



The Open University of Sri Lanka  
 Faculty of Engineering Technology  
 Diploma/Bachelor in Industrial Studies (Agriculture)  
 Final Examination- 2014/2015

AEI3234 Agricultural biology I

Date : 01 - 08 - 2015  
 Time : 0930 - 1230 hours  
 Duration : Three (03) hours

SECTION II

1. a.) Differentiate between Eukaryotic and prokaryotic cells. (12.5 Marks)  
 b.) Explain the functions of the cell organelles in Eukaryotic cells. (12.5 Marks)
  
2. Classify the meristematic tissues in plants and explain the characteristics of each of them. (25 Marks)
  
3. In a plant species, Coarse leaves (P) are dominant to smooth leaves (p). Round pollen (R) are dominant to irregular pollen (r). The progeny resulting from a cross between a plant bearing long leaves, round pollen with that of long leaves and irregular pollen is given below.
 

Plants with coarse leaves and round pollens	108
Plants with coarse leaves and irregular pollens	102
Plants with smooth leaves and round pollens	31
Plants with smooth leaves and irregular pollens	34

 Explain the outcome results of a progeny. (25 Marks)
  
4. a.) Explain the light and dark reactions of photosynthesis. (12.5 Marks)  
 b.) Discuss the conditions necessary for photosynthesis. (12.5 Marks)
  
5. Explain the role of biotic components of an ecosystem. (25 marks)
  
6. Write short notes on any four (04) of the following. (6.25 marks each)
  1. Sieve elements of phloem tissues
  2. Secondary structure of dicot stems
  3. Chromosomal abnormalities
  4. Chromosomal aberrations
  5. Role of growth substances in fruit growth