

EASTERN UNIVERSITY, SRI LANKA

THIRD YEAR FIRST SEMESTER EXAMINATION IN AGRICULTURE - 2008/2009

AS 3101 Animal Breeding and Techniques

End Semester Examination

Time allowed: Two hours

Answer all questions



1. Briefly discuss the followings;
 - a) Steps involved in *in vitro* Embryo Production in goats.
 - b) Conducting two-way cross breeding program for Broiler production

2. Write short notes on the followings;
 - a) Quantitative traits
 - b) Tandem selection
 - c) Transgenesis in cattle breeding

3. a) Milk yield (liter/year) of three cows for lactation is given below. Assuming that the heritability of milk yield is 0.3, calculate the breeding values of the three cows by completing the Table 1. (Copy the table in your answer script).

Table 1

Cow ID No.	Milk yield/ lactation (liter)	Population mean	Yield as deviation from mean	Breeding value
A	1000	2000	.....	.....
B	3000	2000	.....	.....
C	2000	2000	.....	.....

b) Milk yield of daughters of three bulls for lactation is given below. Assuming the heritability of milk yield is 0.3, calculate the breeding values of the two by completing Table 2. (Copy the table in your answer script).

Table 2

Cow ID No.	Milk yield/ lactation (liter)	Population mean	Yield as deviation from mean	Breeding value
X	1500	2000	.....	.....
Y	2500	2000	.....	.....
Z	2000	2000	.....	.....

- c) Name the methods of selection you have used in the above two situations in 3 (a) and 3 (b).
- d) What is the breeding value of offspring if sire 'Y' mated to dam 'B'?
- e) What is the actual milk yield of the offspring of the mating mentioned in 3 (c) above? Comment on this result.
4. a) List out the advantages and disadvantages of artificial insemination in cattle.
- b) Write in details the parameters evaluated in microscopic examination during semen evaluation in cattle.