

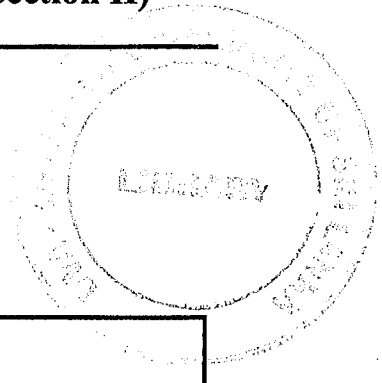
**Uva Wellassa University of Sri Lanka**  
**Faculty of Animal Science & Export Agriculture**  
**BSc. in Aquatic Resources and Technology Degree Programme**  
**Year I Semester I**  
**End Semester Examination – February/ March 2010**



**ANS 131-2 Principles of Genetics and Breeding - Essay (Section II)**

**Instructions**

Answer all questions in Section II  
No. of questions : Two (02)  
No. of pages : Two (02)  
Time : One hour (01 hr)  
Total marks allocated : 60%



Index No:

1.

- a) **Heterozygous black (Bb) guinea pigs (P<sub>1</sub>) are mated to homozygous recessive (bb) whites (P<sub>2</sub>). Predict the genotypic and phenotypic ratios expected from backcrossing the Black F<sub>1</sub> progeny to,**
- i) **The black parent (BC1)**
  - ii) **The white parent (BC2)**

**(50 marks)**

- b) **Giving examples explain how the genetic drift change the gene frequencies in a population ( based on Bottle neck effect)**

**(50 marks)**

2.

a)

i. What is Pseudodominance?

ii. "Deletions /deficiencies of chromosome segments will leads to Pseudodominance"

What is your opinion about this statement?

Agree/ Disagree .....

Justify your answer.

(50 marks)

b)

i. Define Translocation.

ii. " Translocations can change / affect the chromosome morphology".

What is your opinion about this statement?

Agree/ Disagree .....

Justify your answer

(50 marks)

[End of Section II]