

EASTERN UNIVERSITY, SRI LANKA

THIRD YEAR FIRST SEMESTER EXAMINATION IN AGRICULTURE - 2008/2009

ASC 3101 Animal Breeding and Techniques

End Semester Examination

Time allowed: Two hours

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Answer all questions

1. Briefly discuss the following;
  - a) Steps involved in embryo transfer in goats.
  - b) Four-way cross breeding program for Broiler production
  
2. The following details have been recorded in a selection program carried out to increase milk production of goats in Livestock Farm, Eastern University, Sri Lanka.

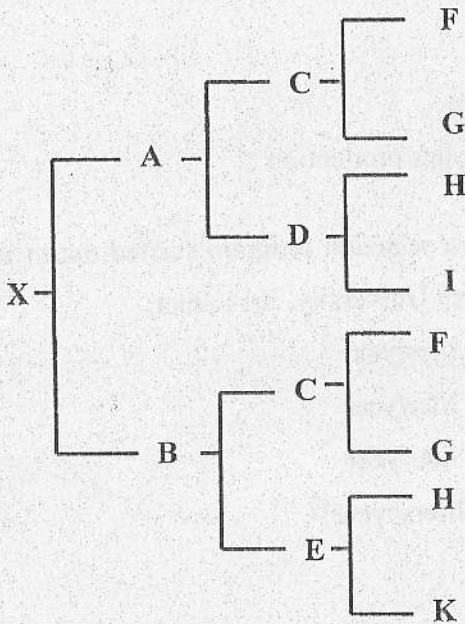
Populations mean	200 liter/year
Mean of the selected group	320 liter/year
Mean of the progeny	280 liter/year
Phenotypic variance	16 (liters/ year) <sup>2</sup>

  - (i) Calculate the following;
    - a) Selection differential
    - b) Response to selection
    - c) Heritability
    - d) Additive standard deviation of the flock
    - e) Selection intensity
  - (ii) Give suggestions to increase response to selection.
  
3. Write short notes on the following;
  - a) Heritability
  - b) Repeatability
  - c) Selection index

4. a) Define the following terms;

- (i) Cross breeding
- (ii) Heterosis
- (iii) Relationship
- (iv) Inbreeding

b) Calculate inbreeding coefficient of X using the following family tree.



c) Briefly discuss how the inbreeding depression could be reduced among farm animals.