

**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**

 **Faculty of Sciences**

**Department of Pure and Applied Science**

**COURSE CODE: BIO304 (2 CREDIT UNITS) TIME ALLOWED: 2HOURS**

**COURSE TITLE: GENERAL ECOLOGY**

**INSTRUCTION: Answer question ONE (1) and any other THREE (3) Questions**

**1**a What is the significance of primary productivity? (**3 marks)**

1b Identify the principal steps in the operation of an ecosystem (**5 marks)**

1c Outline any three safety measures for the maintenance of nuclear power plants

 **(3 marks)**

1d Identify the functional components of a named ecosystem, and describe how they interact to form environmental system. **(14 Marks)**

**2**a List and describe any three ways for the presentation of demographic data **(9 Marks)**

2b Outline any three human activities that can improve the quality of the ecosystem from conservation point of view **(6 Marks)**

**3**a Outline any six causes of industrial pollution **(6 marks)**

3b Briefly, explain each of the following components of the ecosystem

i Producers (Autotrophic components), **(3marks)**

ii Consumers **(3marks)**

iii Decomposers or reducers and transformers **(3marks)**

**4** Write short notes on any **five** of the following:

i Primary Succession **(3 marks)** ii Secondary Succession **(3 marks)**

iii Climax vegetation **(3 marks)** iv Net primary Productivity **(3 marks)**

v Efficiency of energy transfer **(3 marks)** vi Pyramid of Energy **(3 marks)**

**5**a Define the different types of population regulation factors, giving clear examples in each case. **(5marks)**

5b Describe the major steps required to address environmental problems of concern **(5 marks)**

5c List the major steps required to address environmental problems of concern **(5 Marks)**