

STUDENT EDUCATION NUMBER



Sāmoa School Certificate
AGRICULTURAL SCIENCE
2016
QUESTION and ANSWER BOOKLET

Time allowed: 3 hours and 10 minutes

INSTRUCTIONS:

1. You have 10 minutes to read **before** you start writing.
2. Write your **Student Education Number (SEN)** in the space provided on the top right 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 for answers, 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 Number	Time (Minutes)	Weighting
1. Agriculture in Samoa	2	14	8
2. Soils	4	18	10
3. Farm Management, Economics and Marketing	6	36	20
4. Crop Production	10	43	24
5. Animal Production	15	55	30
6. Tools	21	14	8
TOTAL		180	100

CHECK! This booklet contains pages 2-22 in the right order.

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

Study the ecosystem below and answer Number 1 - 3



1. Name an agricultural practice in Samoa that is shown in the ecosystem above.

Skill Level 1

2. Name this ecosystem.

Skill Level 1

3. Describe a managed ecosystem.

Skill Level 2

4. Explain how to use genetics in selecting a new plant example on improved selection.

Skill Level 3

5. What is a monohybrid cross.

Skill Level 1

Study the diagram of soil conservation below and answer Number 6 - 9



6. Name this soil conservation.

Skill Level 1

7. Explain the soil conservation method shown in the diagram.

Skill Level 3

Strand 3: Farm Management, Economics and Marketing Weighting 20

10. Define the following terms.

a. *Marginal Cost*

Skill Level 1

b. *Optimum point*

Skill Level 1

c. *Total Cost*

Skill Level 1

d. *Maximum Point'*

Skill Level 1

e. *Marketing Channel*

Skill Level 1

f. *Break even point*

Skill Level 1

11. Explain what Partial Budget is.

Skill Level 3

12. Describe the purpose of records in production management.

Skill Level 2

13. Explain ONE input factor to improve production.

Skill Level 3

14. Describe the best point of production.

Skill Level 2

STRAND 4

Crop Production

Weighting 24

16. Name an agro-forestry project in Samoa.

Skill Level 1

17. Identify ONE feature of a managed forest.

Skill Level 1

18. Name a local timber tree species present in managed forest.

Skill Level 1

19. Describe TWO features of natural forests.

Skill Level 2

20. Define the Guard cell and Stomata of the internal structure of a leaf.

i) *Guard cell*

Skill Level 1

ii) *Stomata*

Skill Level 1

21. Explain the function of the xylem in the internal structure of a plant stem.

Skill Level 3

Use the diagram below to answer Number 22 and 23.



22. Define the term *Root Pruning*.

Skill Level 1

23. Explain the purpose of Pruning.

Skill Level 3

24. Define the following terms:

i) *Seed viability*

Skill Level 1

ii) *Absorption*

Skill Level 1

25. Explain the impact of intercropping in crop production.

Skill Level 3



28. Name the pig and cattle breeds in the diagram

i) Pig breed

Skill Level 1

ii) Cattle breed

Skill Level 1

29. Describe the uses of cattle to produce particular products.

Skill Level 2

30. List the type of pig production in Samoa.

i. _____

Skill Level 1

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ii. _____

Skill Level 1

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31. There are 4 recommended mating ratios for breeding pigs.
Describe TWO mating ratio for pigs.

Skill Level 2

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32. Describe what is artificial insemination or A.I.

Skill Level 2

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Use the diagram to answer Number 33 and 34.



33. Name the management practise shown in the diagram.

Skill Level 1

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34. Describe what is taking place in the diagram.

Skill Level 2

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35. Name a common disease of cattle.

Skill Level 1

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36. Name a method of growth used to maximise pigs production.

Skill Level 1

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Use the diagram below to answer Question 42-44.



42. Name the equipment in the picture.

Skill Level 1

43. Name the part labelled X.

Skill Level 1

44. State the function of the equipment.

Skill Level 1

