



**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**  
**SCHOOL OF LIFE SCIENCES**  
**DEPARTMENT OF MICROBIOLOGY**

**FIRST SEMESTER EXAMINATION 2014/2015 SESSION**

**COURSE CODE: MCB313**

**COURSE TITLE: MICROBIAL ECOLOGY**

**CLASS: 300 LEVEL**

**TIME ALLOWED: 2hr**

**INSTRUCTION:** Answer any four questions

- 1(a). What is Ecosystem?
- 1(b). List and explain the types of ecosystem.
- 1(c). Explain how ecosystem function can be controlled.
2. Write short notes on any four of the following:
  - i. Thermophiles
  - ii. Psychrophiles
  - iii. Acidophiles
  - iv. Piezophiles
  - v. Halophiles
  - vi. Alkaliphiles
3. Using relevant illustrations discuss nitrogen cycle under the following headings:
  - i. Mineralization
  - ii. Nitrification
  - iii. Denitrification;Highlight the factors that affect each process
- 4(a). Microorganisms rarely occur alone in the soil environment. Discuss with relevant examples.
- 4(b). Write short note on amensalism with relevant example.
- 5(a). Why and how do microorganisms attack petroleum pollutants in the environment?
- 5(b). Define pollution.
- 6(a). Mention four factors that can greatly influence the long lasting nature of pesticides in the soil.
- 6(b). Discuss the key factors which bring about recalcitrance of a chemical pollutant in the environment (Examples and chemical structures of such compounds are important).