

EASTERN UNIVERSITY, SRI LANKA  
FACULTY OF AGRICULTURE  
SECOND YEAR FIRST SEMESTER EXAMINATION 2013/2014  
AB 2102 – PRINCIPLES OF GENETICS

Answer all questions

Time: 01 hour

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1. Briefly explain the following:
  - a) Cell cycle;
  - b) Incomplete dominance;
  - c) Polygenes and quantitative characters.
  
2. a) Discuss about linkage of genes and crossing over.  
b) Assume that a random mating population at genetic equilibrium consists of the genotypes **AA**, **Aa** and **aa** at frequencies  $p^2$ ,  $2pq$  and  $q^2$  respectively. Prove that the same distribution can be obtained in the next generation, if random mating takes place.