1b) Explain the detritus food chain **(6marks)**
1c) Write explanatory notes on the following ecological concepts. **(15marks)**
i)Parasiticism Antibiosis
Commensalism Prediation
Mutualism
- (2a) Discuss the ecological characteristics of biological desert **(10 marks)**
2b) State and explain the sources of energy in the functioning of an ecosystem. **(8marks)**
2c) Using appropriate equation explain the process of photosynthesis in green plants**(2marks)**
- 3a) Discuss the following terms **(9 marks)**
i)Commensalism ii)Proto-cooperation iii)Mutualism or Obligate Symbiosis
3b) Explain the importance of the following in ecosystem functioning.
i) Decomposers (7marks) ii)Solar energy (4marks)
- 4a) Explain the term ecosystem equilibrium **(10 marks)**
4b) With appropriate illustration describe the grazing food chain **(10marks)**
- 5a) Using adequate example describe a resilient ecosystem **(8 marks)**
5b) State factors that promote resilience in an ecosystem **(12 marks)**