



NATIONAL OPEN UNIVERSITY OF NIGERIA

FACULTY OF SCIENCES

DEPARTMENT OF ENVIRONMENTAL SCIENCE AND RESOURCE MANAGEMENT

Plot 91, Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja

2025_2 EXAMINATIONS

COURSE CODE: ESM326

COURSE TITLE: OCEANOGRAPHY

CREDIT: 2 Units

TIME ALLOWED: 2:30 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.

- 1a. In a tabular form, differentiate between waves and tides. (10 marks)
 - b. Explain the relationship between water temperature and sun energy. (5 marks)
 - c. Describe the process of iceberg formation. (5 marks)
 - d. Describe the Pycnocline (5 marks).
-
- 2a. Enumerate five uses of maps and plans. (10 marks)
 - b. Discuss the origin of oceanography. (5 marks)
-
- 3a. Differentiate between mariculture and aquaculture. (5 marks)
 - b. Describe desalinization and its various categories. (5 marks)
 - c. Describe spring tides. (5 marks)
-
- 4a. Describe in detail warm ocean currents. (7 marks)
 - b. List three categories of species diversity measures. (3 marks)
 - c. Explain diversity index. (5 marks)
-
- 5a. Explain factors that influence ocean tides. (5 marks)
 - b. Explain how neap tides are formed. (5 marks)
 - c. Differentiate between semi diurnal tides and mixed semi diurnal tides. (5 marks)