GOVERNMENT OF SAMOA

STUDENT EDUCATION NUMBER									

Samoa Secondary Leaving Certificate

DESIGN TECHNOLOGY 2024

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 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 paper to write your answers, ask the Supervisor. Write your SEN on all extra sheets used and clearly number the questions. Attach the extra sheets to the appropriate places in this booklet.

STRANDS		Pages	Time (min)	Weighting
STRAND 1	**DESIGNING** Demonstrate knowledge and understanding of the principles of design and solving practical problems through the design process.	2-5	50	25
STRAND 2	**DRAWING** Develop the ability to communicate in graphic and verbal forms.	6-7	25	15
STRAND 3	**TOOLS** Demonstrate knowledge and understanding of the safe use and care of tools in the workshop.	8-10	25	15
STRAND 4	**MATERIALS** Demonstrate knowledge and understanding of the use of variety of materials used in a school workshop.	11-13	25	15
STRAND 5	**PROCESSES** Demonstrate knowledge and understanding of the processes used when working with materials and tools in the workshop.	14-17	50	25
STRAND 6	**TECHNOLOGY** Demonstrate knowledge and understanding of the nature of technology and its effects on the lives of people.	18	5	5
TOTAL			**180**	**100**

Check that this booklet contains pages 2-19 in the correct order and that none of these pages are blank.

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

STRAND 1	DESIGNING	WEIGHTING 25

1. Identify **ONE** criteria use for evaluating a project.

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SL 1

The diagram below illustrates a problem at home. Use the diagram to answer Questions 2 and 3.

***Source**:https://www.google.com/search?sca_esv=da56b67854fd2398&sca_upv=1&q=clothes+on+the+floor&tbm=isch&source=lnms&sa=X&ved=2ahUKEwjKt47p__KEAxVJr1YBHautC-sQ0pQJegQIDBAB&biw=1366&bih=633&dpr=1#imgrc=Ys9NWzdGe8RiFM*

2. Identify the problem shown on the diagram above.

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SL 1

3. Select the best solution for the design problem identified in Question 2.

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SL 1

4. (i) Draw a free hand sketch for the design solution in Question 3.

SL 2

(ii) Use a different idea of your choice to draw a different free hand sketch for the design solution in Question 3.

SL 2

5. List **TWO** specifications for the design solution in Question 3.

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SL 2

6. Plan the correct designing cycle for the design process.

SL 2

7. (i) Describe the main purpose of an **open design brief**.

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SL 3

(ii) Describe the main purpose of a **close design brief**.

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SL 3

8. Discuss the importance of specifications in relation to project evaluation.

SL 4

9. Evaluate the importance of the design process in relation to the project outcome.

SL 4

10. Sketch a centre line used in technical drawing.

SL 1

11. List **TWO** types of drawings in pictorial drawing.

A. _____

B. _____

SL 2

12. List the **THREE** types of scales used in drawing.

A. _____

B. _____

C. _____

SL 2

13. (i) Compare a cabinet and cavalier drawing in your own word.

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SL 3

(ii) Compare a 3rd angle and 1st angle projection. [You can use drawings to compare]

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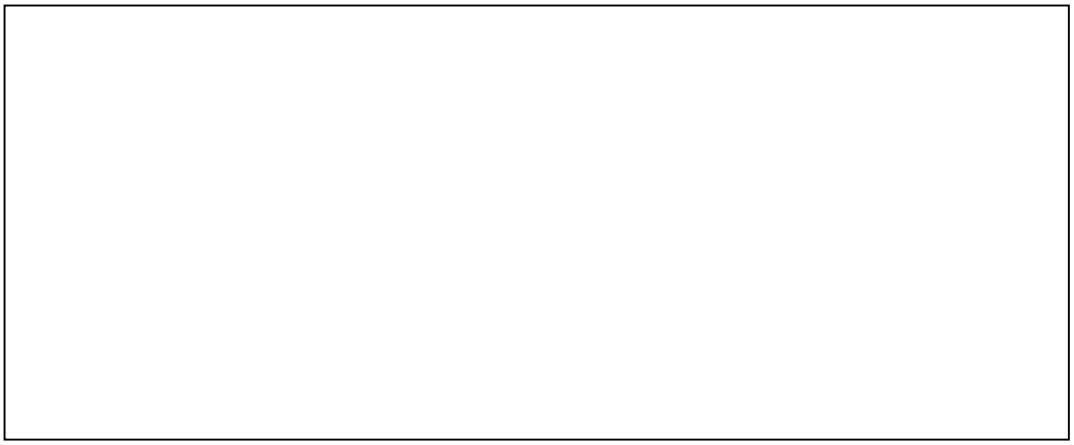
SL 3

Drawing



14. Discuss the purpose of a scale in relation to drawing.

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SL 4

15. What are router bits used for?

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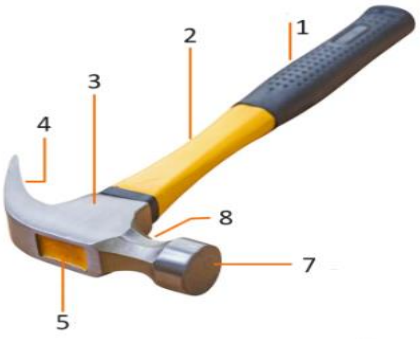
SL 1

16. Label parts 1, 4 and 7 of the following tool.

1. _____
4. _____
7. _____



SL 1

17. Name the brand of the given tool

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SL 1

18. Describe the function of impelling tools.

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SL 2

19. Explain why a utility knife is repeated in both marking and cutting tool.

SL 3

20. Explain clearly why storage is required for tools.

SL 3

21. Compare the advantages of cordless and power tool.

SL 4

22. Name the part of the tree trunk that indicates the tree's age.

SL 1

1. _____

23. Name a property of timber.

SL 1

1. _____

24. In the space provided, draw and label a timber defect you have learned about.

SL 2

25. Draw and label the cross section of a tree trunk.

SL 2

26. Compare the appearance of a softwood and hardwood tree.

SL 3

27. Explain **THREE** reasons why local timbers are commonly used by carpenters.

SL 3

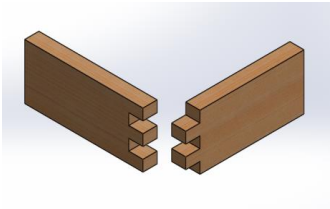
28. Differentiate the properties of local and overseas timber.

SL 3

29. Identify the following type of timber joint.

(i) Timber joint type A.

A: _____



SL 1

(ii) Timber joint type B.

B: _____

SL 1

(iii) Timber joint type C.

C: _____

SL 1

30. Describe the most important thing to remember in any workshop.

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SL 2

31. List two tools needed when cutting a dovetail joint.

SL 2

a._____

b._____

32. Describe the meaning of good trade practices in the design and technology trade.

SL 2

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33. Identify why the good use of resources in any workshop is needed.

SL 2

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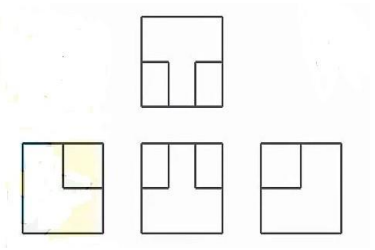
34. Interpret the following orthographic and draw the isometric view of the object.



SL 3

35. Explain the appropriate method to use when ripping a 20mm thickness timber using a skill saw.

SL 3

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36. Discuss the importance of a cutting list in project building.

SL 4

37. Differentiate the application of a wood stain and wood varnish.

SL 4

38. List **TWO** nowadays construction technology when working with timber.

1. _____

2. _____

SL 2

39. Explain the process of timber conversion.

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SL 3

STUDENT EDUCATION NUMBER									

SSLC DESIGN TECHNOLOGY

2024

(For Scorers only)

STRANDS		Weighting	Scores	Check Scorer	AED Check
STRAND 1	DESIGNING	25			
STRAND 2	DRAWING	15			
STRAND 3	TOOLS	15			
STRAND 4	MATERIALS	15			
STRAND 5	PROCESSES	25			
STRAND 6	TECHNOLOGY	5			
TOTAL		**100**			