

1st SEM. 2018

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UNIVERSITY OF ESWATINI

**FINAL EXAMINATION PAPER
2018**

PROGRAMME: BSC. ABE

COURSE CODE: ABE309

TITLE OF PAPER: POST HARVEST TECHNOLOGY

TIME ALLOWED: TWO (2) HOURS

SPECIAL MATERIAL REQUIRED: CALCULATOR

INSTRUCTIONS: ANSWER QUESTION ONE AND ANY TWO OTHER QUESTIONS.

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SECTION ONE: COMPULSORY

QUESTION ONE

- a) What is meant by post-harvest management of agricultural produce? (5 marks)
- b) Post-harvest losses can be divided into two groups or categories;
 - i) Name the two groups or categories. (4 marks)
 - ii) Give three examples for each group. (6 marks)
- c) Explain why product drying creates conflict for the seller. (5 marks)
- d) Give five characteristics of a good storage structure. (10 marks)
- e)
 - i) Calculate the moisture shrink when drying peanuts from 15 percent to 10 percent moisture content. (5 Marks)
 - ii) If a farmer has harvested 150 tonnes of peanuts at 15 percent moisture, what would be the weight after drying to 10 percent? (5 Marks)

SECTION II: ANSWER ANY TWO QUESTIONS

QUESTION TWO

- a) Discuss logically the five steps of post-harvest operations followed by most Agricultural products. (10 marks)
- b) Name five constraints / issues of post-harvest losses. (10 marks)
- c) Discuss five attributes of transport that helps to ensure that a good product reaches the consumers. (10 marks)

QUESTION THREE

- a) Name three factors that affect the selection of the best technologies to be applied, among a range of available post-harvest technologies to preserving a product. (8 marks)
- b) Discuss the two types of pest that mostly affect agricultural products. (6 marks)
- c) Discuss four conditions that tend to increase the products susceptibility to biological, mechanical and quantity damages. (8 marks)
- d) Discuss four conditions related to transport that increases the products susceptibility to damages. (8 marks)

QUESTION FOUR

- a) Discuss how the following cultural practices affect the quality of fresh fruits and vegetables. (6 marks)
 - i) Nutritional conditions
 - ii) Nutritional deficiencies
 - iii) Water stress
 - iv) Excess water
- b) Define the process of curing as applied to fruits and vegetables. (4 marks)
- c) Discuss five ways of reducing transpiration rates in stored fruits and vegetables. (10 marks)
- d) Name five advantages of bulk handling of grains in a silo compared to a Warehouse. (10 marks)