



Samoa School Certificate

DESIGN TECHNOLOGY

2020

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 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.

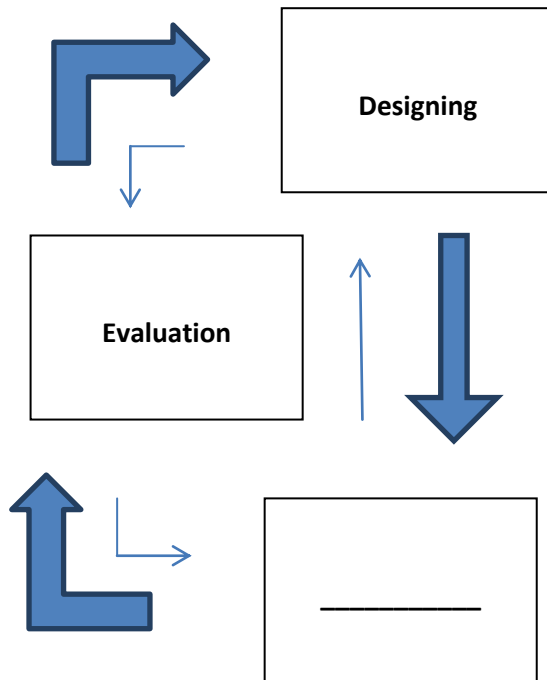
STRANDS		Page	Time (min)	Weighting
STRAND 1:	DRAWING AND DESIGN	2	31	17
STRAND 2:	TOOLS	5	25	14
STRAND 3:	MATERIALS	7	43	24
STRAND 4:	PROCESSING	10	54	30
STRAND 5:	TECHNOLOGY	15	27	15
TOTAL			180	100

Check that this booklet contains pages 2-17 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

The diagram shows the design process model. Use the model and your own knowledge to answer Questions 1 – 4.

THE DESIGN PROCESS



1. Fill in the missing stage on the Design Process Model.

SL 1

2. Describe the importance of the **designing** stage in the design process.

SL 2

3. Define the term “Design Brief”.

SL 1


4. Explain what is involved in the Evaluation stage of the model.

SL 3

5. Define the term "Oblique Projection".

SL 1

6. Draw, using your own dimensions a simple coffee table with four legs.



SL 2

Use the diagrams below to answer the questions that follow.

Diagram A



Diagram B



9. Name the tool in Diagram A.

SL 1

10. Describe the purpose of the tool in Diagram A.

SL 2

11. The tool in Diagram B is classified as a *(tick the correct answer)*.

Power Tool

Hand Tool

SL 1

12. Describe THREE differences between the tool in Diagram A and Diagram B.

SL 3

Timber is made from cutting a tree into various sizes.

15. Name the part of a tree that is best for making timber.

SL 1

16. Name a type of timber that can be processed from a tree.

SL 1

17. Define or sketch a “dead knot”.

SL 1

18. Differentiate local timber from imported timber.

SL 3

19. In the table below compare Wood and Metal materials using the properties provided.

Properties	Material	
	Wood	Metal
Moisture Resistance		
Durability		
Workability		

SL 3

Wood material is normally seasoned first before being used in construction and joinery.

20. Give an advantage of seasoning timber.

SL 1

21. Discuss the difference between a progressive and compartment kiln.

SL 4

22. Name a type of metal.

SL 1

23. Give ONE property of the metal you named in question 22.

SL 1

24. Describe the nature of the metal in question 22.

SL 2

25. Describe the nature of another metal.

SL 2

26. Select a different metal from the ones used in Question 22 – Question 25 and discuss its properties in relation to its use, as required in a design solution. Fill in the table below with your answer.

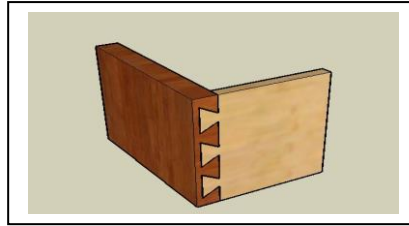
Metal	Properties	Uses	Design Solution

SL 4

Write the letter of your **BEST** answer in the **BOX** provided on the right hand side of each question.

27. What type of joint is shown in the figure below?

- A. Angle Butt.
- B. Lapped Dovetail.
- C. Angle Halving.
- D. Cross Halving.



SL 1

28. What is the most appropriate finish when you wish to protect outside boards?

- A. Glue.
- B. Paint.
- C. Vanish.
- D. Stain.

SL 1

29. Identify which of the following describes the use of a router.

- A. A hand tool used to hollow out an area.
- B. A narrow blade used for cutting curves in wood.
- C. A tool used for carving or cutting wood.
- D. Single edge tool used to scrape metal.

SL 1

30. Which of the following is a simple and effective method of strengthening dovetail joints?

- A. Glue.
- B. Pop Riveting.
- C. Welding.
- D. Pin.

SL 1

31. One must check for accuracy and _____ before assembling work.

- A. Fit
- B. Line
- C. Brace
- D. Balance



SL 1

32. Identify the main use of the tool below.



SL 1

33. Name the type of joint shown in the diagram.



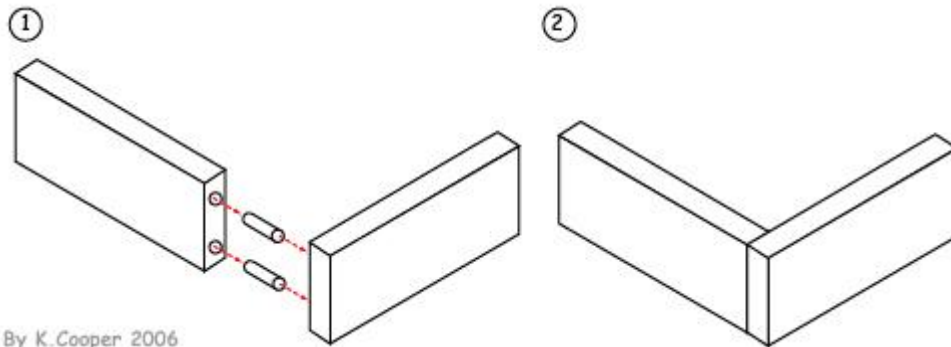
SL 1

34. Explain a method for squaring a box.



SL 3

35. Explain the steps of making the dowel join in the diagram below.



SL 3

Use the diagram and your own knowledge to answer Questions 36 – 40.



36. Explain why drawings are an important trade practice in the making process.

SL 3

37. Stain and vanish are common finishes that can be used on the coffee table.
Name TWO other finishers that can be used.

SL 2

38. Describe another best way of bracing the coffee table.

SL 2

39. Sketch a Cavalier Drawing of the coffee table in the box below.



SL 2

40. Discuss how you can remove tool marks on the surface of the coffee table.

SL 4

41. Discuss the difference between tools and materials.

SL 4

Technology is used to develop resource materials used for various purposes in the building industry.

42. Define the term technology.

SL 1

43. Define the term industry.

SL 1

44. Define the term craft.

SL 1

45. Describe the importance of technology to our everyday life.

SL 2

46. Compare and contrast the use of technology and no technology at school.

SL 3

47. Explain the environmental impact of the construction and engineering industry in Samoa.

SL 3

48. Discuss the implications and consequences of technology at the global level.

SL 4

STUDENT EDUCATION NUMBER									

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2020

(For Scorers only)

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STRAND 1: DRAWING AND DESIGN	17			
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TOTAL	100			