

STUDENT EDUCATION NUMBER

GOVERNMENT OF SAMOA
MINISTRY OF EDUCATION, SPORTS AND CULTURE

Samoa Secondary Leaving Certificate

AGRICULTURAL SCIENCE 2019

QUESTION and ANSWER BOOKLET

Time allowed: 3 Hours & 10 minutes

INSTRUCTIONS

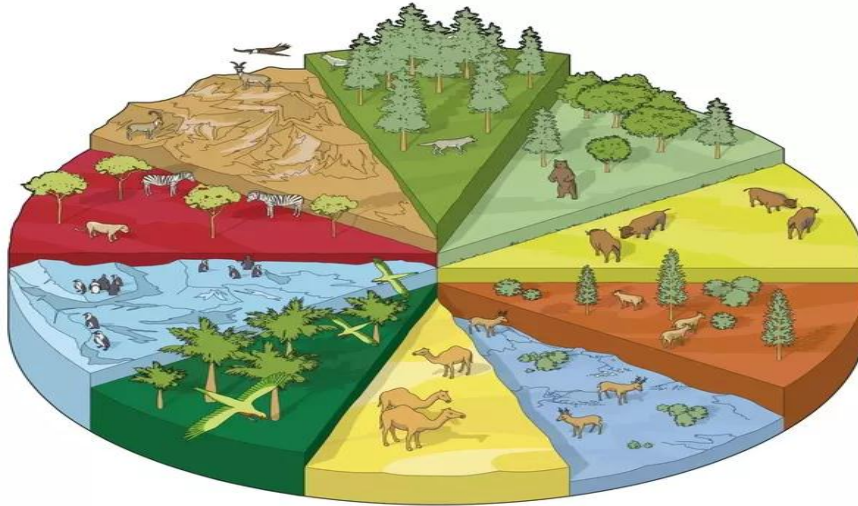
1. You have 10 minutes to read **before** you start the exam.
2. Write your **Student Education Number (SEN)** in the space provided on the top left hand corner of this page.
3. **Answer ALL QUESTIONS.** Write your answers in the spaces provided in this booklet.
4. If you need more space, ask the Supervisor for extra paper. Write your SEN on all extra sheets used and clearly number the questions. Attach the extra sheets at the appropriate places in this booklet.

STRANDS		Page	Time (min)	Weighting
STRAND 1:	AGRICULTURE IN SAMOA	2	18	10
STRAND 2:	SOILS	4	45	24
STRAND 3:	FARM MANAGEMENT, ECONOMICS AND MARKETING	8	22	12
STRAND 4:	CROP PRODUCTION	10	40	23
STRAND 5:	ANIMAL PRODUCTION	14	43	24
STRAND 6:	TOOLS, EQUIPMENTS AND FACILITIES	18	12	7
TOTAL			180	100

Check that this booklet contains pages 2-20 in the correct order and that none of these pages is blank.

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

Study the picture given below to answer Number 1 to 5.



1. Name a producer in an ecosystem.

SL 1

2. Define the natural ecosystem.

SL 1

3. List TWO characteristics of a managed ecosystem.

(a) _____

(b) _____

SL 2

4. Explain the differences between a managed and unmanaged ecosystem.

SL 3

5. Explain the impact of regional or local agricultural practices on the natural ecosystem.

SL 3

6. Define the chemical properties of soil (pH).

SL 1

7. Name a property of volcanic soil.

SL 1

8. Define crop rotation.

SL 1

9. Name a property of coral soil.

SL 1

10. Define tillage.

SL 1

11. Define deforestation.

SL 1

12. Describe the physical properties of volcanic soil.

SL 2

13. Describe the biological properties of the newly decomposed soil.

SL 2

Use the picture given below to answer Number 14.



14. Explain the effect of biological properties on soil texture and structure.

SL 3

15. Explain how micro-organisms on top soil are affected by burning.

SL 3

Use the picture given below to answer Number 16 and 17.



16. Discuss how soil properties are affected by soil leaching.

SL 4

17. Discuss the effect of deforestation on the quality of soil.

SL 4

18. Give ONE role of record keeping in managing a layer chicken farm.

SL 1

19. Name a type of human resource in a horticulture farm.

SL 1

20. What is post harvesting?

SL 1

Use the picture given below to answer Number 21.



21. Name a physical resource shown in the diagram.

SL 1

22. Lists TWO types of human resources.

(i) _____

(ii) _____

SL 2

23. Explain the post-harvest handling steps used on banana to meet the local market requirements.

SL 3

24. Explain post-harvest handling steps used on eggs to meet consumer demand.

SL 3

25. Define asexual reproduction.

SL 1

Use the picture given below to answer Number 26.



26. Name the vegetative propagation method shown in the picture above.

SL 1

27. Define Air layering/Marcotting.

SL 1

28. What are gametes?

SL 1

29. Define grafting.

SL 1

30. What a re fungus?

SL 1

31. Define bacteria.

SL 1

32. What are metamorphoses?

SL 1

33. Define tariff.

SL 1

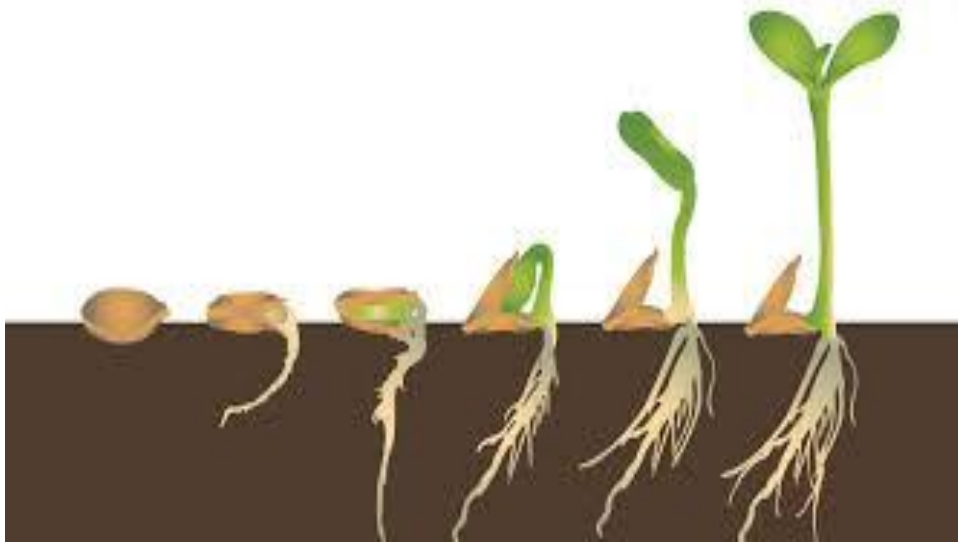
34. Give TWO examples of asexual reproduction that you have studied.

(a) _____

(b) _____

SL 2

Use the picture given below to answer Number 35.



35. Describe seed germination.

SL 2

36. Explain how asexual reproduction is used to increase plant numbers or multiplying plant varieties.

SL 3

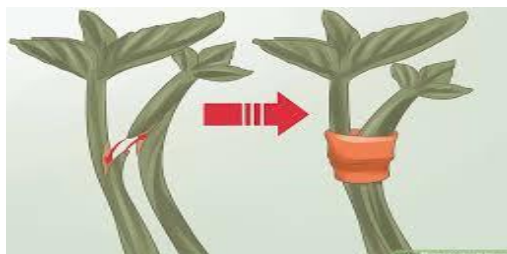
Use the picture given below to answer Number 37.



37. Explain the effect of the pest mouth part shown in the picture on Chinese cabbage.

SL 3

Use the picture given below to answer Number 38.



38. Discuss a procedure or method (steps form) of rafting Lime plants.

SL 3

39. Name ONE farming system for raising broiler chickens.

SL 1

40. Identify ONE farming system for raising subsistence pigs.

SL 1

41. Define husbandry practices.

SL 1

42. Define the disease Mastitis in Dairy cattle.

SL 1

Use the picture given below to answer Number 43.



43. Name the pig breed shown in the diagram.

SL 1

44. Define Brucellosis in cattle.

SL 1

45. What is Tuberculosis disease?

SL 1

46. Describe how humidity affects the growth and development of cattle.

SL 2

Use the picture given below to answer Number 47.



47. Describe TWO characteristics of the Samoan local chicken.

SL 2

Use the picture given below to answer Number 48.



48. Describe lameness disorders on the hoofs of sheep.

SL 2

49. Explain the purposes of tail docking on sheep.

SL 3

50. Discuss the importance of controlling diseases in pig production.

SL 4

Use the picture given below to answer Number 51.



51. Describe the nutritive value of legume pastures.

SL 4



52. Name the agriculture equipment shown in the diagram.

SL 1

53. Define Knapsack sprayer.

SL 1

Use the picture given below to answer Number 54.



54. Describe the correct use of the tool shown in the diagram above.

SL 3

55. Explain the first-aid safety procedures you should follow if get contaminated by Agricultural chemicals.

SL 3

STUDENT EDUCATION NUMBER									

AGRICULTURAL SCIENCE

2019

(For Scorers only)

STRANDS	Weighting	Scores	Check Scorer
STRAND 1: AGRICULTURE	10		
STRAND 2: SOILS	24		
STRAND 3: FARM MANAGEMENT, ECONOMICS AND MARKETING	12		
STRAND 4: CROP PRODUCTION	23		
STRAND 5: ANIMAL PRODUCTION	24		
STRAND 6: TOOLS, EQUIPMENTS AND FACILITIES	7		
TOTAL	100		