



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
Plot 91 Cadastral Zone, Nnamdi Azikwe Express Way, Jabi, Abuja.  
**FACULTY OF EDUCATION**  
**2020\_1 Semester**

**COURSE CODE: SED421**

**COURSE TITLE: CYCLES IN NATURE- BIOLOGICAL CYCLES**

**CREDIT UNIT: 2**

**TIME ALLOWED: 2 HOURS**

**INSTRUCTION: Answer Question One and any Other Two**

1. (a) Briefly explain the process of denitrification. **10 marks**  
(b) Describe the water cycle. **15 marks**  
(c) Identify 5 processes in the movement and phase changes in water. **5 marks**  
**(Total=30marks)**
  
2. (a) i. What is atmospheric Photochemistry? **5 marks**  
ii. Mention 5 problems atmospheric chemistry seeks to address. **5 marks**  
(b) Briefly explain any 2 central elements of atmospheric chemistry. **10 marks**
  
3. (a) Define the term Biorhythms. **2 marks**  
(b) Explain Physical, Emotional and Intellectual Biorhythms cycles. **18 marks**
  
4. (a) Identify any five (5) features of progressive ocean waves. **5 marks**  
(b) Briefly explain any five (5) stages of the Hydrological Cycle. **15 marks**