



Index Number:

NATIONAL CERTIFICATE OF EDUCATION

March / April 2021

TECHNOLOGY STUDIES (N550)

TIME: 1 HOUR 15 MINUTES

Component 1

Candidates answer on the Question Paper.

Additional materials: Standard drawing equipment

- Check whether this assessment booklet consists of:
 - Questions **1 - 7** printed on **8** pages from page **2** to page **8**;
 - Question **8** printed on an **A3** sheet paper as an insert.
- Write your index number in the space provided above and on the A3 sheet paper.
- Use black or blue ink. Pencils may be used for diagrams/sketches only.
- Do not use correction fluid, highlighters and glue.
- Read each question carefully. All answers must be written in the spaces provided.
- Answer **ALL** questions.
- The total number of marks for Component 1 is **50**.
- The number of marks for each question is given in brackets ().
- Question 8:**
 - All answers are to be drawn accurately using drawing aids.
 - All construction lines **MUST** be left on each solution.
 - All dimensions are in millimetres.
- At the end of the examination, fold the A3 sheet paper and insert it in the assessment booklet.**

For Examiners' use										
Question No.	1	2	3	4	5	6	7	8	Total	Signature
Marker										
Team Leader										
Quality Controller										
CE/ACE										

SECTION A

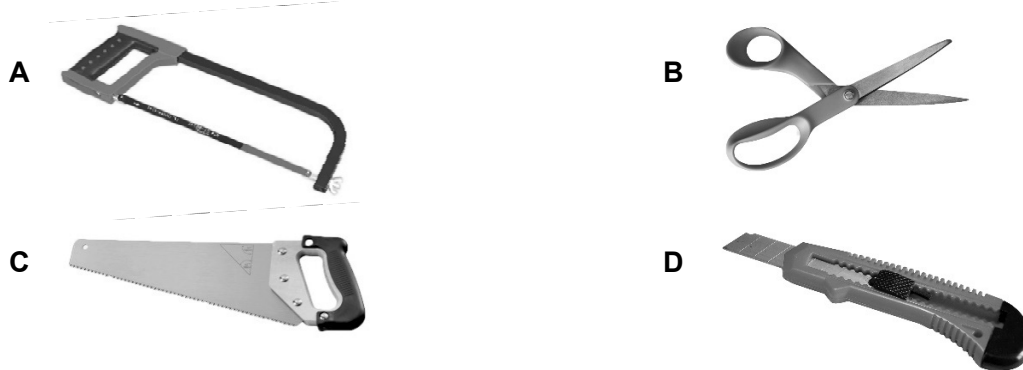
QUESTION 1 (5 Marks)

Circle the correct answer as shown in the example

Example: Which one of the following materials is a type of hardwood?

- ☒ **A** Teak
 ☐ **B** Douglas fir
☐ **C** Red Cedar
 ☐ **D** Plywood

1. Which one of the following tools should be used to cut wood?



2. The cube shown in **Figure 1** has been drawn in _____ projection.

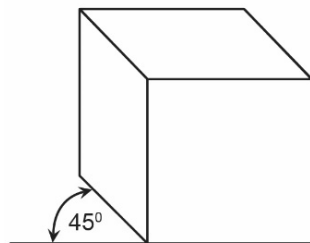


Figure 1

- ☐ **A** isometric
 ☐ **B** oblique
☐ **C** orthographic
 ☐ **D** planometric

3. A _____ is used to test the squareness of a piece of wood.
- A steel rule B set square
- C try square D marking knife
4. Hydro-electric power stations use _____ to generate electricity.
- A air B steam
- C wind D water
5. Which **one** of the following materials is a thermoplastic?
- A Acrylic B Melamine
- C Epoxy resin D Urea formaldehyde

QUESTION 2 (5 marks)

Put a tick (✓) in the appropriate box to indicate whether the statements in the table below are **True** or **False**. The first one has been done for you.

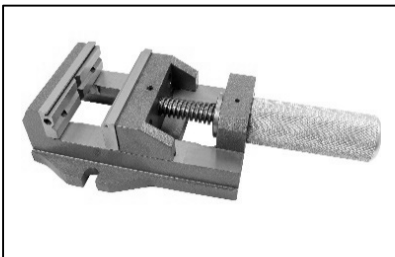
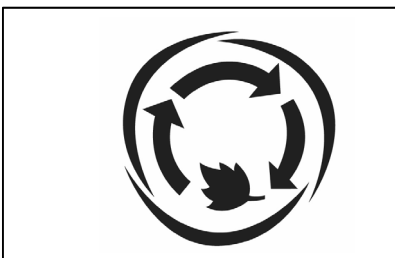
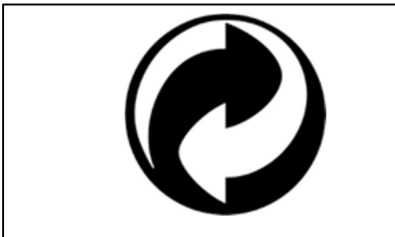
STATEMENT		TRUE	FALSE
Example: During research, existing products are analysed.		✓	
a	Thermosets can be recycled by heat.		
b	Softwood trees take longer to grow than hardwood trees.		
c	Medium density fibre board is made of a number of layers of veneers glued together.		
d	Bamboo stems can be used as eco-materials.		
e	Wind is a source of green energy.		

Please turn over this page

Question 3 (5 marks)

Match the pictures shown in **Column A** to their corresponding descriptions in **Column B**.

Column A



Column B



Green dot



Compostable



Measuring tape



Machine vice



Recyclable



Engineer's vice



Biodegradable

Question 4 (5 marks)

Fill in the blanks with the appropriate word(s) from the list given below. The first one has been done for you.

scriber	manufactured board	pine	tin
marking gauge	sliding bevel	design brief	

Example: A design brief is a short statement indicating what is to be designed.

- To mark lines at different angles on workpieces, a _____ is used.
- A _____ is made from by-products of wood.
- A type of softwood used to make furniture is _____.
- For marking out on metals, a _____ is used.
- The material used to make food cans is _____.

Please turn over this page

QUESTION 5 (5 marks)

(a) Give **two** examples of good practices when using cutting tools to cut materials to size.

(i) _____

(ii) _____

(2 marks)

(b) Sketch a **tenon saw** in the space provided.



(3 marks)

SECTION B**QUESTION 6 (4 marks)**

Figure 2 shows an isometric view of a shaped block. Apply the thick and thin line technique to the drawing to enhance its appearance.

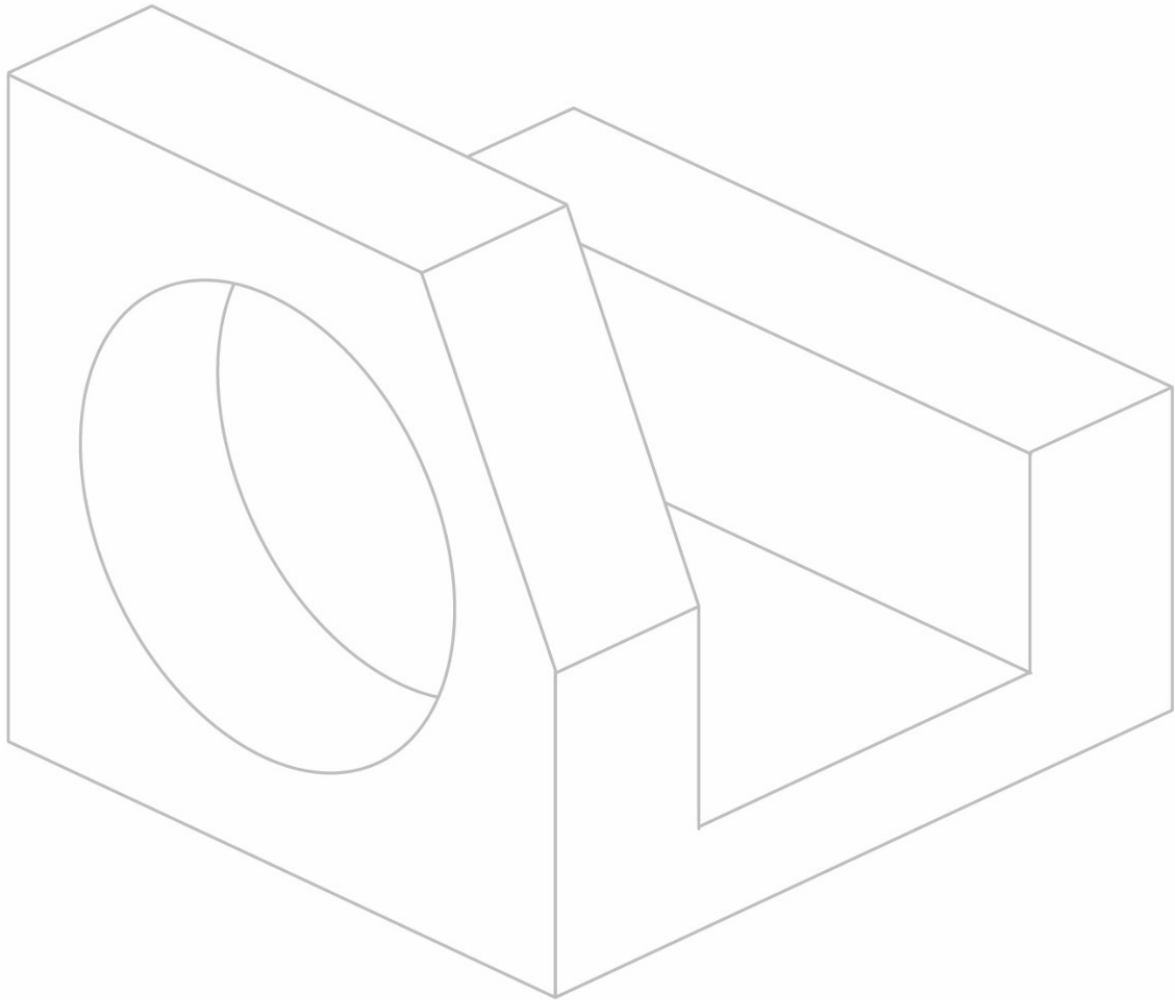


Figure 2

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QUESTION 7(6 marks)

Figure 3 shows a pen and pencil set. A packaging is required to hold the pen and the pencil set.

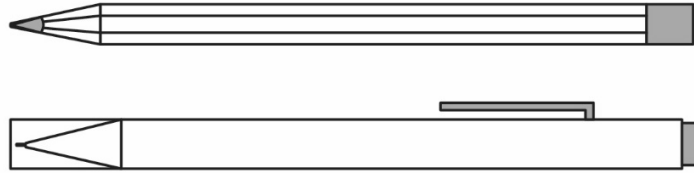


Figure 3 – pen and pencil set

Sketch **one idea** for the packaging with an analysis of the function, material(s) used and safety in the space provided.

Function:

Material(s) used:

Safety:
