

STUDENT EDUCATION NUMBER									



Sāmoa School Certificate

DESIGN TECHNOLOGY 2016

QUESTION and ANSWER BOOKLET

Time Allowed: 3 Hours & 10 Minute

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	PageNumber	Time (minutes)	Weighting
1. Designing and Drawing	2	45	25
2. Tools and Safety	7	27	15
3. Materials	10	36	20
4. Processes	14	54	30
5. Technology	21	18	10
TOTAL		180	100

CHECK! This booklet contains pages 2-20 in the right order.

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

STRAND 1

Designing and Drawing

Weighting 25

1. Identify a problem faced at home or at school that can be improved with your Design Technology skills.

Skill Level 1

2. Provide a solution for the problem given in question 1.

Skill Level 1

3. Why is Evaluation important in the design process?

Skill Level 2

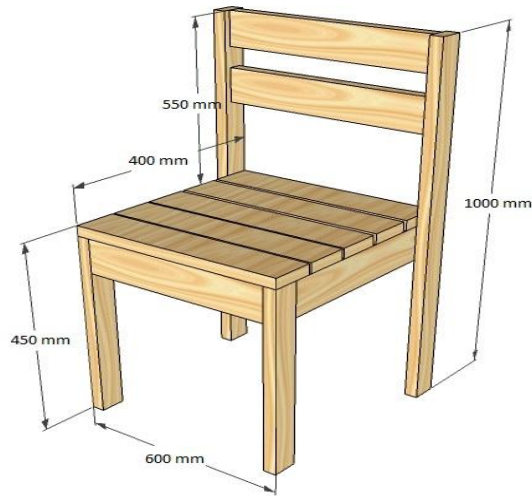
4. Specification is a very important part of designing. Discuss and give examples.

Skill Level 4

5. Define the term *Oblique Projection*.

Skill Level 1

Use the diagram below to answer Number 6 and 7



6. Create a cutting list for the above project.

Skill Level 3

7. Calculate the cost of materials needed for the above project.
Use the table below for your calculation.

Size	Cost per linear meter
2 x 3	\$4.50
1 x 4	\$3.80

Skill Level 3

8. Name the TWO types of lettering used in the technical drawing.

- i) _____
- ii) _____

Skill Level 1

9. Define the terms 'Open' and 'Close' Design Brief.

A. *Open Design Brief*

Skill Level 1

B. *Close Design Brief*

Skill Level 1

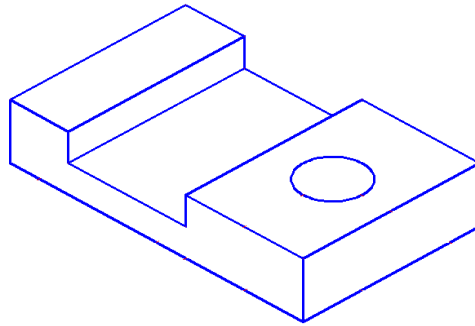
10. List the FOUR different types of drawings, not including sketching.

Skill Level 2

11. Name the type of line used to identify the distance between two points.

Skill Level 1

12. Interpret the drawing below and separate it into three orthographic views.



Skill Level 3

13. Define the term *3rd Angle Projection*.

Skill Level 1

STRAND 2

Tools and Safety

Weighting 15

Use the following diagram to answer question Number 1 and 2 below.

A.



B.



C.



D.



1. Name the tools A, B, C and D listed above correctly.

A. _____

B. _____

C. _____

D. _____

Skill Level 1

Skill Level 1

Skill Level 1

Skill Level 1

2. Discuss the safety precautions that we should take before using tools.

Skill Level 4

3. Describe the usage of the following tools below.

A. Pincer

Skill Level 2

B. Plumb Bob

Skill Level 2

4. Explain the differences between a water level and a spirit level.

Skill Level 3

3. Define the following terms in your own words.

i) *Tight Knot*

Skill Level 1

ii) *Dead Knot*

Skill Level 1

4. Discuss the process done by a xylem and phloem in the tree.
Make a drawing to support your answer in the space provided.

Skill Level 3



5. Describe the attributes for the following terms below.

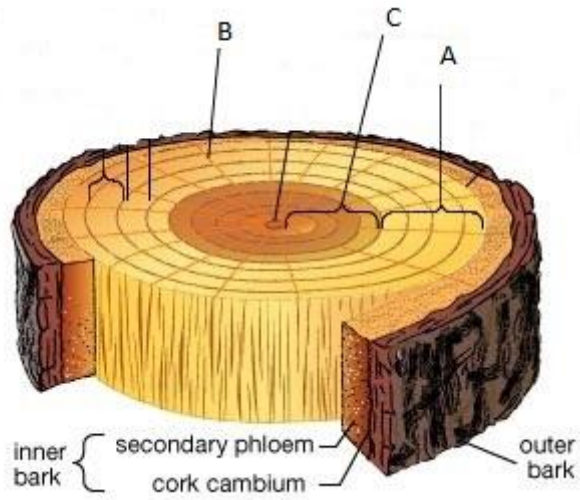
i) Warp

Skill Level 2

ii) Wane

Skill Level 2

6. Label the cross section of the tree trunk in the spaces provided.



A. _____

Skill Level 1

B. _____

Skill Level 1

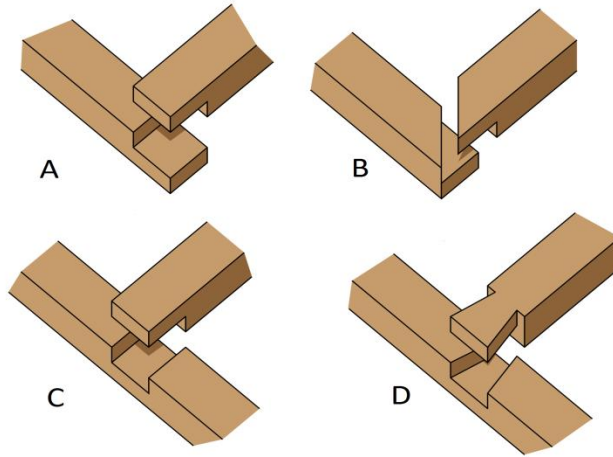
C. _____

Skill Level 1

7. Differentiate between overseas timber and indigenous timber trees.

Skill Level 3

Use the diagrams below and answer Number 1.



1. Identify the types of joints shown in the diagram above.

A. _____

Skill Level 1

B. _____

Skill Level 1

C. _____

Skill Level 1

D. _____

Skill Level 1

2. Describe the best way of checking for squareness.

Skill Level 2

3. Explain the process of making a Dowel Joint.

Skill Level 3

4. Discuss the difference between Materials and Tools in your construction work at school.

Skill Level 4

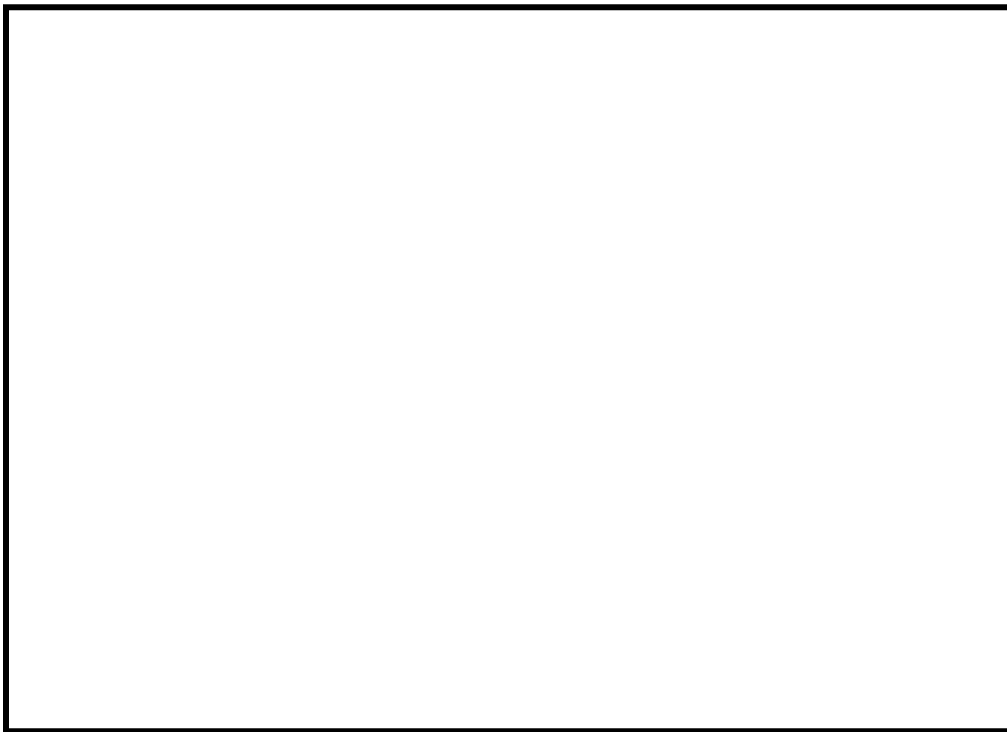
5. It is important for a project to be firmly squared. Describe ONE method in which this can be achieved.

Skill Level 3

6. Discuss how you would fix a surface with lots of Claw Hammer marks.

Skill Level 4

7. In the box, draw a coffee table using a Cavalier Drawing.



Skill Level 2

8. Which of the following tool is the fastest for producing a dovetail joint?

Circle the correct Tool

- Tenon Saw
- Router
- Skill Saw
- Rip Saw

Skill Level 1

9. Name a special hand tool that is used for clearing grooves in timber.

Skill Level 1

10. Draw the following joints in the box provided.

Box Pin Joint	Dovetail Joint

Skill Level 1

11. Describe a well finishing project.

Skill Level 2

12. Name the building material that is best used for hanging doors.

Skill Level 1

13. Define the following terms.

i) *Stain*

Skill Level 1

ii) *Varnish*

Skill Level 1

3. Define the following terms.

i) *Expectation*

Skill Level 1

ii) *Safety Spectacle*

Skill Level 1

4. What is a coping saw and how is it used?

Skill Level 2