

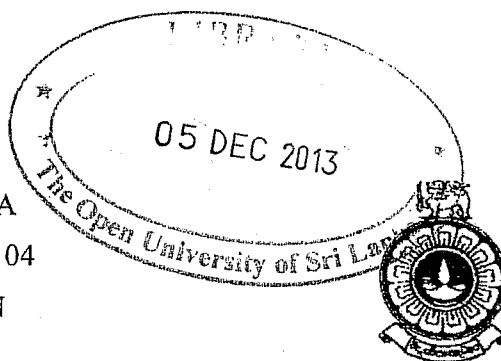
THE OPEN UNIVERSITY OF SRI LANKA
B. Sc. DEGREE PROGRAMME – LEVEL 04

BOU2101 – GENETICS & EVOLUTION

CAT 1 (NO BOOK TEST) 2012/13

DATE: 16th February 2013

Time: 4.00 – 5.00 p.m.



REGISTRATION NUMBER:

Answer all questions.

This paper consists of two parts, Part A and Part B.

Part A - Q1 contains twenty (20) multiple choice questions. Tick the correct answers for these questions with a cross (x) against the question number in the answer sheet given below.

Part B has two questions and Q 3, Q 2. Answers for these structured essay questions should be written in the space provided in the question paper itself.

Submit the entire question paper.

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				

PART 2

Q 2

(2.1) What are the agents that change the allele frequencies of a population?

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(2.2.) State the Hardy-Weinberg principle?

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(2.3) Describe the process of directional selection using a diagram.

(2.4) What is adaptive radiation?

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(2.5) List the post-mating reproductive isolating mechanisms.

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(2.6) What is meant by kin selection?

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(2.7) What is the commonest way by which sympatric speciation can occur?

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Q 3

(3.1) Name the two hypotheses that have been presented to explain the origin of eukaryotic cells during the Proterozoic era.

- i.....
- ii.....

(3.2) Name three living fossils.

- i.....
- ii.....
- iii.....

(3.3) Fill in the table given below to compare the Protostomes with the Deuterostomes.

	Protostomes	Deuterostomes
Cleavage of eggs		
Formation of mouth		
Formation of coelom		
Laval form		

(3.4) State three reptile-like characters that can be seen in *Archaeopteryx*.

- i.....
- ii.....
- iii.....
