

MARKER CODE



Student Personal Identification Number

Solomon Islands National Form Six School Certificate

AGRICULTURE 2018

QUESTION AND ANSWER BOOKLET

THURSDAY 15th NOVEMBER 9:00 AM

TIME: 3 Hours Plus 10 Minutes
Reading Time.

INSTRUCTIONS

1. This Examination has TWO (2) 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	100 marks
	3 hours	120 marks

2. Write all the answers to the Multiple Choice questions in the answer sheet on the **FOLD-OUT FLAP** on the last page of the 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 fold-out flap at the end of this booklet.
5. Check that the booklet contains pages **2-22** in the correct order and that none of these pages is blank. Page **21** 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

120

SECTION A:**MULTIPLE CHOICE QUESTIONS****(20 MARKS)**

THIS SECTION CONSISTS OF 20 MULTIPLE CHOICE QUESTIONS WORTH ONE (1) MARK EACH. CIRCLE THE LETTER OF THE BEST ANSWER A, B, C or D.

1. Which of the following lists represents the Natural ecosystems?
 - A. Farms, plantations and greenhouses.
 - B. Farms, forests and greenhouses.
 - C. Beaches, atolls and forests.
 - D. Plantations, atolls and forests.

2. Chemicals like pesticides are not used in this type of farming system;
 - A. Organic farming.
 - B. Commercial farming.
 - C. Mixed farming.
 - D. Agroforestry.

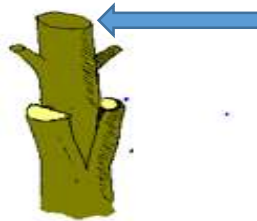
3. Soil texture, structure and color are useful to describe the _____ properties of the soil.
 - A. Chemical.
 - B. Physical.
 - C. Biological.
 - D. Origin.

4. The heavy reliance on herbicide by vegetable farmers can greatly reduce the levels of both the;
 - A. soil organisms and soil nutrient status.
 - B. animal manure and green manure.
 - C. soil water and soil air.
 - D. soil pH and drainage.

5. Which practice below is an important practice to soil because it can help to increase organic matter content of the soil?
 - A. Liming.
 - B. Irrigation.
 - C. Weeding.
 - D. Mulching.

6. Which of these are examples of macro- nutrients in soil needed in large quantities to support plant growth and development?
- A. N, P, K.
 - B. N, P, Zn.
 - C. Zn, Fe, Cl.
 - D. Zn, Mn, Fe.
7. Adequate light is ONE (1) important factor in plant growth and development because it helps the plant in the;
- A. respiration.
 - B. transpiration.
 - C. photosynthesis.
 - D. evaporation.

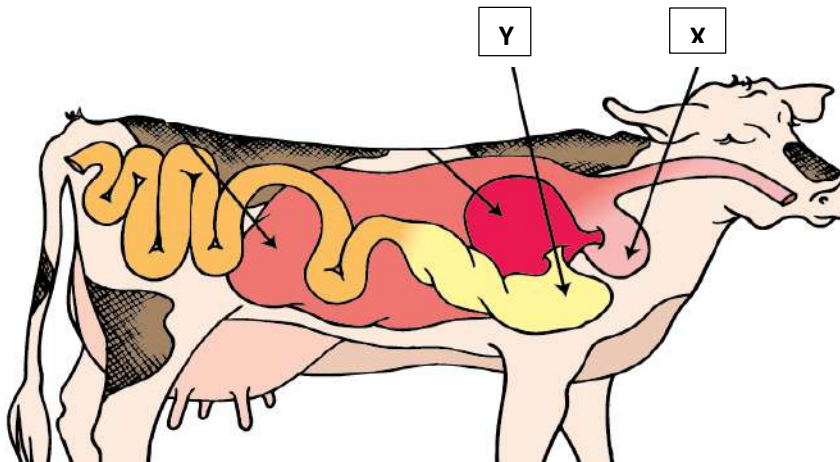
USE THE DIAGRAM BELOW TO ANSWER QUESTION 8.



8. The top part of the propagation as indicated by the arrow in the above picture is called;
- A. stock
 - B. scion
 - C. parent
 - D. stem
9. Nematode is an example of a;
- A. disease
 - B. pests
 - C. vertebrates
 - D. insect

10. This group of pest causing damage to crops by chewing, sucking and boring.
- A. Insects and mites.
 - B. Insects and snails.
 - C. Mites and snails.
 - D. Mites and birds.

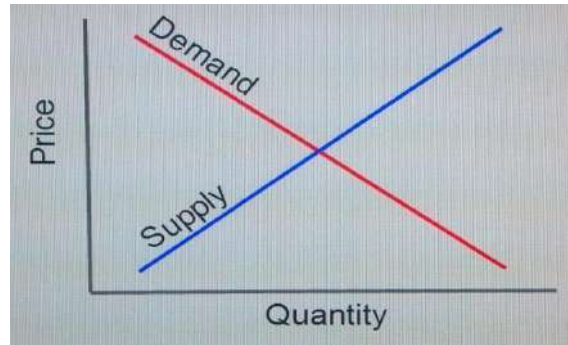
USE THE DIAGRAM BELOW TO ANSWER QUESTIONS 11 AND 12.



11. The part labelled X in the above diagram is called;
- A. rumen.
 - B. stomach
 - C. reticulum
 - D. liver
12. The main function of the part labelled Y in the above diagram is to;
- A. chemically breakdown the food.
 - B. absorb all the water.
 - C. distribute all nutrients.
 - D. keep away bacteria.
13. Clipping of eye- teeth in animal husbandry is an important management practice to;
- A. boar
 - B. sow
 - C. weaners
 - D. piglets

14. Understanding the _____ of pests is important in order to ensure, we apply the control method at the right time.
- A. life cycle
 - B. level
 - C. damage
 - D. amount
15. Chronic respiratory disease is **one** main problem associated with;
- A. pigs
 - B. poultry
 - C. cattle
 - D. sheep
16. Which Law is applied below when pig farming is NOT allowed in the middle of the villages and in towns?
- A. Biosecurity Law
 - B. Regulatory controls Law
 - C. Land tenure Law
 - D. Environmental laws
17. ONE (1) of the roles of the financial institutions to our farmers is to provide;
- A. capital.
 - B. planting materials.
 - C. market opportunity.
 - D. human resources.
18. Which of these stages require a greater need to be careful during the post –harvest handling stage in a water melon farm in order to maintain quality of the product?
- A. Proper planting space.
 - B. Pest and diseases control.
 - C. Choosing the ripe ones.
 - D. Transportation to market.
19. _____ sold in the market are examples of how processing can add value to a primary product.
- A. Slippery cabbage
 - B. Green coconuts
 - C. Kumara chips
 - D. Ripe pawpaw

REFER TO THE ECONOMICS OF PRODUCTION GRAPH WATER MELON AT THE LOCAL MARKET BELOW TO ANSWER QUESTION 20 THAT FOLLOWS.



20. Which is the best statement about this economics of production graph?

- A. When the supply is low, the quantity is low.
- B. When the demand is low, the quantity high.
- C. The demand is high when the supply is high.
- D. The price is high when the supply is low.

Total marks for Section A.

20

WRITE YOUR ANSWERS IN THE APPROPRIATE SPACES PROVIDED.

QUESTION ONE: AGRICULTURAL ECOSYSTEM

Part One: (4 marks)

1. Describe the term “**Agroforestry**”.

(2 marks)

2. Describe any impact of **pesticides** on the natural ecosystem.

(2 marks)

Part Two: (6 marks)

1. Discuss with examples, ONE (1) **negative effect** of these practices below on the natural ecosystem.

a. Over cultivation:

(3 marks)

b. Deforestation:

(3 marks)

QUESTION TWO: SOILS

Part One:

(6 marks)

1. Explain how does composting affect the nutrient status of the soil.

(2 marks)

2. Explain how does proper drainage help soil conservation.

(2 marks)

3. Refer to the diagram below and answer question i (*a and b*) below.



i. List TWO (2) ways in which this organism help to increase **soil fertility**.

a. _____

b. _____

(2 marks)

Part Two:

(9 marks)

Mr. Tom got a new piece of flat land for planting slippery cabbages. Slippery cabbages grow well in soils with pH of 6.0 – 7.0. He divided the land into two (A and B) and carried out a soil test for soil pH, soil type and N, P and K content. See results in the table below;

<i>Area</i>	<i>pH</i>	<i>Soil Type (%)</i>			<i>N, P, K Content</i>		
		<i>Sand</i>	<i>Silt</i>	<i>Clay</i>	<i>N</i>	<i>P</i>	<i>K</i>
A	5	10	35	55	Low	Low	Moderate
B	6.5	5	45	50	High	Moderate	Moderate

1. Explain TWO (2) reasons why the farmer would choose Area B to carry out his farm?

Reason i. _____

(2 marks)

Reason ii. _____

(2 marks)

2. Discuss ONE (1) way in which the farmer can help to increase the **Nitrogen and Phosphorus** content of the soil in area A.

(3 marks)

3. Discuss ONE (1) way in which the farmer can improve the **pH level** of area A in order to be suitable for growing slippery cabbage.

(2 marks)

B – Q2.

	15
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QUESTION THREE: PLANT PRODUCTION

Part One

(8 marks)

Look at the diagram below to answer question 1 below;



1. Describe ONE (1) **advantage** of this type of fertilizer application

(2 marks)

2. Explain how mulching helps to reduce wilting in plants.

(2 marks)

3. Explain how pruning helps to increase quality sized pods on a crop like cocoa.

(2 marks)

4. Explain how weed control help to reduce pest and disease on our crops.

(2 marks)

Part Two

(9 marks)

1. Discuss how do these planting strategies help to increase farm productivity.

a. Choice of cultivar

(3 marks)

b. Use of plant hormones like auxin

(3 marks)

c. Grafting

(3 marks)

B – Q3.

17

QUESTION FOUR: PLANT PROTECTION

Part One

(4 marks)

1. How would the Integrated Pest Management (IPM) help to reduce pest problem on the crop farm?

(2 marks)

USE THE DIAGRAM AND INFORMATION TO ANSWER QUESTION 2 BELOW.

Rhinoceros beetle is becoming a real threat to our farmers today. This will affect our national economy if it is not controlled.



2. Explain how biosecurity can help to control the spread of this pest in the country.

(2 marks)

Part Two

(6 marks)

1. Explain how the control of Pests and diseases of crops will affect the followings;

- a. Product trading

(2 marks)

b. Product quality

(2 marks)

c. Product Yield

(2 marks)

B – Q4.

10

QUESTION FIVE: ANIMAL PRODUCTION

Part One.

(6 marks)

1. Describe how a pig farmer would use animal body conformation as a selection criteria for breeding stock.

(2 marks)

2. Explain why it is important to consider the animal breed in cattle farming.

(2 marks)

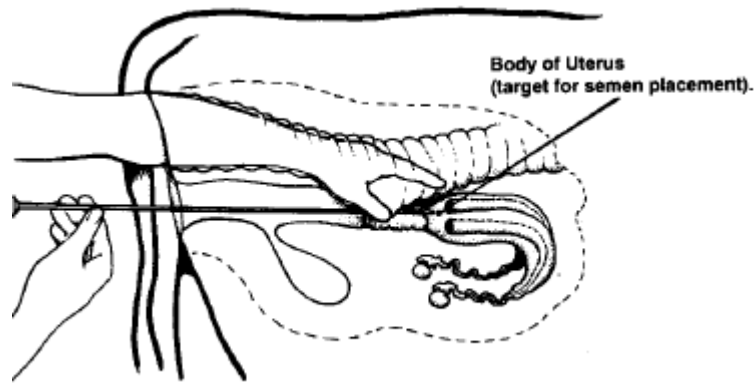
3. Explain what could have happened to your boar if you observed an abnormal behaviour like lying down, breathing heavily and foam coming out from the mouth?

(2 marks)

Part Two:

(10 marks)

Refer to the diagram below of one breeding system in cattle industry and answer questions (1 and 2).



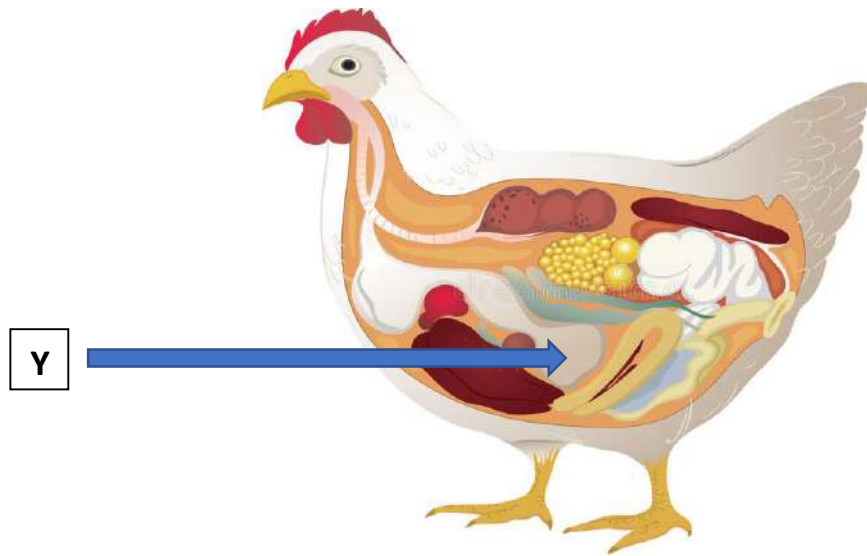
1. Discuss ONE (1) advantage of this breeding system.

(3 marks)

2. Justify why this breeding system is **not** very popular in the Solomon Islands.

(4 marks)

Refer to the diagram of the poultry digestive system below and answer question 3 that follow;



3. Explain the main role of this part labelled Y.

(3 marks)

B – Q5.

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QUESTION SIX:**ANIMAL PROTECTION****Part One:****(4 marks)**

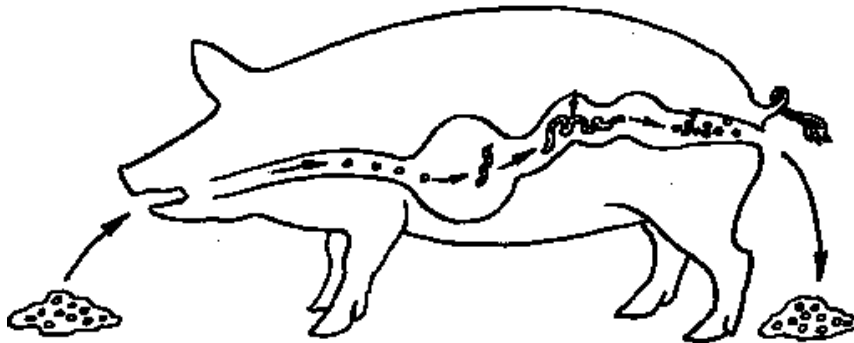
1. Describe how stock grazing rotation help to control pest and disease in your cattle farm.

(2 marks)

2. Describe the disease mastitis in pigs.

(2 marks)**Part Two:****(7 marks)**

Refer to the diagram below to answer questions (1 and 2) that follows;



1. Explain TWO (2) main symptoms of this parasites on the pig.

(i) _____

(ii) _____

(4 marks)

2. Explain why you would recommend hygienic practices as one best method to protect your remaining herd from this parasite problem.

(3 marks)

QUESTION SEVEN: AGRICULTURAL MANAGEMENT

Part One:

(4 marks)

1. Describe why the proper recording of your vegetable sales (income) is important for the farmer.

(2 marks)

2. Describe why reading the instructions on chemicals is a very important safety procedure.

(2 marks)

Part Two:

(6 marks)



Based on the above notice, answer the TWO (2) questions below;

1. List down THREE (3) key roles of the Biosecurity Department in the Ministry of Agriculture and Livestock in the Solomon Islands in relation to this notice.

i. _____

ii. _____

iii. _____

(3 marks)

2. Justify with ONE (1) reason why it is necessary to apply heavy penalties to those people who do not comply with the above notice.

(3 marks)

B – Q7.

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QUESTION EIGHT: AGRICULTURAL MARKETING

Part One:

(5 marks)

1. Explain ONE (1) quality feature to be observed by the Kumara farmer if he/she wishes to sell successfully in both the local and overseas markets.

(2 marks)

2. Explain how the “Market price” affects the product when it finally reaches the market.

(3 marks)

Part Two:

(6 marks)

1. Discuss ONE (1) way in which the farmer can do to plan his strategy to **minimise** the effects of heavy rain that is frequently experienced throughout the country.

(3 marks)

2. Discuss ONE (1) way in which a melon farmer can increase his sales at the local market where there is a **stiff competition** between all the other melon farmers.

(3 marks)

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SINF6SC – AGRICULTURE 2018

Student Personal Identification Number

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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

- | | |
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FOR MARKER USE ONLY

QUESTION	MARKS	MARKER	SCRIPT CHECKER
M/C	20		
B.1	10		
B.2	15		
B.3	17		
B.4	10		
B.5	16		
B.6	11		
B.7	10		
B.8	11		
TOTAL	120		
Marker / Checker Initials			