



**TOM NEWBY SCHOOL
TERM 4 TEST NOVEMBER 2021**



Subject	Natural Science & Technology	Examiner	Mrs P Singh
Date	November 2021	Total marks	60
Grade	6	Duration	1 Hour
		Moderator	Mrs M Fourie
Special instructions/ Equipment	NONE		
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.			

Instructions:

1. Read all questions carefully before answering.
2. Check the mark allocation.
3. Write neatly and legibly.

Name:	Surname:	Grade:
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SECTION A – ENERGY AND CHANGE

Question 1: Electric Circuits (5)

Multiple Choice: Underline the correct answer.

- 1.1 Parts of electric circuits are called ...
- a. circuit diagrams
 - b. copper wire
 - c. components
 - d. appliances

1.2 Which of the following materials is a good conductor of electricity?

- a. plastic
- b. wood
- c. rubber
- d. copper wire

1.3 A battery has:

- a. two terminals
- b. three terminals
- c. one terminal
- d. no terminal

1.4 An electric circuit is made up of:

- a. a source and a device
- b. a source of energy, conducting material and a device
- c. a device and conducting material
- d. a source and an output

1.5 Bulbs change...

- a. chemical energy into electrical energy
- b. electrical energy into chemical energy
- c. electrical energy into light energy
- d. kinetic energy into light energy

Question 2: Circuits (5)

Provide one word for each of the following statements.

2.1 Where a thing comes from or starts.

_____ (1)

2.2 A component that controls the flow of electricity.

_____ (1)

2.3 A person who uses simple diagrams to show electrical circuits.

_____ (1)

2.4 A simple sign which represents something else.

_____ (1)

2.5 Energy after it has gone through a device.

_____ (1)

Question 3: Conductors and Insulators (5)

State whether the following Statements are **True** or **False**. If False, correct the statement.

3.1 If an electric current can pass through a material, the material is an insulator.

_____ (1)

3.2 Parts of objects that need to allow electricity to pass through are always plastic.

_____ (1)

3.3 Copper is used as a conductor of electricity because it is not expensive.

_____ (1)

3.4 Ceramic is a good example of an insulator.

_____ (1)

3.5 People can be energised from touching a live wire with bare hands.

_____ (1)

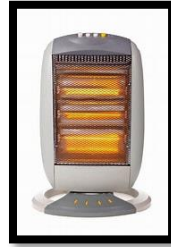
Question 4: Systems to solve problems (9)

Look at the pictures of appliances that use electric circuits to produce useful energy to solve a problem.

1.



2.



3.

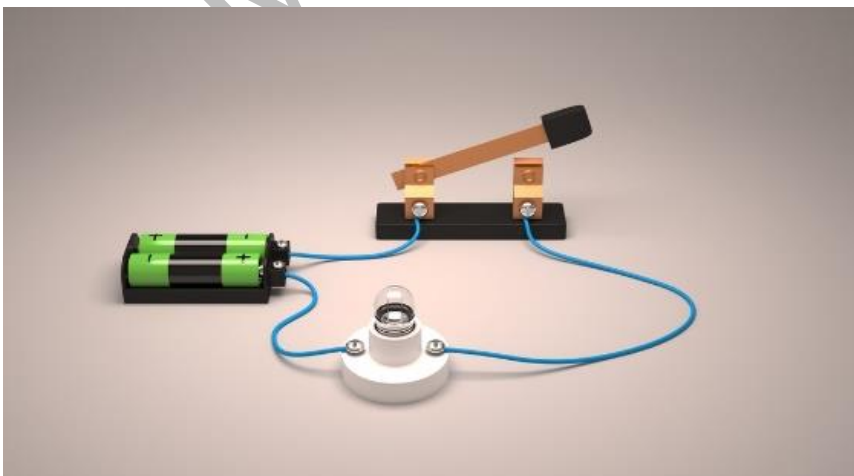


Complete the table by writing down the name of the appliances in the pictures in the 1st column, writing the form/s of useful energy produced by each of the appliances in the 2nd column and then writing the problem each circuit solves in the 3rd column.

Appliance	Form/s of useful energy	Problem circuit solves
1. (1)	(1)	(1)
2. (1)	(1)	(1)
3. (1)	(1)	(1)

Question 5: Circuit symbols (3)

Draw a circuit diagram for the electric circuit in the image. Use symbols for each component and label the components.



Circuit diagram

(3)

Question 6: Mains electricity (10)

Read through the questions carefully and then answer.

6.1 Suggest one way of saving energy when using an electric geyser.

_____ (1)

6.2 Explain how **Solar Panels** operate to provide electricity to our homes.

_____ (3)

6.3 Identify the differences between non-renewable energy sources with renewable energy sources in the table below.

Non-renewable energy sources	Renewable energy sources
1.	1.
(1)	(1)
2.	2.
(1)	(1)
3.	3.
(1)	(1)

SECTION B – EARTH AND BEYOND

Question 7: The Sun, Planets and Asteroids (10)

Match the word/phrase in Column B with the word in Column A. Write down only the correct letter in the space provided.

Column A	Column B
7.1 The Sun	A. has a bare rocky surface with many volcanoes
7.2 Mercury	B. is a gas planet, made mainly from hydrogen and helium
7.3 Venus	C. has a blue-green colour because of methane in its atmosphere
7.4 Earth	D. is made up of frozen gas and is sometimes called an ice giant
7.5 Mars	E. Every fourth year we have an extra day
7.6 Jupiter	F. most of its surface is covered by soil and water
7.7 Saturn	G. at the centre of our solar system
7.8 Uranus	H. has bright colourful rings around it
7.9 Neptune	I. often known as the 'red planet'
7.10 Leap year	J. a rocky planet covered in a layer of fine soil

7.1 _____	7.2 _____	7.3 _____	7.4 _____	7.5 _____
7.6 _____	7.7 _____	7.8 _____	7.8 _____	7.10 _____

Question 8: Moons (7)

Study the picture of the Mars Rover below and then answer the questions that follow.



8.1 Who were the first two people to walk on the moon?

_____ (2)

8.2 Why does the Mars Rover have cameras? Provide 2 reasons.

 _____ (2)

8.3 What are the temperatures like on Mars?

_____ (1)

8.4 Moons do not give out their own heat and light, but they can be seen from Earth.

How does this happen?

 _____ (1)

8.5 The footprints from the astronauts who first walked on the Moon are still there. Explain why they are still there.

 _____ (1)

Question 9: Movement of the Earth and Planets (6)

9.1 Explain why we experience day and night on Earth.

 _____ (2)

9.2 Provide a good definition for the following words:

a. Rotation - _____
_____. (1)

b. Axis - _____
_____. (1)

9.3 How long does it take Earth to complete one rotation?

_____. (1)

9.4 Complete the sentence:

The sun rises in the _____ and sets in the _____ (1)

TOTAL: 60

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Performance Analysis

(For teacher use only)

Name of learner: _____ Grade 6: _____

Question Number	1	2	3	4	5
Possible Mark	5	5	5	9	3
Learner's Mark					
Moderator's Mark					

Question Number	6	7	8	9
Possible Mark	10	10	7	6
Learner's Mark				
Moderator's Mark				