

MARKER CODE				



STUDENT ENROLMENT NUMBER (SEN)									

TONGA NATIONAL FORM SEVEN CERTIFICATE

2019

AGRICULTURE

QUESTION AND ANSWER BOOKLET

Time allowed: 3 Hours

INSTRUCTIONS:

1. Write your **Student Enrolment Number (SEN)** on the top right-hand corner of this page.
2. This paper consists of **FOUR SECTIONS** and is out of 70 Skill Level.

SECTIONS	TOPICS	TOTAL SKILL LEVEL
A	PRIMARY PRODUCTION	16
B	SUSTAINABLE PRIMARY PRODUCTION	16
C	PRODUCTION MANAGEMENT	21
D	POST-HARVEST	17
TOTAL		70

3. Answer ALL QUESTIONS. Write your answers in the spaces provided in this booklet.
4. Use a **BLUE** or **BLACK** ball point pen only for writing. Use a pencil for drawing if required.
5. If you need more spaces for answers, ask the supervisor for extra paper. Write your **Student Enrolment Number (SEN)** on each additional sheet, number the questions clearly and insert them in the appropriate places in this booklet.
6. Check that this booklet contains pages **2-15** in the correct order and that page 15 has been deliberately left blank.

YOU MUST HAND IN THIS BOOKLET TO THE SUPERVISOR BEFORE YOU LEAVE THE EXAMINATION ROOM.

SECTION A: PRIMARY MANAGEMENT

Question 1: What is produced?

Select a locally produced Primary Product. Answer all **Questions One** using the Primary Product you have selected.

Name of primary product: _____

a. Name the export market for your chosen product.

Skill level 1	
1	
0	
NR	

b. Describe the grading procedures for your chosen export market.

Skill level 2	
2	
1	
0	
NR	

Figure 1: Product attribute.

- Colour
 - Taste
 - Nutritional value
 - Shelf life

c. Choose **ONE (1)** product attribute from **Figure 1** the box and **explain** how that selected attribute varies according to cultivar or breed.

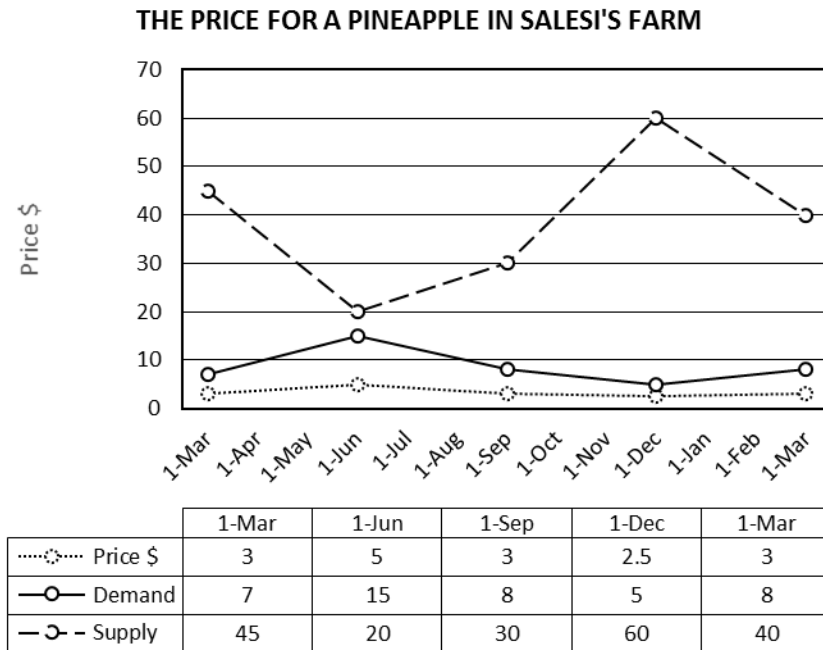
Attribute: _____

Explanation:

Skill level 3	
3	
2	
1	
0	
NR	

Question 2: Factors influencing primary production

Figure 2: The graph represent the price for a pineapple from the month of March 2018 to March 2019.



- a. Describe the effect of seasonality on the price of pineapple.

Skill level 2	
2	
1	
0	
NR	

- b. Create a marketing plan for Salesi's pineapple farm, in order to maximize his profit.

Skill level 4	
4	
3	
2	
1	
0	
NR	

Question 3: Effect of market control

Select a locally produced Plant Product. Answer all **Questions Three** using the Plant Product you have selected.

Name of plant product: _____

- a. Identify the marketing channel for your selected plant product if you are planning to export for an overseas market.

_____	Skill level 1	
_____	1	
_____	0	
_____	NR	

- b. Choose **ONE** (1) trade Agreement from the list below and **explain** its role in facilitating the marketing of your chosen plant product.

- i. WTO
- ii. PICTA
- iii. Bilateral trade Agreement

Name of Trade Agreement: _____

Explanation:

_____	Skill level 3	
_____	3	
_____	2	
_____	1	
_____	0	
_____	NR	

SECTION B: SUSTAINABLE PRIMARY PRODUCTION

Question 1: Analyzing Production Practices

Use the diagram below to answer part a) and part b)

Figure 3: The picture indicates a type of poultry production system.



Source: www.thebetterindia.com/51188/happy-hens-farm-better-eggs-battery-cages/

- a. Name the animal production system shown in the picture **Figure 3**.

Skill level 1	
1	
0	
NR	

- b. Describe a method that you could use to improve the system in **Figure 3** so that it can align with the principle of sustainable production.

Skill level 2	
2	
1	
0	
NR	

- c. Explain the possible outcome of sustainable farming in the Biodiversity.

Skill level 3	
3	
2	
1	
0	
NR	

Question 2: Sustainable Agriculture Issue

This question you are required to choose a crop/animal and use it to answer part a) to part c).

Name of crop or animal: _____

- a. Name a disease that affect the production of your selected crop or animal.

Skill level 1	
1	
0	
NR	

- b. Describe a sustainable way to control the disease of your selected crop or animal.

Skill level 2	
2	
1	
0	
NR	

- c. Explain the most sustainable way of establishing your selected crop or animal.

Skill level 3	
3	
2	
1	
0	
NR	

Figure 4: Global agricultural issues that affect the local primary production.

- Pestilence
- Water
- Waste
- pollution

d. Choose **ONE** (1) attribute from the box and **discuss** how that selected issue affect the local primary production.

[illegible]

Skill level 4	
4	
3	
2	
1	
0	
NR	

SECTION C: PRODUCTION MANAGEMENT

Question 1: Schedule of Operation

Use the information in the chart below to assist you in answering part a) and b).

Figure 5: Establishment time for early yam production.

Management	Jan		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
i. Soil preparation	←		→										
ii. Planting				↔									

- a. Name a manipulation that can be made during the time of at establishment to produce a good quality yam.

Skill level 1	
1	
0	
NR	

- b. Describe the process of preparing soil for yam production.

Skill level 2	
2	
1	
0	
NR	

- c. Explain the preparation of yam to an overseas market.

Skill level 3	
3	
2	
1	
0	
NR	

Question 2: Factors affecting the Schedule of Operation

Agriculture today brings economic prosperity to the country and cash cropping is the new lifestyle in Tonga. Squash pumpkin, *cucurbita maxima*, has been one of the main cash crops introduced to Tonga in the past decade. Tongan farmers became interested in squash pumpkin because of the high demands from the Japanese market.

- a. Identify the management practices that contribute the most for achieving a good quality squash pumpkin fruit.

Skill level 1	
1	
0	
NR	

- b. Describe the production process for squash pumpkin.

Skill level 2	
2	
1	
0	
NR	

- c. Explain how capital can influence the control of disease in the schedule of operation for squash pumpkin.

Skill level 3	
3	
2	
1	
0	
NR	

Question 3: Manipulating the Schedule of Operation

You are required to choose an animal that you have studied in class to answer part a) to part c)

Chosen Animal: _____

- a. Describe the concepts of yield maximization.

Skill level 2	
2	
1	
0	
NR	

- b. Explain the manipulation of the production process of your chosen animal to meet the quality requirement of an Export market.

Skill level 3	
3	
2	
1	
0	
NR	

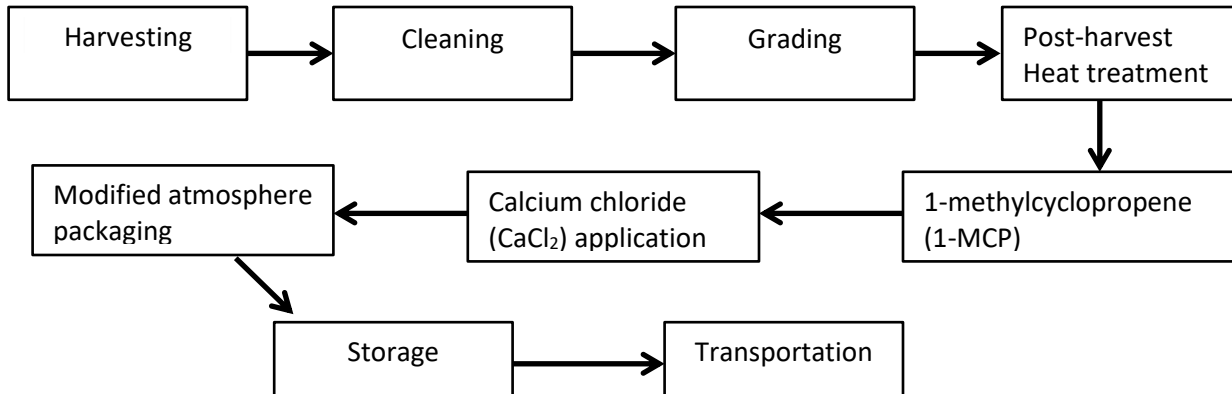
- c. Evaluate a market opportunity for your chosen product to decide the manipulation required to meet the market requirement.

Skill level 4	
4	
3	
2	
1	
0	
NR	

SECTION D:**POST HARVEST****Question 1: Preparation for Market, Procedure in Post-Harvest 8 marks**

Use the information in the chart below to assist you in answering part a) and b).

Figure 6: Post-harvest flow chart for tomato.



a. Name the main function of post-harvest.

Skill level 1	
1	
0	
NR	

b. Describe the procedure for grading of tomato fruit.

Skill level 2	
2	
1	
0	
NR	

c. Describe the importance of firmness in tomato fruits.

Skill level 2	
2	
1	
0	
NR	

- d. Explain the proper method for packing of squash pumpkin fruit to ensure the market requirement are met.

Skill level 3	
3	
2	
1	
0	
NR	

Question 2: Post-Harvest handling

Choose an Animal Product or Plant Product from the table below to answer part a) to part c).

Crop	Animal
Squash Pumpkin	Piglet
Local tobacco	Chicken
Kava powder	Beef

Chosen product: _____

- a. From your chosen crop/animal, describe the operation prior to packaging of your product.

Skill level 2	
2	
1	
0	
NR	

- b. Explain the importance of putting a Logo or brand name in the packaging of Local tobacco.

Skill level 3	
3	
2	
1	
0	
NR	

c. Discuss the requirements that must comply with packaging of food product.

[illegible]

Skill level 4	
4	
3	
2	
1	
0	
NR	

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