

University of Ruhuna- Faculty of Technology

Bachelor of Biosystems Technology Honours Degree

Level 1 (Semester II) Examination, December 2023

Academic year 2020/2021

Course Unit: BST 1282 Fundamentals In Agriculture (Theory) Duration:1.5 hours

Part I – Answer all questions (50 minutes).

Part II – Answer only two questions (40 minutes)

Part I

1.

a. State the key features of the following; (15 marks)

i. First Agricultural Revolution

ii. Second Agricultural Revolution

iii. Third Agricultural Revolution

b. Several activities are carried out during the land preparation for crop cultivation. Write the main reason/purpose for each of the following activities; . (10 marks)

	Activity	main reason/purpose
i	Zeo tillage	
ii	Harrowing the soil	
iii	Mulching	
iv	Thinning out	
v	Hardening of seedlings	

2.

a. Giving an example, briefly explain as to how parent material influences the properties of a soil. (5 marks)

b. Soil materials are progressively moved within the natural landscape. List down three (03) types of transported soil with the relevant transportation method. (6 marks)

c. Briefly explain the main three (03) horizons of soil with their specific features. (9 marks)

Write the main reason/purpose for each of the following activities. (10 marks)

Activity	Main reason/purpose
i. What is meant by soil texture? (3 marks)	
ii. What is the most important soil textural class in agricultural perspective? (2 marks)	

3.

- a. Write five (05) distinctive characteristics of agricultural products that set them apart from other goods in the realm of marketing. (10 marks)

- b. State (3) three importance of labelling of a food. (6 marks)

- c. Differentiate common name and the brand name of a label with examples. (9 marks)

4.

- a. Give a brief description for each type of the following crops. State an example for each. (10 marks)

Crop type	Explanation	Examples
i. Millets		
ii. Grams		
iii. Oil seed crop		
iv. Fiber crop		
v. Sugar crop		

- b. Briefly explain the part of the following plant used as a vegetable. Give two examples for each. (15 marks)

Part of the plant	Explanation	Example
BULBS:		
FLOWERS:		
FRUITS:		
ROOTS:		
TUBERS:		

Part II – 40 minutes, Answer two questions only.

1.
 - a. Briefly explain the effect of climatic factors on crop production. (20 marks)
 - b. Explain the importance of “Controlled agriculture” as an alternative crop production method to minimize the impact of above-mentioned climatic factors. (25 marks)

2.
 - a. Briefly discuss the role of organic matter in improving soil fertility. (25 marks)
 - b. Describe in brief the methods available for increasing organic matter content in soil. (25 marks)

3.
 - a. Briefly explain the benefits of food packaging. (20 marks)
 - b. Giving suitable examples, discuss the major methods used in food packaging. (30 marks)

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