

MARKER CODE



Student Personal Identification Number

Solomon Islands National Form Six School Certificate

AGRICULTURE 2019

QUESTION AND ANSWER BOOKLET

WEDNESDAY 13th NOVEMBER 9:00 AM

TIME: 3 Hours Plus 10 Minutes
Reading Time.

INSTRUCTIONS

1. This Examination has TWO Sections. Both Sections are **COMPULSORY**.

Recommended time allowances for each section:

Section A: Multiple Choice Questions	40 minutes	20 marks
Section B: Short Answer Questions	140 minutes	98 marks
	3 hours	118 marks

2. Write all the answers to the Multiple Choice questions in the answer sheet on the **BACK-FLAP** of this booklet.
3. Answer all questions in Section B in the spaces provided.
4. Write your **Student Personal Identification Number (SPIN)** in the box at the top right hand corner of this page and on the back-flap at the end of this booklet.
5. Check that the booklet contains pages **2-24** in the correct order and that none of these pages is blank. Page **23** has been left blank deliberately.
6. Do NOT use correction fluid.
7. Mobile phones are NOT allowed in the Examination room.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

TOTAL MARKS

118

SECTION A: MULTIPLE CHOICE QUESTIONS

(20 MARKS)

THIS SECTION CONSISTS OF 20 MULTIPLE CHOICE QUESTIONS WORTH ONE (1) MARK EACH.

WRITE THE LETTER OF THE BEST ANSWER (A, B, C or D) IN THE BOX CORRESPONDING TO THE QUESTION NUMBER ON THE BACK-FLAP.

1. In Agriculture farming system, which of the following is an example of an **'Organic farming'**?
 - A. Cocoa planted alone on a piece of land.
 - B. A small garden that uses artificial fertilizers.
 - C. A vegetable farm selling only to the local market.
 - D. Farming that only relies on naturally sourced fertilizers.

2. **Deforestation** can damage the ecosystem through;
 - A. planting of trees.
 - B. sustainable land use.
 - C. environmental farming.
 - D. excessive removal of trees.

3. Which statement below BEST describes the key role of **nitrogen fixing bacteria** in the soil?
 - A. Decomposes humus.
 - B. Provides additional air in the soil.
 - C. Uses the nitrogen for photosynthesis.
 - D. Converts the nitrogen gas into nitrates.

4. The use of **organic materials in farming to cover the top soil** helps to;
 - A. damage the soil fertility.
 - B. reduce pests and diseases.
 - C. kill the microbes in the soil.
 - D. retain moisture and nutrients in the soil.

5. Which of the following **farming practices** reduces soil beneficial properties?
- A. Soil tillage.
 - B. Crop rotation.
 - C. Using herbicides.
 - D. Burning of rubbish.
6. Water is an important **environmental factor** required for seed germination because it;
- A. helps to rot the seed coat.
 - B. provides adequate nutrient.
 - C. helps to provide carbon dioxide.
 - D. provides required temperature.
7. Which of the following is a **macro- nutrient** in soil required for crop flowering and fruiting?
- A. Nitrogen (N).
 - B. Copper (Cu).
 - C. Potassium (K).
 - D. Phosphorus (P).
8. Viability as a factor of seed germination can be greatly affected by the _____ the seed.
- A. air in
 - B. water in
 - C. quality of
 - D. oxygen in
9. Weeds presence amongst crops can greatly reduce their growth due to;
- A. a reducing staking support.
 - B. an increasing supply of water.
 - C. an increasing supply of nutrients.
 - D. an increasing competition for space.

10. The followings are the main **physical measures** used for controlling pests and diseases on the farm:
- A. Manual killing, hand picking and trapping.
 - B. Crop rotation, manual killing and drainage.
 - C. Time of planting, drainage and mixed cropping.
 - D. Integrated pest management, pesticides and burning.
11. **Control** of pests and diseases on our farm can greatly result in _____ of product.
- A. poor sales
 - B. low turnover
 - C. minimum yield
 - D. improved quality
12. Which of the following **husbandry practices** are carried out in piglet management?
- A. Castration, tail cutting and watering.
 - B. Castration, watering and ear cutting.
 - C. Castration, clipping eye- teeth and genetics.
 - D. Castration, tail cutting and clipping eye- teeth.
13. **Ventilation** is useful for growth and development of animals in farming and it is defined as;
- A. proper drainage to control flow of water.
 - B. adequate spacious and free flow of air in the farm building.
 - C. an organ of the animal used for breathing with less flow of air.
 - D. a permanent building required to keep animals from excessive heat.
14. **Local breeds** of pigs are NOT highly recommended in farming because they;
- A. grow, produce and develop faster.
 - B. can easily catch pests and diseases.
 - C. have good food conversion ratio (FCR).
 - D. are not as productive as the European breeds.

15. Which of the following is an example of a **disorder** in animals?
- A. Mastitis.
 - B. Lameness.
 - C. Brucellosis.
 - D. Tuberculosis.
16. **Coccidiosis** is a disease normally found in _____.
- A. pigs
 - B. cattle
 - C. sheep
 - D. poultry
17. Which of the following is an important **safety procedure** when using agricultural chemicals?
- A. Use only once a year.
 - B. Ensure cheaper prices.
 - C. Keep in proper storage.
 - D. Avoid environmental laws.
18. One of the important export market **requirements** is;
- A. Size of product.
 - B. Price of product.
 - C. Quality of product.
 - D. Label of product.
19. **Adding value** to a local primary product like a pineapple can be done through;
- A. canning.
 - B. selling in bunch.
 - C. reducing the price.
 - D. grading into different sizes.

20. One of the **post-handling steps** used to meet both local and export market requirement is;
- A. Pricing.
 - B. Selling.
 - C. Nursery.
 - D. Transplanting.

SECTION A.

20

SECTION B:**FREE RESPONSES****(100 MARKS)****WRITE YOUR ANSWERS IN THE APPROPRIATE SPACES PROVIDED.**

QUESTION ONE:**AGRICULTURAL ECOSYSTEMS****(10 MARKS)****Part One:****(4 Marks)**

1. Using local examples, describe the two **farming systems** listed below.

i. Mono cropping farming system.

(2 marks)

ii. Agroforestry farming.

(2 marks)

Part Two:**(6 Marks)**

1. Discuss how each of these **key components of ecosystem** are affected by deforestation.

i. Soil microbes.

(3 marks)

ii. Plants and vegetation.

(3 marks)

B – Q.1.

--

10

QUESTION TWO:**SOILS****(16 MARKS)****Part One: (6 Marks)**

1. Explain how the following **practices and activities** listed below help to improve soil structure.

i. Cover cropping;

(2 marks)

ii. Proper drainage;

(2 marks)

iii. Use of composting;

(2 marks)

Part Two: (10 Marks)

1. Use the picture below of **Soil erosion** to answer questions (i-ii) that follow;



Source: Bing image, 2019.

- i. Discuss ONE (1) **negative impact** of soil erosion.

(3 marks)

- ii. Explain ONE (1) of the MOST appropriate **control measures** that can be used to minimise the effects of soil erosion.

(3 marks)

2. Explain ONE (1) MAIN **reason** why these factors below require us to maintain good soil conservation practices at all times.

i. Atoll islands;

(2 marks)

ii. Growing population;

(2 marks)

B – Q.2.

16

QUESTION THREE:**PLANT PRODUCTION****(17 MARKS)****Part One: (8 Marks)**

i. Describe how the following **management practices** influence crop growth and development;

a. Weed control

(2 marks)

b. Excessive shade

(2 marks)

c. Fertilizer application

(2 marks)

d. Farm irrigation

(2 marks)

Part Two: (9 Marks)

i. Explain with support of examples, how the following **plant production strategies** help to produce a quality product.

a. Grafting;

(3 marks)

b. Pruning;

(3 marks)

c. Use of best planting materials/cultivars;

(3 marks)

B – Q.3.

17

QUESTION FOUR:**PLANT PROTECTION****(10 MARKS)****Part One: (4 Marks)**

1. Study the picture below of an **infected lemon leaf** and answer questions (i-ii) that follow;



- i. Describe what kind of **pest group** is causing this damage on the picture above.

(2 marks)

- ii. Describe how **proper drainage** can be useful to farmers in controlling the pest indicated in the picture above.

(2 marks)

Part Two: (6 Marks)

1. Explain the MAIN **economic reason** why controlling pests and diseases are important in relation to quality and trade.

i. Quality:

(3 marks)

ii. Trade:

(3 marks)

B – Q.4.

	10

QUESTION FIVE:**ANIMAL PRODUCTION****(15 MARKS)****Part One: (6 Marks)**

1. Describe with support of examples the key functions of these **reproductive systems in animals**.

i. Testes,

(2 marks)

ii. Ovary,

(2 marks)

iii. Uterus,

(2 marks)

Part Two: (9 Marks)

1. Explain how **quality, availability and quantity** of feed stock and water affect growth and development in poultry farming.

i. Quality;

(3 marks)

ii. Availability;

(3 marks)

iii. Quantity;

(3 marks)

B – Q.5.

15

QUESTION SIX:**ANIMAL PROTECTION****(10 MARKS)****Part One: (4 Marks)**

1. Describe the TWO (2) **animal disorders** below.

i. Farrowing difficulties;

(2 marks)

ii. Dehydration;

(2 marks)

Part Two: (6 Marks)

2. Study the picture of a **sick cow** below infected by Tuberculosis (TB) and answer questions (i-ii) that follow;



i. Explain any ONE (1) **symptom** of tuberculosis (TB) that you can observe on the animal above.

(3 marks)

- ii. Explain ONE (1) possible **control measure** the farmer can do to avoid tuberculosis (TB) spreading rapidly to the other farm animals.

(3 marks)

B – Q.6.

10

QUESTION SEVEN:**AGRICULTURAL MANAGEMENT****(10 MARKS)****Part One: (4 Marks)**

1. Describe how the TWO (2) **regulations** below can affect the management of Agricultural enterprises.

i. Tariffs;

(2 marks)

ii. Trade barriers;

(2 marks)

Part Two: (6 Marks)

2. Explain how the TWO (2) **resource factors** listed below can influence the management decisions of any farming enterprises.

i. Market opportunities;

(3 marks)

ii. Storage systems;

(3 marks)

B – Q.7.**10**

QUESTION EIGHT:**AGRICULTURAL MARKETING****(10 MARKS)****Part One: (4 MARKS)**

1. Post-harvest handling steps are very important factors to consider before marketing of products in order to meet the local market requirements.

Describe how the TWO (2) **factors** listed below (i-ii) can affect sales when it reaches the market.

- i. Product quality;

(2 marks)

- ii. Market prices;

(2 marks)

Part Two: (6 Marks)

1. Using cassava crop as an example, explain how processing **add value** to this local primary product.

(3 marks)

2. Discuss how LACK of **financial capital** can become a challenge or limitation to farmer's capacity to process any local primary product.

(3 marks)

B – Q.8.

10

This page has been left blank deliberately

--	--	--	--	--	--

SECTION A

MULTIPLE CHOICE (20 MARKS)

Write clearly the letter of the correct answer in the box provided. Make sure your answer is put alongside the right question number.

EXAMPLE:

If you consider B is the correct answer, write it like this:

B

To change your answer from B to C, cross out B and write the new answer by the box, like this:

B

C

1.

--

11.

--

2.

--

12.

--

3.

--

13.

--

4.

--

14.

--

5.

--

15.

--

6.

--

16.

--

7.

--

17.

--

8.

--

18.

--

9.

--

19.

--

10.

--

20.

--

FOR MARKER USE ONLY

QUESTION	M A R K S	MARKER	CHECKER
M/C	20		
B.1	10		
B.2	16		
B.3	17		
B.4	10		
B.5	15		
B.6	10		
B.7	10		
B.8	10		
TOTAL	118		
Marker / Checker Initials			