



KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

GENERAL EDUCATION AND TRAINING

GRADE 6

NATURAL SCIENCES AND TECHNOLOGY

PLC PRE-TEST

2025 TERM 4

Time: 70 Minutes

Marks: 40

Instructions and Information

1. You must **answer all the questions**.
2. Read the instructions carefully, and answer questions as instructed.
3. Number your answers exactly as the questions are numbered.
4. For **Question 4.2.1** a graph sheet is provided. **Submit the graph sheet together with your answer sheet.**
4. Write neatly and legibly.

This question paper consists of **4 pages** and contains **5 questions**.

SECTION A: Energy and change (60% Term 3 Content)

Question 1

Four options are provided as possible answers to the following questions. Each question has only ONE correct answer. Write down only the letter next to the question number e.g. 1.1 B

1.1 Which energy source is most commonly used in South Africa?

- A Oil
 - B Natural gas
 - C Solar
 - D Coal
- (1)

1.2 What is the unit of electrical power in an appliance?

- A Generator
 - B Wattage
 - C Turbine
 - D Renewable resources
- (1)

1.3 An energy source that cannot be replaced.

- A Non- renewable resources
 - B Turbine
 - C Power station
 - D Transformer
- (1)

1.4 The remains of dead plants and animals that store energy from the sun millions of years ago.

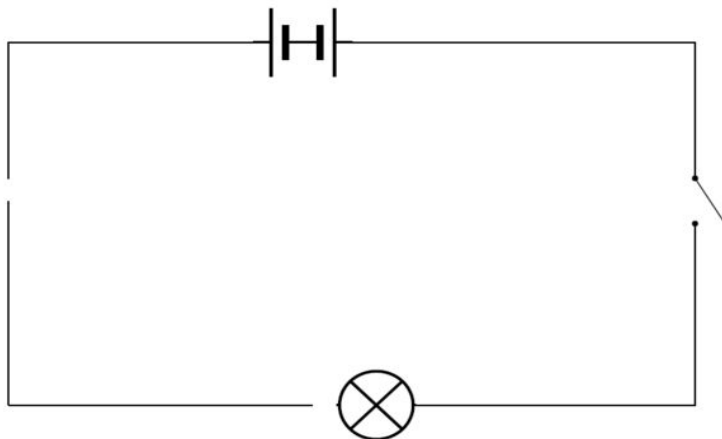
- A Fuel
 - B Fossils fuel
 - C Energy
 - D Solar power.
- (1)

1.5 A machine that produces electricity.

- A Non-renewable
 - B Oil
 - C Conductor
 - D Generator
- (1)
[5]

Question 2

- 2.1 Differentiate between cell and battery. (2)
- 2.2 List TWO materials or objects in your home that can conduct electricity. (2)
- 2.3 Look at the following circuit diagram. The bulb does not light up for 4 reasons. Give a reasons why the bulb does not light up in each case. (4)



2.4 Use the table below to draw a symbol of each component.

COMPONENT	SYMBOL
Closed switch	2.4.1
1 Cell	2.4.2
Buzzer	2.4.3
1 Bulb	2.4.4

- (4)
- 2.5 What is a function of a switch in a circuit ? (1)

[13]

Question 3

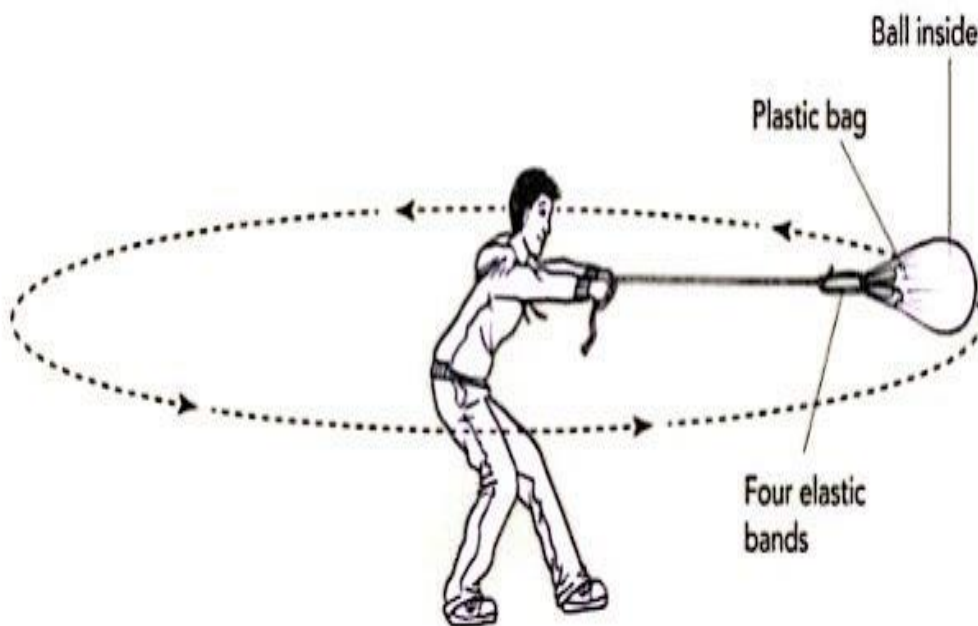
- 3.1 Cardboard and plastic are both electrical insulators. Give 2 reasons why plastic, not cardboard is used around electrical wires. (2)
- 3.2 Why is it not safe to use electrical appliance in a bathroom? Support your answer. (1)
- 3.3 Mention **TWO** importance of an insulator. (2)
- 3.4 Give one example of an insulator. (1)

[6]

SECTION B: Planet Earth and beyond (40% Term 4 Content)

Question 4

- 4.1 Study the picture below and answer the questions that follow.



(source: www.siyavula.com)

Imagine that the above picture is in space.

- 4.1.1 What does the learner who is swinging the ball represent? (1)
- 4.1.2 What does the ball represent? (1)
- 4.1.3 What do you feel is happening to the elastic as you swing the ball ? (1)
- 4.1.4 How long does the Earth really need to revolve once around the sun ? (1)

4.2 The following table displays the diameters of 3 planets.

Planet	Diameter (km)
Mercury	4 000
Venus	6 000
Earth	12 000

4.2.1 Use the information in the table above to draw a bar graph on the graph paper that has been provided. (6)

[10]

Question 5

5.1 What is a telescope? (1)

5.2 What does abbreviation" SALT" represent? (1)

5.3 Why do people need Moon rovers when they are exploring the surface?
Give 2 reasons. (2)

5.4 What is the main different between vehicles used on the moon and vehicles used on Mars to explore the surface? (2)

[6]

Total Marks: 40

NAME : _____

QUESTION 4.2.1

