



TOM NEWBY SCHOOL TERM 4 TEST



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Subject	Technology	Examiner	Mrs Fourie
Date	November 2021	Total marks	60
Grade	7		1 ½ hours
		Moderator	Ms Mpesu
Special instructions/ Equipment	Answer all the questions on the paper. Write neatly and legibly. Use a pencil and colouring in pencils for drawings. Good luck! Think before you INK!		
This assessment has been compiled using notes and information contained in the Tom Newby School resource material. The marking memorandum has been compiled accordingly. While alternative responses will be given due acknowledgement, the official memorandum will be considered a priority document to ensure uniformity of marking.			

Name:	Surname:	Class:
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SECTION A: TECHNOLOGICAL KNOWLEDGE AND UNDERSTANDING [18]

Question 1: Multiple choice [6]

Choose the correct answer from the statements below. Write the letter of the answer that you have selected next to the number in the answer grid.

1.1 Reciprocating movement is...

- a) Constant forward and backward, upward and downward movement.
- b) In one direction
- c) Moving constantly forwards and sideways

1.2 What is a pulley?

- a) It is a machine with one or more right-angled bends in it.
- b) A pulley is a wheel with two raised edges and a groove in the centre It is a rotating crank shaft.
- c) It is a simple machine that consists of a rigid bar resting on a pivot.

1.3 An *electromagnet* is a type of magnet....

- a) In which the magnetic field disappears when it is turned on.
- b) In which the iron filings create an electric current.
- c) In which the flow of electric current produces a magnetic field.

1.4 What can cause migration?

- a) Food supplies multiply because of overgrazing.
- b) Social factors – people not giving each other space to plant crops
- c) Environmental factors like soil erosion, lack of water, and overgrazing.

1.5 Waterproof clothing is covered with a waterproofing material such as

- a) Wool
- b) Rubber, PVC or wax.
- c) Fabric only

1.6 What is a homestead?

- a) a single building, or collection of buildings grouped together on a large agricultural holding.
- b) a large shopping complex on a large agricultural holding.
- c) Double-storey buildings on a large agricultural holding.

Answer Grid

1.1	_____	1.2	_____	1.3	_____	1.4	_____	1.5	_____	1.6	_____
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Question 2: Match the Columns-(6)

Match Column A with Column B. Write the letter of the answer that you have selected next to the number in the answer grid.

COLUMN A	COLUMN B
2.1 Compression	A. A force that attracts or repels an object which contains metal.
2.2 Stateless	B. A system which operates by moving up and down.
2.3 Recycling	C. Refugees that do not belong to any country as they have spent their lives moving from one country to another and therefore have no official nationality.
2.4 Magnetism	D. A squashing force acting on a structure, for example when you step on a sponge and it gets compressed or squashed
2.5 Circular movement	E. It is a movement that forms a complete circle like the rotating wheels of a moving car.
2.6 Escalators and lifts	F. The process of making or manufacturing new products from a product that has served its original purpose.

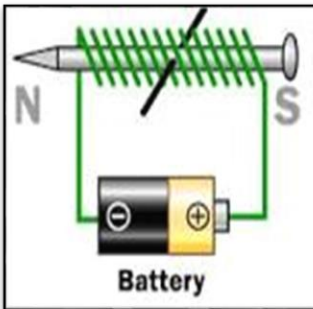
Answer Grid

2.1	_____	2.2	_____	2.3	_____	2.4	_____	2.5	_____	2.6	_____
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Question 3: Identify images [6]

Identify the images. Give your own explanation of what the image is and where it is used or what it is used for.

3.1 Image A



What is it? _____

What is it used for?/Where is it used?

3.2 Image B



What is it? _____

What is it used for?/Where is it used?

3.3 Image C



What is it? _____

What is it used for?/Where is it used?

SECTION B: DESIGN PROCESS SKILLS & GRAPHIC COMMUNICATION [30]**Question 4: True or False [10]**

State whether each of the following statements is true or false. If it is false, then correct the statement.

4.1 A temporary magnet is a piece of magnetic material that retains or keeps its magnetism after it is removed from a magnetic field.

(2)

4.2 In the central interior of South Africa, Xhosa and Ndebele farmers designed and developed cone-cylinder homes.

(2)

4.3 On average, 16% of the money you spend on a product pays for the packaging, which ultimately ends up in the rubbish dump.

(2)

4.4 A great deal of waste that could be recycled ends up in rubbish dumps, which is harmful to the environment. These are also called landfill sites.

(2)

4.5 A pulley and belt system is a bar or rod that has one or more right-angle bends in it. The bar or rod is normally attached to a pivot at one end and rotates in a complete circle.

(2)

Question 5: Short questions and pictures [20]

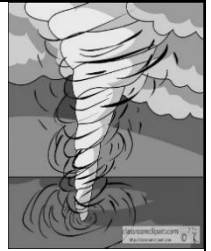
5.1 Draw a sketch of a temporary shelter, using a grey pencil. Add colour. Label it by adding all the materials and tools, showing what your temporary shelter will be made of.

Scenario

On 22 August 2014, a tornado hit the Daveyton informal settlement in Ekurhuleni. The tornado caused major damage to a shopping centre, a hospital, schools and many vehicles and delivery trucks.

In emergency situations, informal dwellings (shacks) can be damaged or destroyed and it leaves people stranded – they have nowhere to go.

The local municipality of Ekurhuleni has decided to form a disaster management team to be better prepared for future emergencies. They have asked for help with a design for temporary shelters.



Rubric: Sketch of a temporary shelter	Possible mark (10)
Wrote an interesting heading for the model shelter	1
Started with the front / side view and added something in 3 D	2
Indicated the real measurements and enough labels	2
Used dark outlines and other types of lines	2
Made use of different colours and showed the materials & tools	2
Neatness of drawing.	1

The specifications are:

- The shelter should be waterproof and fireproof.
- It needs to be cost-effective to build.
- It needs to be strong and sturdy.
- It should have at least one strengthening technique.

5.2 Write a short design brief (in point form) explaining the following :(10)

- What is the problem?
- Who will benefit from the solution?
- When will the solution be used?

5.2.1 **Remember: Start your sentence with 'I must design a.....**

_____ (2)

5.2.2 Write down three specifications. (3)

a) _____ (1)

b) _____ (1)

c) _____ (1)

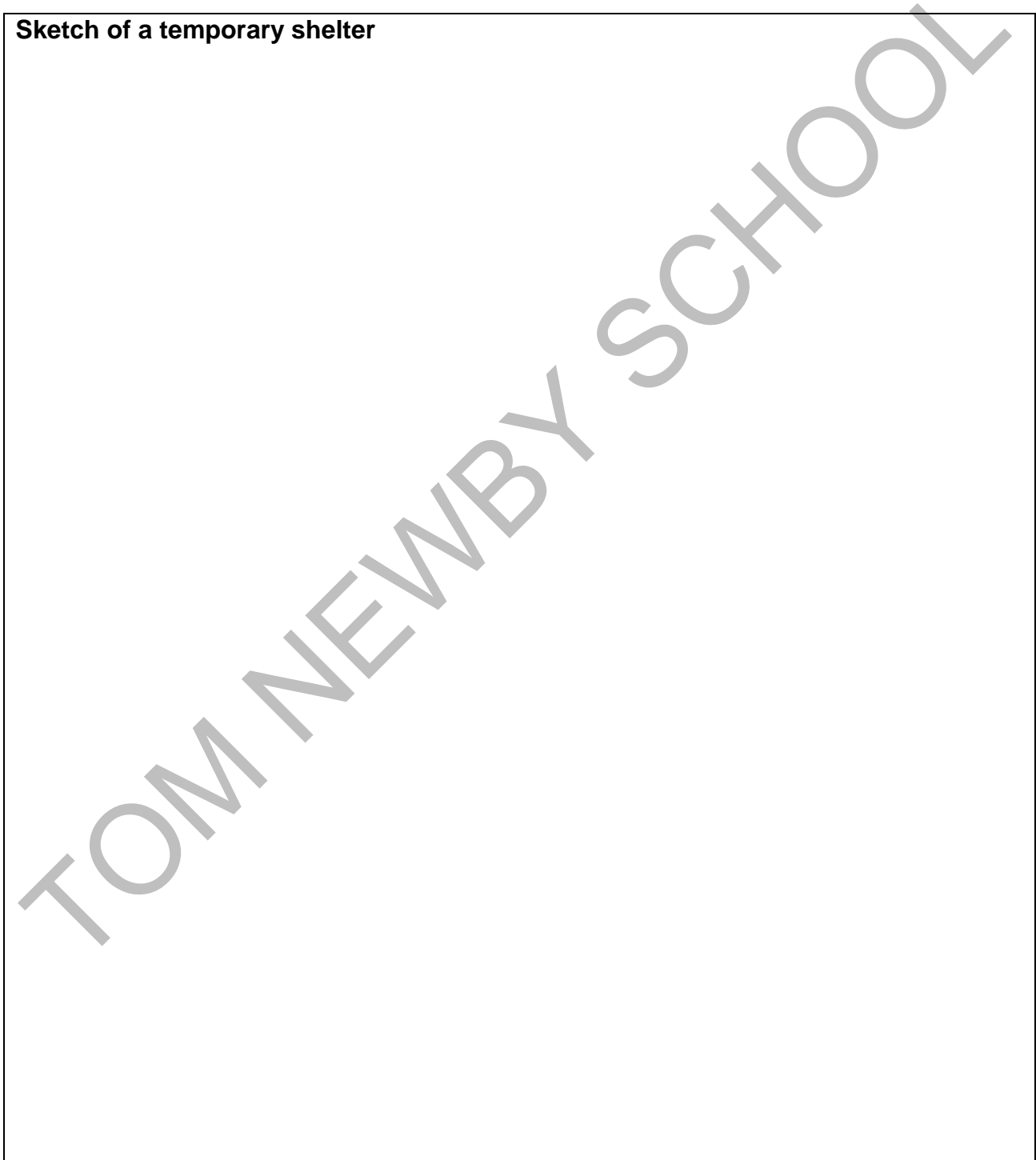
5.2.3 Write down three possible constraints. (3)

- a) _____ (1)
b) _____ (1)
c) _____ (1)

5.2.4 Name 2 other disasters that can cause informal dwellings to be destroyed.

- a) _____ (1)
b) _____ (1)

Sketch of a temporary shelter



SECTION C: TECHNOLOGY, SOCIETY AND THE ENVIRONMENT [12]
Question 6: Read the questions below and answer the questions [12]

6.1.1 Name 2 methods of waterproofing materials

a) _____ (1)

b) _____ (1)

6.1.2 Name 1 method of fireproofing materials.

_____ (1)

CASE STUDY: TASTIFEED

Read the case study of a very special product that fights malnutrition and answer the questions that follow.

Tastifeed is a food paste made of peanuts. It contains calories and vitamins specially manufactured to re-nourish starving children. The product may not look like much. It is a little foil packet filled with a soft sticky substance. However, people say that it is magic and works wonders. Starving children on a Tastifeed diet gain weight quickly. They often go from almost dying to being healthy within a month.



The ingredients are peanut paste, vegetable oil, powdered milk, sugar, vitamins and minerals. Tastifeed is often used as a treatment for emergency malnutrition cases. It helps with rapid weight gain, which can mean the difference between life and death for a young child.

According to the manufacturer, Tastifeed consists of a peanut paste with sugar, vegetable fat and skimmed-milk powder. It is enriched with vitamins and minerals. It can be stored for 24 months without refrigeration. Tastifeed is a food that is ready to use. It can be eaten straight from the sachet. The product makes it possible to treat children suffering from severe malnutrition without putting them in the hospital.

Malnutrition kills 5 000 children every year, or one child every 6 seconds. Why are so many children dying? Because they cannot get the protein, vitamins and minerals that their young bodies need.

Doctors without Borders say it finally has something that can save millions of these children. Tastifeed is a simple product that can be used to save lives.

6.1.3 a) What is Tastifeed and what does it contain?

_____ (1)

b) What does Tastifeed look like and how long can it be stored?

_____ (1)

c) Name any 2 ingredients that are found in Tastifeed.

_____ (2)

d) What is the cause of thousands of children dying every year?

_____ (1)

e) Give an explanation of what the disease mentioned above means.

_____ (2)

f) Where is Tastifeed mostly used and who gives it to the hungry children?

_____ (2)

**GO BACK AND CHECK
YOUR ANSWERS!
TOTAL: 60 MARKS**

Grade 7 Technology Exam
Performance analysis
(For teacher use only)

Name: _____ Surname: _____ Grade 7: _____

Section	Specific Aim	Possible mark	Learner's mark
A	Technological Knowledge and Understanding	Q 1 - 6	
		Q 2 - 6	
		Q 3 - 6	
B	Design Process Skills & Graphic Communication	Q 4 - 10	
		Q5 -20	
C	Technology, Society and the Environment	Q6 -12	
TOTAL		60	