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	**: AGI5541/AEI5241 Agricultural biotechnology**
Academic Year	: 2017/18
Date	:17th February 2019
Time	: 0930-1230 hrs

SECTION 2: Answer any four (04) questions.

1. (a) Label and illustrate the structure of a ribosome. (5 marks)
   (b) Explain the roles of chromosomal DNA, messenger RNA, transfer RNA, and ribosomal RNA in the process as well as how complementary base pairing is involved. (20 marks)

2. Explain the total procedure of isolating DNA until visualizing in the gel electrophoresis. (25 marks)

3. Discuss the application of biotechnology in food industry by giving two (02) examples. (25 marks)

4. Explain the use of protoplast culturing for the development of agriculture industry. (25 marks)

5. Introduce an annual production programme for micro propagation of a newly establishing floriculture farm in Intermediate Zone of Sri Lanka. (25 marks)

6. Write short notes on any **two (02)** of the following. (12.5 marks each)

   i. Plasmids

   ii. Single cell proteins

   iii. Restriction Fragment Length Polymorphism (RFLP) Analysis

   iv. Meristem Culture