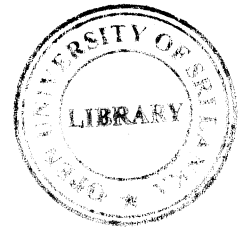




The Open University of Sri Lanka  
Faculty of Engineering Technology  
Industrial Studies Program

Final Examination- 2007

**AEI3234 Agricultural Biology I**



Date : 28-04-2007  
Time : 0930-1230 hours

**SECTION 2: Answer any four (04) questions**

- (1) (a) Briefly discuss the "Influence of environment on heredity".  
(b) A certain plant species exhibit the formation of red or white flowers. Plants were crossed as follows:

<u>Parents</u>	<u>Progeny</u>
red×red	71 red
red×red	57 red, 26 yellow
red×yellow	68 red
yellow×yellow	74 yellow
red×yellow	43 red, 46 yellow

- i. What phenotype is dominant?  
ii. What are the genotypes of the parents and progeny in each cross?
- (2) (a) Write a short essay on "coding of genetic materials".  
(b) What are the biological functions of protein?
- (3) Briefly explain the major differences between any four (04) of the followings:  
(a) Mitochondria and Chloroplast  
(b) Monocot stem and dicot stem  
(c) Photosynthesis and Respiration  
(d) Homozygous and Heterozygous  
(e) Cyclic phosphorelation and Non cyclic phosphorelation
- (4) (a) What are the factors affecting fruit quality?  
(b) Briefly discuss the role of seeds in fruit growth.
- (5) (a) Briefly explain the conditions necessary for photosynthesis.  
(b) Write a brief account on C<sub>3</sub> photosynthesis.
- (6) Write short notes on the following.  
(a) Incomplete dominance  
(b) Energy pyramids  
(c) Nucleic acids  
(d) Fluid mosaic model of the membrane.