Adult Education and Training (AET)
Site-Based Assessment
Portfolio of Evidence

Natural Sciences:	**NQF Level 1**
Total:	**50 marks**
Duration:	**2 hours**
Task 4:	**Test**

Learner Information

Name : _____

Surname : _____

Identity/

Passport Number : _____

Employee Number : _____

Company : _____

Centre : _____

Date : _____

Declaration

I declare that this portfolio of evidence is my own work: _____

Signature

INSTRUCTIONS

1. This test consists of **TWO SECTIONS,** Section A and Section B.
2. Answer ALL questions.
3. Write neatly and legibly.

SECTION A

QUESTION 1

1.1 Various possible options are provided as answers to the following questions. Choose the correct answer and encircle only the letter (A–D) next to the question number (1.1–1.5).

1.1.1 A statement made without experimental evidence.

A Aim
B Hypothesis
C Investigative question
D Experimental report

(1)

1.1.2 Identify a recyclable material.

A Food waste
B Coal
C Paper
D Light

(1)

1.1.3 Joules is a SI unit measuring _____.

A Work done and kinetic energy
B Work done and force
C Electricity and Power
D Kinetic energy and Gravitational force

(1)

1.1.4 Zoology is the study of _____.

A climate.

B the plant kingdom.

C the animal kingdom.

D volcanoes.

(1)

1.1.5 Which ONE of the following is an acidic substance?

A pH = 5

B pH = 7

C pH = 11

D pH = 7.5

(1)

TOTAL MARKS FOR QUESTION 1.1 **[5]**

1.2 Indicate whether the following statements are **TRUE** or **FALSE**. Write only the word 'True' or 'False'.

1.2.1 Sodium Chloride is an example of an element.

_____

(1)

1.2.2 A test tube is an apparatus used during experiments.

_____

(1)

1.2.3 Organic compost is used to fertilize crops.

_____

(1)

1.2.4 Current is a flow of power.

_____

(1)

1.2.5 Technology is not used in mining.

_____

(1)

TOTAL MARKS FOR QUESTION 1.2 **[5]**

1.3 Choose a description from COLUMN B that matches a word COLUMN A.

Write only the letter (A – F) in the table provided below.

COLUMN A	**COLUMN B**	
1.3.1 Planet	**A.** Measures acidity and alkalinity.	(1)
1.3.2 Laboratory	**B.** Measurer of push or pull.	(1)
1.3.3 Newton	**C.** Large body orbiting stars.	(1)
1.3.4 pH-scale	**D.** Breaking down of food.	(1)
1.3.5 Digestion	**E.** Place to conduct experiments.	(1)
	F. The law of gravity.	

1.3.1	**1.3.2**	**1.3.3**	**1.3.4**	**1.3.5**

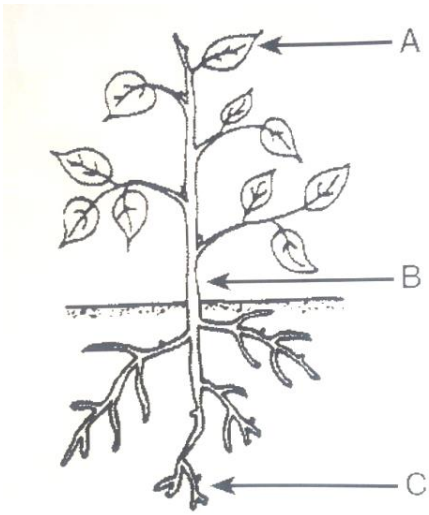
TOTAL MARKS FOR QUESTION 1.3 **[5]**

TOTAL SECTION A: [15]

SECTION B

QUESTION 2

Study the plant diagram below and answer the questions.



[Source: AQA-34441FQP]

2.1 Label parts A, B and C.

(3)

2.2 Name the gas released by the plants for human benefit.

(1)

2.3 Write ONE important function of part labelled C.

(2)

2.4 Explain the term **"transpiration"**.

(2)

TOTAL MARKS FOR QUESTION 2 **[8]**

QUESTION 3

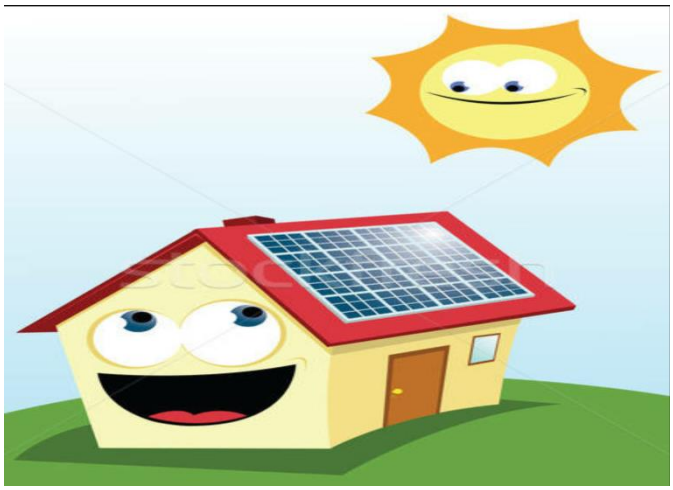
3.1 A typical home in South Africa uses about 1 500 watts per hour when cooking on a modern stove. Calculate the cost of energy consumption of a stove if the rate of 1 kWh is 74 cents.

***Use the formula*:**

Cost of consumption = kilowatt x time x unit price

(4)

3.2 Solar panels are used throughout South Africa to provide an alternative source of electricity as shown in the picture below.



[Source: Scubasanmateo.com]

3.2.1 Is solar energy renewable or non-renewable?

_____

(1)

3.2.2 Provide TWO advantages of using solar power.

_____

_____

_____

(2)

3.2.3 Write down the energy transformation depicted by the picture.

_____

_____

(2)

TOTAL MARKS FOR QUESTION 3 **[9]**

QUESTION 4

4.1 Classify the following as either ACID or BASE.

4.1.1 Vinegar

_____

(1)

4.1.2 ENO

_____

(1)

4.2 Define the term **"neutralization"**.

_____

_____

_____

(2)

4.3 The table below shows the melting and boiling points of three substances. Study the table and answer the questions that follow.

Substance	Melting point (ºC)	Boiling point (ºC)
Water	0	100
Chlorine	-101	-35
Mercury	-39	357

4.3.1 Explain the meaning of the melting point.

_____

_____

_____

(2)

4.3.2 At what temperature does the water change from liquid to solid?

_____

(1)

4.3.3 At which temperature does mercury change from solid to liquid?

_____

(1)

4.3.4 Which substance has the lowest boiling point?

_____

(1)

4.3.5 Which substance is used in medical thermometers?

_____

(1)

TOTAL MARKS FOR QUESTION 4 **[10]**

QUESTION 5

Mining in South Africa is undergoing a rapid change towards technological advancement which promises to boost the economy at a faster rate than traditional mining. Although this is good because it will benefit mining companies and the country, it also poses many challenges for people and the environment.

(www.itgmining.org)

5.1 Name ONE type of mining used in South Africa.

_____

_____

(1)

5.2 Explain how technology poses a challenge for mining employees.

(2)

5.3 Name any TWO minerals mined in South Africa.

(2)

5.4 Classify the following as either recyclable or non-recyclable.

5.4.1 Water

(1)

5.4.2 Asbestos

(1)

5.5 Identify a type of pollution associated with mining.

(1)

TOTAL MARKS FOR QUESTION 5 **[8]**

TOTAL SECTION B: [35]

GRAND TOTAL FOR TASK 4 **[50]**

Total for Task 4: 50 Marks

Task	Question	Maximum Mark	Learner's Mark	Moderated Mark
Task 4	Question 1	15		
	Question 2	8		
	Question 3	9		
	Question 4	10		
	Question 5	8		
	Total: Task 2	50		