GOVERNMENT OF SAMOA

| STUDENT EDUCATION NUMBER | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

# Samoa National Junior Secondary 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**<br>Demonstrate knowledge and understanding of the principles of design and solving practical problems through the design process. | 2-5 | 50 | 25 |
| **STRAND 2** | **DRAWING**<br>Develop the ability to communicate in graphic and verbal forms. | 6-7 | 25 | 15 |
| **STRAND 3** | **TOOLS**<br>Demonstrate knowledge and understanding of the safe use and care of tools in the workshop. | 8-10 | 25 | 15 |
| **STRAND 4** | **MATERIALS**<br>Demonstrate knowledge and understanding of the use of variety of materials used in a school workshop. | 11-12 | 25 | 15 |
| **STRAND 5** | **PROCESSES**<br>Demonstrate knowledge and understanding of the processes used when working with materials and tools in the workshop. | 13-16 | 50 | 25 |
| **STRAND 6** | **TECHNOLOGY**<br>Demonstrate knowledge and understanding of the nature of technology and its effects on the lives of people. | 17 | 5 | 5 |
| **TOTAL** | | | **180** | **100** |

Check that this booklet contains pages 2 - 18 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. Name **ONE** stage in the Design Brief.

| SL 1 |
| --- |
| |

A. _____

2. Name **TWO** stages in the Design Process.

| SL 1 |
| --- |
| |

A. _____

B. _____

3. Define a design brief.

| SL 1 |
| --- |
| |

_____

_____

_____

_____

4. Draw a free hand sketch for a coin box.

| SL 2 |
| --- |
| |

5. List the **TWO** types of design briefs.

| SL 2 |
| --- |
| |

A. _____

B. _____

6. List **TWO** specifications for a project.

A. _____

_____

B. _____

_____

| SL 2 |
| --- |
| |

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

| SL 2 |
| --- |
| |

8. Explain the main focus of a **project sketching**.

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_____

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| SL 3 |
| --- |
| |

9. Explain the exact meaning of using the right tool and equipment for the right job.

| SL 3 |
| --- |
| |

10. Combine a set of specification for the project build.

| SL 4 |
| --- |
| |

11. Compile a set of criteria when evaluating a school project.

| SL 4 |
| --- |
| |

12. Define the term dimension line in drawing.

_____

_____

_____

| SL 1 |
| --- |
| |

13. List **TWO** drawing instruments.

A. _____

B. _____

| SL 2 |
| --- |
| |

14. List the **TWO** types of lettering and numbering in drawing.

A. _____

B. _____

| SL 2 |
| --- |
| |

15. Explain the purpose of a project plan.

_____

_____

_____

_____

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_____

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_____

| SL 3 |
| --- |
| |

16. Explain the purpose of a hidden line.

| SL 3 |
| --- |
| |

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

| SL 4 |
| --- |
| |

18. Define the following in your own words.

(i) Power Tools

_____

_____

_____

| SL 1 |
|---|
| |

(ii) Safety

_____

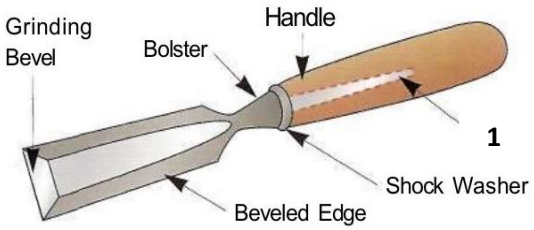
_____

_____

| SL 1 |
|---|
| |

19. Label the following diagram.

1. _____




| SL 1 |
|---|
| |

20. Describe the function of a marking gauge.

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_____

_____

_____

_____

_____

_____

| SL 2 |
|---|
| |

21. Explain the main purpose of power tools.

| SL 3 |
| --- |
| |

22. Explain the function of a nail punch.

| SL 3 |
| --- |
| |

23. Compare the usage of a router and a coping saw.

| SL 4 |
| --- |
| |

24. Name the **THREE** main parts of a tree growth.

    1. _____

    2. _____

    3. _____

| SL 1 |
| --- |
| |

25. Name **ONE** common liquid use by carpenter to treat or protect local timber from insect attack.

    _____

| SL 1 |
| --- |
| |

26. List **TWO** common overseas timber tree you study this year.

    1. _____

    2. _____

| SL 2 |
| --- |
| |

27. Describe the appearance of an overseas timber.

    _____

    _____

    _____

    _____

    _____

    _____

    _____

    _____

| SL 2 |
| --- |
| |

28. Explain the quality of a local timber.

| SL 3 |
| --- |
| |

29. Clarify how timber is graded.

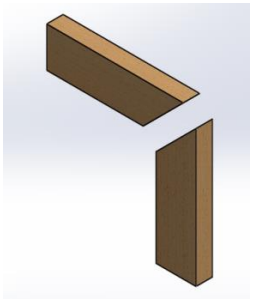
| SL 3 |
| --- |
| |

30. Differentiate the appearance of a softwood and hardwood tree.

| SL 3 |
| --- |
| |

31. Identify the following type of timber joint.

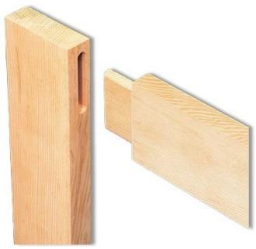
A. Timber joint type A.



_____

| SL 1 |
| --- |
| |

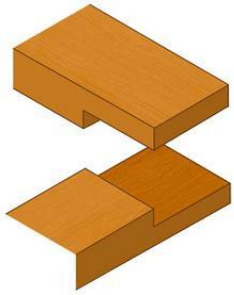
B. Timber joint type B.



_____

| SL 1 |
| --- |
| |

C. Timber joint type C.



_____

| SL 1 |
| --- |
| |

32. Describe the easiest way to check the square of a project.

_____

_____

_____

_____

_____

_____

| SL 2 |
| --- |
| |

33. List **TWO** ways to fix hammer mark on a timber surface without reducing its size.

1. _____

2. _____

| SL 2 |
| --- |
| |

34. Describe ways to apply a stain on a timber.

_____

_____

_____

_____

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_____

_____

_____

| SL 2 |
| --- |
| |

35. Describe the reason why we need to measure twice before cutting a timber.

_____

_____

_____

_____

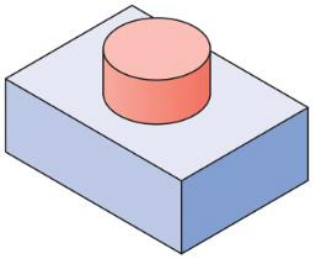
_____

_____

_____

| SL 2 |
| --- |
| |

36. Interpret the following drawing and draw it to a 3rd Angle Projection.



| SL 3 |
| --- |
| |

37. Explain the main purpose of a cutting list.

_____

_____

_____

_____

_____

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_____

_____

_____

_____

| SL 3 |
| --- |
| |

38. Convert the following Units. Show calculations.

A. 2' 8" = _____ mm

**Working Out**

| SL 4 |
| --- |
| |

B. 2.8 meter = _____inches

**Working Out**

39. Differentiate the application of a folding rule and a tape measure.

| SL 4 |
| --- |
| |

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40. List **TWO** advantages of technology to our everyday practices.

| SL 2 |
| --- |
| |

A. _____

B. _____

41. Explain the disadvantages of technology to the environment.

| SL 3 |
| --- |
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| STUDENT EDUCATION NUMBER | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
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# SNJSC 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** | | | |