

The Open University of Sri Lanka
 Faculty of Engineering Technology
 Department of Agricultural and Plantation
 Engineering



Study Programme	: Bachelor of Industrial studies Honours in Agriculture
Name of the Examination	: Final Examination
Course Code and Title	: AGI3534/AEI3234 Agricultural biology I
Academic Year	: 2019/2020
Date	: 30 th September 2020
Time	: 09:30 – 12:30 hrs
Duration	: 3 hours

SECTION 2: Answer any four (04) questions.

1. (a) Explain the biological functions of proteins.
 (b) Describe the factors effecting enzymatic activities of plants.

2. (a) Write the Mendel's first and second laws.
 (b) In a plant species, long pods (L) are dominant to short pods (l). Round seeds (R) are dominant to irregular seeds (r). The progeny resulting from a cross between a plant bearing long pods, round seeds with that of long pods and irregular seeds is given below.

Plants with long pods and round seeds	105
Plants with long pods and irregular seeds	102
Plants with short pods and round seeds	30
Plants with short pods and irregular seeds	31

Explain the results

3. (a) Draw a labelled diagram of the structure of a chloroplast as seen with an electron microscope.

- (b) Outline the effect of temperature, light intensity and carbon dioxide concentration on the rate of photosynthesis.
 - (c) Explain the reactions involving the use of light energy that occur in the thylakoids of the chloroplast.
4. (a) Outline the process of glycolysis.
(b) Explain anaerobic respiration.
5. "Colour is the most obvious change that occurs in many fruits and the major criterion used by consumers to determine whether the fruit is ripe or unripe". Describe the statement.
6. (a) Define the term ecosystem.
(b) Discuss the role of consumers in an ecosystem.