

**BOWEN UNIVERSITY, IWO**  
**DEPARTMENT OF BIOLOGICAL SCIENCES**

**2010/2011 FIRST SEMESTER EXAMINATION**  
**BLY 121: INTRODUCTORY ECOLOGY**

Answer questions **ONE** and any two others. Answers should be well-illustrated where appropriate.  
Time: 2hrs 20 mins

1. (a) Give a concise definition of the following ecological terms:
- |                 |                 |
|-----------------|-----------------|
| (i) Habitat     | (ii) Population |
| (iii) Ecosystem | (iv) Flora      |

- (b) The following data were obtained from studies in an ecosystem of 5km<sup>2</sup> in area

Organism	Population size (2005)	Population size (2006)	Population size (2007)
Goat	250	200	270
Maize	1000	1500	2500
Man	50	-	75

Use the data above to:

- (i) Calculate the population growth of goat from 2006 to 2007  
(ii) If the population growth of man from 2005 to 2006 was 10, what was the population size in 2006?  
(iii) If the land area of the ecosystem is 5km<sup>2</sup>, calculate the population density of maize in 2007.

- (c) Briefly explain the following terms:

- (i) Pollutant  
(ii) Acid precipitation  
(iii) Eutrophication  
(iv) Bioremediation  
(v) Deforestation

(30 Marks)

2. Briefly comment on how the following factors may affect the distribution of living organisms:

- (a) Temperature  
(b) Moisture  
(c) Parasitism  
(d) Competition

(20 Marks)

3. A community comprises of: antelope, butterfly, cassava, grasshoppers, mango, lizard, eagle, snake and man

- (a) Construct the food web of the ecosystem  
(b) Identify two different trophic levels that man occupies.

(20 Marks)

4. Discuss in detail water pollution and ways of prevention

(20 Marks)

5. (a) Draw the nitrogen cycle

- (b) State three problems associated with pyramids of numbers

(20 Marks)