

Faculty of Animal Science & Export Agriculture
Uva Wellassa University of Sri Lanka
BASC / BSc in Aquatic Resources Technology Degree programmes
Year I Semester II
End Semester Examination – August / September 2011
ANS 101-2 Principles of Genetics and Breeding- Essay (Section II)

Instructions

Answer all questions in Section II in booklets provided.

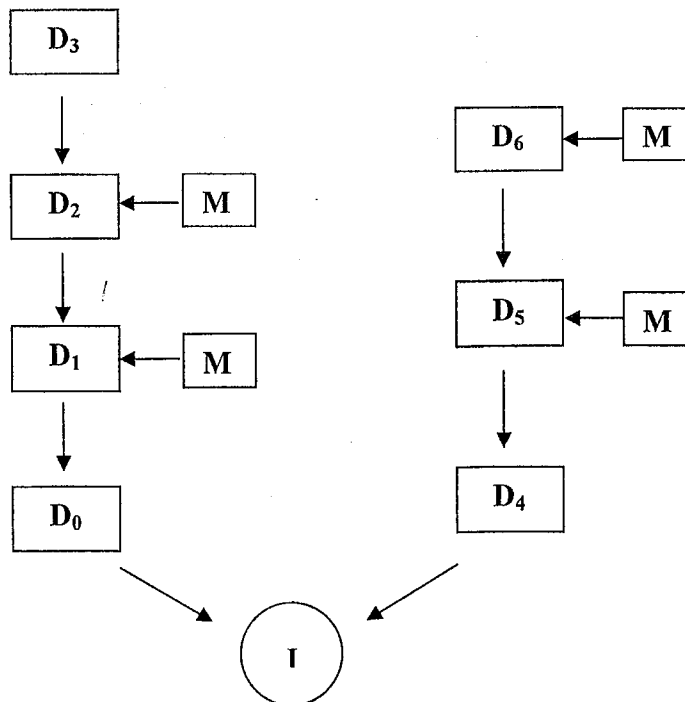
No. of questions : Two (02)
No. of pages : Two (02)
Time : One hour (01hr)
Total marks allocated : 60%

Index No:

1)

- i) Define “Relationship”. (10 marks)
- ii) a) What are the two (02) types of relationships? (10 marks)
- b) Briefly explain above mentioned relationships (20 marks)

iii) Following is a pedigree of the bull I. Calculate the relationship between the off spring I and ancestor M



(60 marks)

2)

i) Define "Linkage"

(10 marks)

ii) Briefly explain following giving examples

- a) Sex Linked Traits
- b) Sex Limited Traits

(20 marks)

iii) What is "Criss-cross inheritance"?

(20 marks)

iv) A researcher conducted a **three point test cross** to map three genes v,c,g and their wild types (+,+,+). Observed values for genotypes are given below; locate the three genes (**v, c and g**) in the chromosome

Gene combinations			Observations
v	c	g	1015
+	c	+	249
v	+	g	254
+	c	g	8
+	+	+	1370
v	c	+	159
v	+	+	9
+	+	g	189

(50 marks)

[End of Section II]