THE OPEN UNIVERSITY OF SRI LANKA
DEPARTMENT OF ZOOLOGY
B. Sc. DEGREE PROGRAMME - LEVEL 4– 2016/2017
COURSE TITLE: FUNDAMENTALS OF ECOLOGY
COURSE CODE –ZLU2281

2. **NO BOOK TEST**

2.1

a) Define the terms ecosystem and biosphere.

Ecosystem:...

....

Biosphere..

....

b) List the main components and processes of an ecosystem.

(i) Components:...

(ii) Processes:...

c) Explain briefly the above 2.1 b (i) and 2.1 b (ii).

Components

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Processes

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d) Explain briefly the biosphere.

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2.2 a) State the three main methods that an ecologist can use to study about organisms.

i...

ii..

iii...

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b) Looking at the diagram given below

  (i) Identify the major concept that is represented in Figure 1. ....

  (ii) Explain the named concept in 2.2b (i) in detail.

    ....

    ....

  (iii) Identify the major anthropogenic threat in Figure 1.....................................

  (iv) Name the tropic levels of each organism given in Figure 1.

A... B...

C... D...

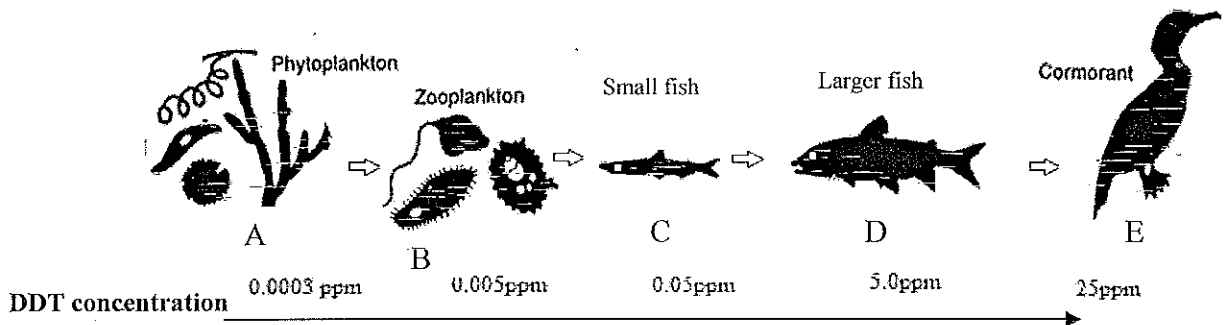E...

Figure 1

v) Draw a fully labeled diagram (trophic levels) to show the energy pyramid representing the
   organisms in the above ecosystem (Figure 1).

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2.3

a) Explain the term habitat.

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b) According to the **Law of tolerance** each physico-chemical factor has three critical values. Explain this using a diagram of a tolerance curve.

2.4
a) Name the two main phases of the carbon cycle.

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b) List the main processes of a biogeochemical cycle which shows the association with thunder showers and lighting.

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c) List five nutrient cycles in nature. Out of these name two sedimentary cycles and two gaseous cycles.

   i)   Nutrient cycles...

   ii) Sedimentary cycles ....

   iii) Gaseous cycles ....