

Index Number: .....

# NATIONAL CERTIFICATE OF EDUCATION

2021-2022

## TECHNOLOGY STUDIES (N550)

TIME: 1 HOUR 15 MINUTES

### Component 1

Candidates answer on the Question Paper.  
Additional materials: Standard drawing equipment

#### READ THESE INSTRUCTIONS FIRST

- Write your index number in the space provided above and on the A3 printed question sheet.
- Write in dark blue or black ink. Coloured and HB pencils may be used for diagrams/sketches and shading.
- Answer **ALL** questions.
- Check whether this assessment booklet consists of:
  - Questions **1 - 7** printed on **7** pages from page **2** to page **8**;
  - Question **8** printed on an **A3** sheet paper as an insert.
- Do not use correction fluid, highlighters or glue.
- All answers must be written in the spaces provided.
- The total marks for each question is given at the beginning of each question.
- The number of marks for each item is shown in brackets [ ].
- Question 8:**
  - All answers are to be drawn accurately using drawing instruments.
  - All construction lines **MUST** be shown.
  - All dimensions are in millimetres.
- The total number of marks for this paper is **50**.
- At the end of the examination, fold the A3 sheet and insert it in the assessment booklet.**

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

**SECTION A****Question 1 (5 marks)**

**Circle the correct answer. Each item carries one mark.**

(i) Which eco-material is used to make baskets, mats and hats?

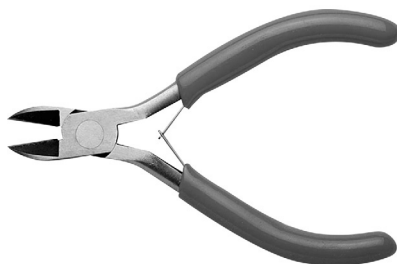
**A** Pandamus leaves

**B** Bamboo fibres

**C** Coconut coirs

**D** Palm leaves

(ii) The **tool** shown in Figure 1 is a wire .....



**Figure 1**

**A** stripper

**B** cutter

**C** heater

**D** bender

(iii) A pulley is used to transmit ..... motion.

**A** linear

**B** oscillating

**C** reciprocating

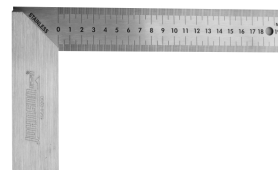
**D** rotary

(iv) Which **one** of the following is a holding tool?

**A**



**B**



**C**



**D**



(v) In pneumatics, mechanical motion is achieved by using pressurised

.....

**A** air

**B** oil

**C** petrol

**D** water

E

TL

QC

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## Question 2 (5 marks)

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

STATEMENT		TRUE	FALSE
<b>Example:</b> <i>Thermosetting plastics cannot be reshaped.</i>		✓	
a	A T-square is used to draw perpendicular lines.		
b	Tin is a malleable metal.		
c	Timber is classified as processed wood.		
d	Electrical insulators allow the flow of current.		
e	Eco-materials decay naturally.		

E

TL

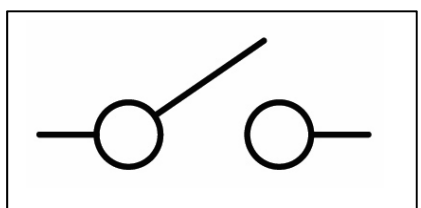
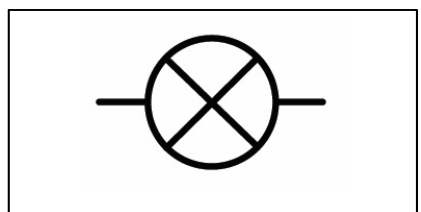
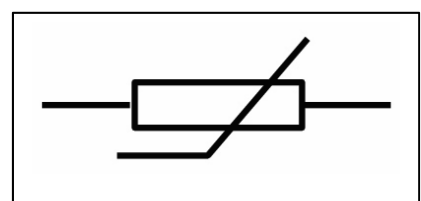
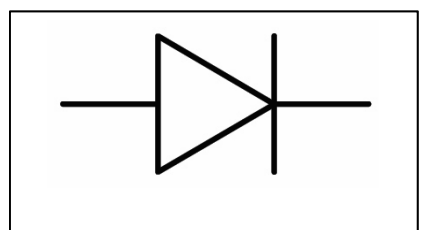
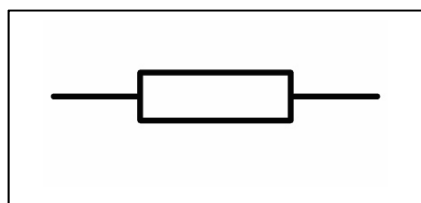
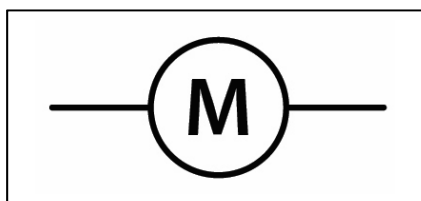
QC

CE

### Question 3 (5 marks)

Match the symbols shown in Column A to their corresponding names in Column B.  
An example is given.

COLUMN A



COLUMN B

- Light bulb
- Thermistor
- Switch
- Electric motors
- Variable resistor
- Resistor
- Diode

### Question 4 (5 marks)

Fill in the blanks with the appropriate word from the list given below. An example is given.

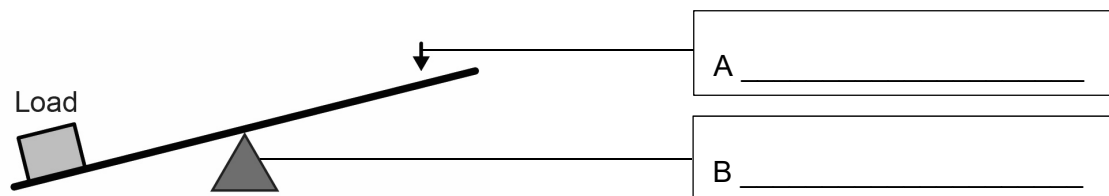
glass	Cedar	motion	alloy	<b>specifications</b>	design	turbines
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**Example:** Specifications are points that define the key features of the design solution.

- a) Red ..... is used to make musical instruments.
- b) Green ..... involves making products that cause no harm to the environment.
- c) Wind ..... convert movement energy into electrical energy.
- d) Acrylic is often used as a replacement for ..... as it is a transparent and tough material.
- e) Bevel Gear transmits ..... at right angle.

**Question 5 (5 marks)**

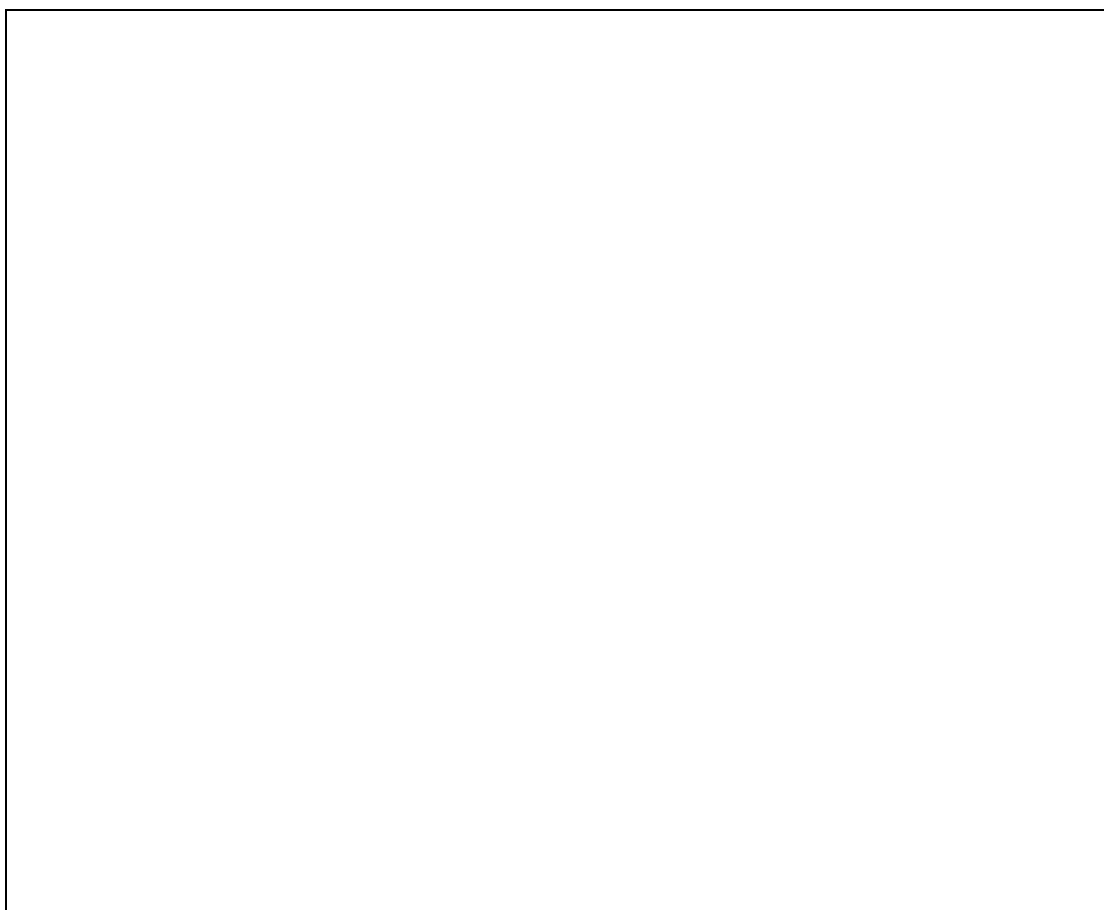
- (a) **Figure 2** shows the line diagram of a lever used to lift a load. Label parts **A** and **B**.



**Figure 2: Lever symbol**

[2]

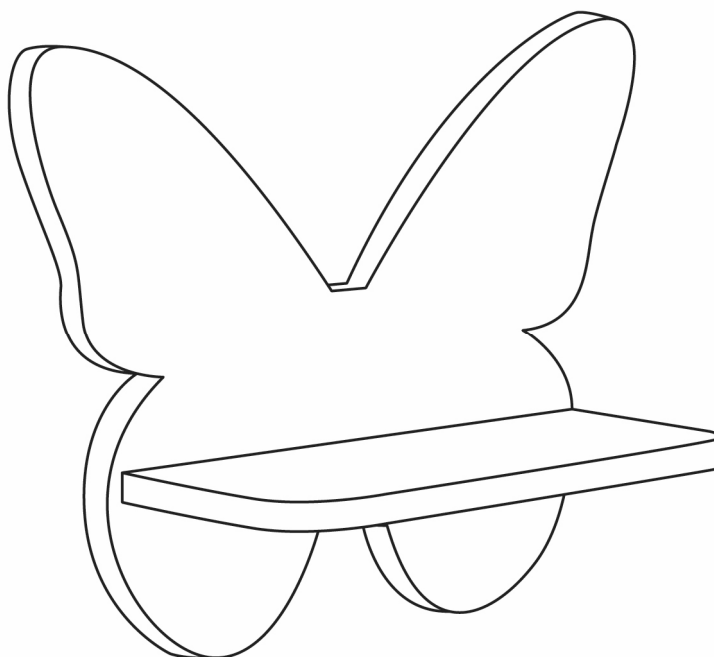
- (b) Sketch a **wooden mallet** in the space provided below.



[3]

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

**Figure 3** shows an isometric view of a wooden shelf. Apply wooden surface texture rendering techniques using coloured pencils to enhance its appearance.

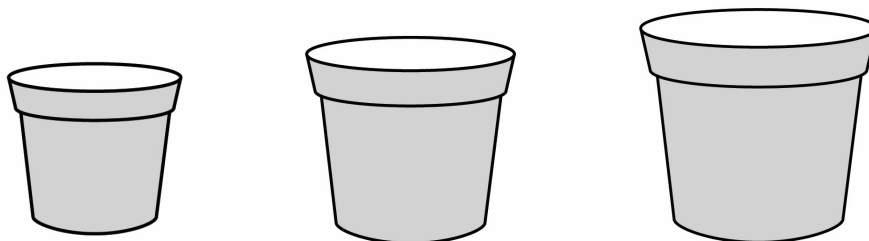


**Figure 3: Isometric view of a wooden shelf**

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**Question 7 (6 marks)**

**Figure 4** shows three flower pots of different sizes. A display stand is required to hold the three flower pots in a living room.



**Figure 4: Set of three flower pots**

In the space provided, sketch **one idea** for the display stand with an analysis of the function, material(s) used and safety.

Function:

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Material(s) used:

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Safety considerations:

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