THE OPEN UNIVERSITY OF SRI LANKA

B. Sc. DEGREE PROGRAMME – LEVEL 04

BOU2101 – GENETICS & EVOLUTION

CAT II (NO BOOK TEST)

DATE: 07th May 2016 Time: 2.30 – 3.30 p.m.

REGISTRATION NUMBER: .....

Answer all questions.

This paper consists of two parts; Part A & B.

Part A - Q 1 contains 20 multiple choice questions. Tick the correct answers for these questions on the answer sheet provided below.

Part B has two questions, Q 2 & Q 3. Answers for these questions should be written on the space provided.

Answer Sheet for Part A - Q 1

	(a)	(b)	(c)	(d)
1.1				
1.2				
1.3				
1.4				
1.5				
1.6				
1.7				
1.8				
1.9				
1.10				

	(a)	(b)	(c)	(d)
1.11				
1.12				
1.13				
1.14				
1.15				
1.16				
1.17				
1.18				
1.19				
1.20				

Registration No: .....

Part B

Q 2 This question is based on population genetics.

2.1 State the Hardy-Weinberg Law?

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2.2 What are the conditions that must be met for a population to be at Hardy-Weinberg equilibrium?

1) .....

2) .....

3) .....

4) .....

5).....

2.3 Within a population of butterflies, the color brown (B) is dominant over the color white (b). And, 4% of all butterflies are white. Calculate the following:

A. The percentage of butterflies in the population that are heterozygous.

B. The frequency of homozygous dominant individuals.

Q 3 This question is based on the origin of new species.

3.1 List out the species isolating mechanisms

1) ..... 6) .....

2) ..... 7) .....

3) ..... 8) .....

4) ..... 9) .....

5) .....

3.2 Define the following terms

a) Adaptation

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b) Adaptive radiation

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c) Coevolution

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d) Polyploidy

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