



**KWAZULU-NATAL PROVINCE**

EDUCATION  
REPUBLIC OF SOUTH AFRICA

## GENERAL EDUCATION AND TRAINING

GRADE 6

### NATURAL SCIENCES AND TECHNOLOGY PLC FINAL TEST 2025

**Marks: 40**

**Time: 70 minutes**

#### **Instructions and Information**

1. You must answer all the questions.
2. Read the instructions carefully, and answer questions as instructed.
3. Write neatly and legibly.

**NB.** This question paper consists of **4 pages** excluding cover page and contains **7 questions**.

**SECTION A**  
**QUESTION 1**

Various options are provided as possible answers to the following statements. Choose and write only the letter of the most correct answer. e.g. 1.12 D.

- 1.1 Which of these items are good conductors of electricity?  
A Aluminium and wood  
B Gold and lead  
C Copper and plastic  
D Aluminium and copper (1)
- 1.2 A battery is made up of two or more ...  
A wires that are connected together  
B cells that are connected together  
C bulbs that are connected together  
D conductors that are connected together (1)
- 1.3 Bulbs in a circuit convert...  
A chemical energy into electrical energy  
B electrical energy into chemical energy  
C electrical energy into light energy  
D kinetic energy into light energy (1)
- 1.4 Copper wires are normally used in electric circuits as they are...  
A converters  
B output devices  
C conductors  
D source of energy (1)
- 1.5 When we touch a live wire, the electricity will...  
A electrocute us  
B energize us  
C get converted  
D be stored in our bodies (1)
- 1.6 This unit is NOT used to measure electricity.  
A volts  
B ohms  
C watts  
D litres (1)
- 1.7 This force prevents objects from falling off the Earth.  
A push  
B gravity  
C pull  
D static (1)

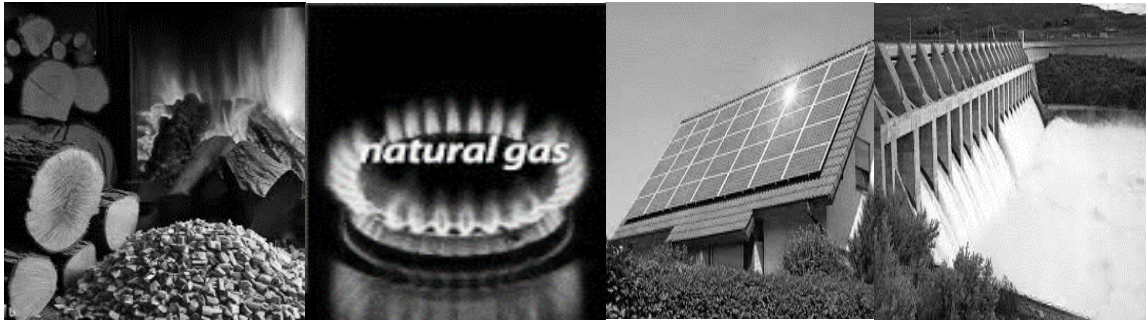
1.8 Which ONE of the following examples of energy sources is used up over time and **cannot** be replaced naturally?

wood

natural gas

solar panels

water



A

B

C

D

(1)

1.9 Which of the following are renewable energy sources?

A Biomass and natural gas

B Geothermal and coal

C Hydroelectric and oil

D Biomass and Hydroelectric

(1)

1.10 A leap year has how many number of days?

A 366

B 31

C 29

D 365

(1)

[10]

## QUESTION 2

Match the statements in column A with the words in column B. Write only the letter of the correct answer. **e.g. 2.7 H**

Column A		Column B	
2.1	Is made of frozen gas/the ice giant.	A	Sun
2.2	Is known as the red planet.	B	SALT
2.3	At the center of the solar system.	C	Earth
2.4	South Africa's Largest Telescope.	D	Neptune
2.5	Is covered by soil and water.	E	Mars

[5]

**QUESTION 3**

Use the words/terms in the word box to give answers to the questions below.

**Orbit, microscope, year, revolution, telescope, axis, rotation, month**

- 3.1 What is the approximate time it takes the moon to complete one cycle around the Earth? (1)
- 3.2 What term describes the Earth's movement around the Sun? (1)
- 3.3 What is the path called that the Earth follows as it moves around the Sun? (1)
- 3.4 How long does it take the Earth to complete one full movement around the Sun? (1)
- 3.5 What tool do astronomers use to observe distant stars and planets clearly? (1)

**[5]**

**SECTION B**

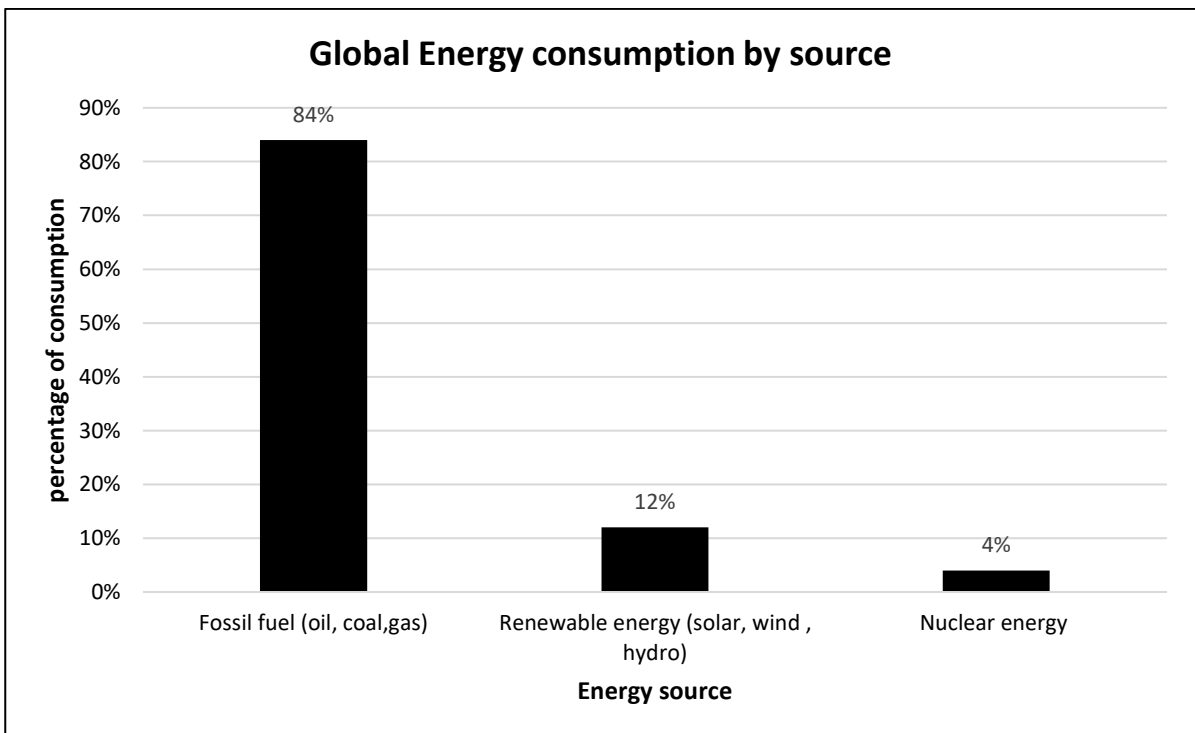
**QUESTION 4**

- 4.1 Draw a circuit diagram using the following components.  
3 cells, an open switch, 2 light bulbs. Use a solid line to show the connecting wires. (4)
- 4.2 What is the purpose of a switch in a circuit? (1)
- 4.3 What will happen if you remove 1 bulb from this circuit? (1)

**[6]**

**QUESTION 5**

Study the graph below on global energy consumption and answer questions that follow.



- 5.1 What is the leading energy source globally, according to the graph? (1)
- 5.2 What percentage of global energy consumption comes from renewable sources? (1)
- 5.3 When comparing the percentages, which energy is used more between nuclear energy and renewable energy (1)
- 5.4 Mention one disadvantage of relying more on fossil fuels for energy? (1)
- 5.5 Over the past years coal has been used to produce most of the electricity in South Africa. Now other sources of energy are being explored and the use of solar energy has increased.
- Mention two reasons why there is an increase in the use of solar energy in the country. (2)
- [6]**

### QUESTION 6

A group of learners investigate how different materials affect the flow of electricity in a simple circuit. They test various materials (copper wire, plastic straw, metal spoon, rubber band, and wood stick) by connecting them to a battery, wires, and a small light bulb.

- 6.1 What is the variable being tested (independent variable) in this investigation? (1)
- 6.2 What is being measured or observed (dependent variable)? (1)
- 6.3 Identify one variable that should be kept constant in this investigation. (1)
- 6.4 Explain why the learners use the same battery and light bulb for each test. (1)
- 6.5 Predict which material will allow the electricity to flow and light up the bulb and give a reason for your answer. (1)
- [5]**

### QUESTION 7

Space exploration is ongoing with the use of robots, satellites and astronauts landing on the Moon.

- 7.1 List TWO things the Mars Rover was able to do on the surface of Mars. (2)
- 7.2 What do you think is the benefit of sending these robots to the Moon or Mars (1)
- 7.3 Why is it not possible for people to do what the Mars Rover does on Mars? (1)
- [4]**

**Total Marks: 40**