

EASTERN UNIVERSITY, SRI LANKA

THIRD YEAR FIRST SEMESTER EXAMINATION IN AGRICULTURE 2007/2008

ASC 3101 ANIMAL BREEDING AND TECHNIQUES

EXTERNAL DEGREE IN AGRICULTURE

Answer all questions

Time: Two hours

1. Briefly discuss the followings;
  - a) Application of four way crossing method in commercial broiler production.
  - b) Usefulness of embryo technology in neat cattle production.
  
2. Write short notes on the followings;
  - a) Repeatability
  - b) Progeny testing
  - c) Polygenic traits
  
3. a) List out the methods of multiple trait selection in farm animals.  
b) A breeder is going to select a hen for a breeding program from a flock to get dual purpose chicks (egg and meat). The production performances of four hens in the flock are given below;

Traits	Hen A	Hen B	Hen C	Hen D
Live weight (kg)	2.5	3.0	2.7	2
Egg production ( number/lifespan)	500	400	350	300

Develop an index for the selection program (consider that price per kilogram meat is Rs. 300.00 and price per egg is Rs 8.00) and select the best individual based on the index.

4. a) Define the term 'inbreeding depression'.  
b) State the consequences of inbreeding in a population.  
c) Calculate the inbreeding coefficient ( $F_x$ ) for individual X using the following family tree.

