



THE OPEN UNIVERSITY OF SRI LANKA
B.Sc. DEGREE PROGRAMME – LEVEL 4
FINAL EXAMINATION 2008/2009
COURSE TITLE : FUNDAMENTALS OF ECOLOGY – PAPER 2
COURSE CODE : ZOU 2265/ZOI 4265
DURATION – 3 HOURS

DATE : 14th OF JULY 2009

TIME : 1.30PM – 4.30PM

INDEX NUMBER : _____

ANSWER QUESTION 1 FROM PART "A" AND ANY FOUR (04)
QUESTIONS FROM PART "B".

PLEASE NOTE THAT QUESTION "1" IS COMPULSORY AND THE
ANSWERS SHOULD BE WRITTEN IN THE SPACE PROVIDED.



PART "A"

QUESTION 1

Question 1 is based on biogeochemical cycles. Questions from 1.1 – 1.5 are based on figure 1.

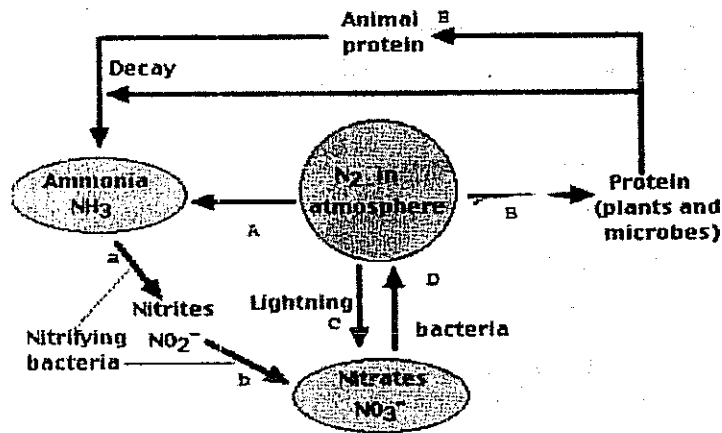


Figure 1

1.1 State the given nutrient cycle in Figure 1.

1.2 List two (02) basic features in figure 1 which are found in a typical nutrient cycle.

(1) -----

(2) -----

1.3 State five (05) major processes that take place in the cycling of nutrients as shown in figure 1.

(1) -----

(2) -----

(3) -----

(4) -----

(5) -----

1.4. State the processes indicated by A, B, C, D and E.

- (A)-----
- (B)-----
- (C)-----
- (D)-----
- (E)-----

1.5. Name one (01) species of microorganisms that are involved in the processes B, a, b, D.

- (B)-----
- (a)-----
- (b)-----
- (D)-----

1.6. Fill in the blanks in the table given below.

Element	Reservoirs	Processes by which the element is returned to the atmosphere
O	1. 2.	1.
N	1. 2.	1.
S	1. 2.	1.

1.7 State two (02) forms of sulphur present in living organisms.

(1) -----

(2) -----

1.8 Indicate the four (04) phases of the sulphur cycle.

(1) -----

(2) -----

(3) -----

(4) -----

1.9 Briefly explain the term “**eutrophication**”.

1.10. State the adverse effects of eutrophication that may occur in an aquatic ecosystem?

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PART “B”

ANSWER ANY FOUR (04) QUESTIONS.

2. Briefly describe the successional types that occur in a forest which consist of dense forest patches, bare rocks, large ponds and areas subjected to Chena cultivation.
3. Explain how
 - (i) submerged water plants of a stream,
 - (ii) plants and animals of a desert,are adapted to the environmental conditions.
4. a) Explain the term “speciation”.
b) Describe the factors that bring about the allopatric speciation in population.
5. a) Explain what you understand by the growth of a population.
b) Discuss the different growth patterns of a population with discrete and overlapping generations.
6. Write an essay on inter-specific interactions seen among organisms.
7. Write short notes on any ***three (03)*** of the following.
 - a) Tolerance curves
 - b) Survivorship curves
 - c) Plate boundaries
 - d) Species diversity in Oceanic islands

