THE OPEN UNIVERSITY OF SRI LANKA
B. Sc. DEGREE PROGRAMME - LEVEL 4- 2010/2011
COURSE TITLE: FUNDAMENTALS OF ECOLOGY
COURSE CODE – ZOU 2265/ZLU 2281
OPEN BOOK TEST

REGISTRATION NUMBER .....

DATE: 24.04.2011 **TIME -11.00AM-12.30 PM**

Answer all questions in both parts A and B. Answers for part A should be indicated with an "X" in the answer sheet provided.

Both part A and B should be handed over after the examination.

PART A

Answer sheet for PART A

Ques. No	a	b	c	d
1.1				
1.2				
1.3				
1.4				
1.5				
1.6				
1.7				
1.8				
1.9				
1.10				

Ques. no	a	b	c	d
1.11				
1.12				
1.13				
1.14				
1.15				
1.16				
1.17				
1.18				
1.19				
1.20				

PART B

1.

1.1. What are the main population parameters which affect the density of a population?

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1.2. Illustrate the "geometric population growth" in discrete populations when the reproductive rate is constant. Consider starting population is 50 and R_0 values as 1.3, 1.2, 1.1, 1.0, and 0.95.

1.3. Considering the above R_0 values calculate the population size of these populations in the third generation (each population separately).

a)When $R_0 = 1.3$

c)When $R_0 = 1.0$

c) When $R_0 = 1.1$

d) When $R_0 = 0.95$

1.4. What type of growth pattern do you expect from a population if a) $R_0>1$?
b) $R_0<1$?

a) $R_0>1$ .....

b) $R_0<1$ .....

1.5. Differentiate the net reproductive rate (R_0) and the per capita rate of increase (r).

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1.6. Giving two examples explain the exponential growth in nature.

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2.1 Name the two main types of interactions found in nature and describe them briefly.

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2.2. List the types of population interactions between species in respect to response.

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2.3. Giving suitable examples, briefly explain the terms exploitative and interference competition.

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2.4. What are the possible out comes of inter specific competition between two species?

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2.5. Giving suitable graphical representations and equations explain the above (2.4) out comes briefly.