



EXAMINATIONS COUNCIL OF SWAZILAND

Swaziland Primary Certificate Examination

CANDIDATE
NAME

CENTRE
NUMBER

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NUMBER

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SCIENCE

513/02

Paper 2

November 2018

1 hour 30 minutes

READ THESE INSTRUCTIONS FIRST

Write your, Centre number, candidate number and candidate name in the spaces provided.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams, graphs and tables.

Do **not** use staples, paper clips, highlighter, glue or correctional fluid.

This paper consists of two sections: Section A and Section B.

Answer **all** questions in Section A.

Answer **one** question in Section B.

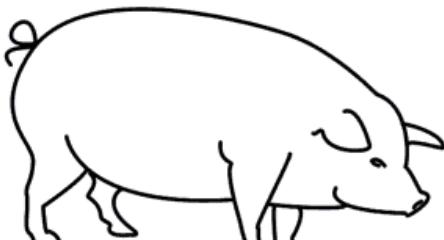
The number of marks is given in brackets [] at the end of each question or part question.

For Examiner's Use	
Section A	
1	
2	
3	
4	
5	
Section B	
6	
7	
Total	

This document consists of 15 printed pages and 1 blank page.

Section A

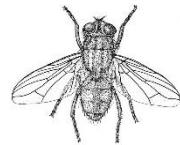
1 The diagram shows three different animals. Animals **A** and **B** belong to the same group. Animal **C** belongs to a different group.



A



B



C

(a) (i) State the group to which animals **A** and **B** belong.

.....

[1]

(ii) Name the group to which animal **C** belongs.

.....

[1]

(b) State **one** feature present in animal **A** and animal **B** that is not found in animal **C**.

.....

[1]

(c) Identify **two** similar features from the diagram that animals **A** and **B** have.

1

2

[2]

(d) Describe how the skin of animal **A** differs from that of animal **B**.

.....

.....

[2]

(e) Complete the table below to show the differences in reproduction and feeding between animal A and animal B.

	animal A	animal B
reproduce		
feeding		young ones feed on their own on tiny grains

[3]

[Total: 10]

2 (a) Draw a line to match the substances on the left with the correct explanation on the right.

The first one has been done for you.

substances	explanations
atom	it has a fixed shape
element	is made of solid dissolved in a liquid
solid	is the building block of matter
solution	it does not have a fixed volume
liquid	is made up of similar atoms

[4]

(b) Describe how you can separate the mixtures described below.

(i) sand from beans,

..... [1]

(ii) clean water from muddy water,

..... [1]

(iii) grains of iron mixed with sand.

..... [1]

(c) Water and steam belong to different states of water.

(i) Name the change of state when water changes to steam.

.....

[1]

(ii) State what causes water to change to steam.

.....

[1]

(iii) State **one** example of a liquid that changes from a liquid to steam at 100° C.

.....

[1]

[Total: 10]

3 (a) Over the past 50 years technology has greatly improved the lives of people.

Describe what is meant by the term *technology*.

.....

[2]

(b) Busa'a school has computers and the internet.

(i) Explain the importance of learners having access to the internet.

.....

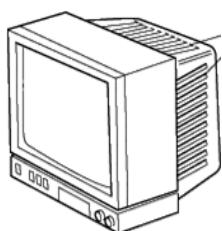
[2]

(ii) State **one** disadvantage of allowing learners to have access to the internet.

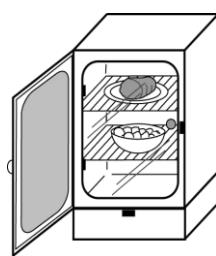
.....

[1]

(c) The diagram shows technology gadgets and machines.



television



fridge



helicopter

State how each technology gadget has improved people's lives.

(i) television

..... [1]

(ii) fridge

..... [1]

(iii) helicopter

..... [1]

(d) The use of tractors for ploughing has improved food production.

Describe **two** disadvantages of using tractors when ploughing fields.

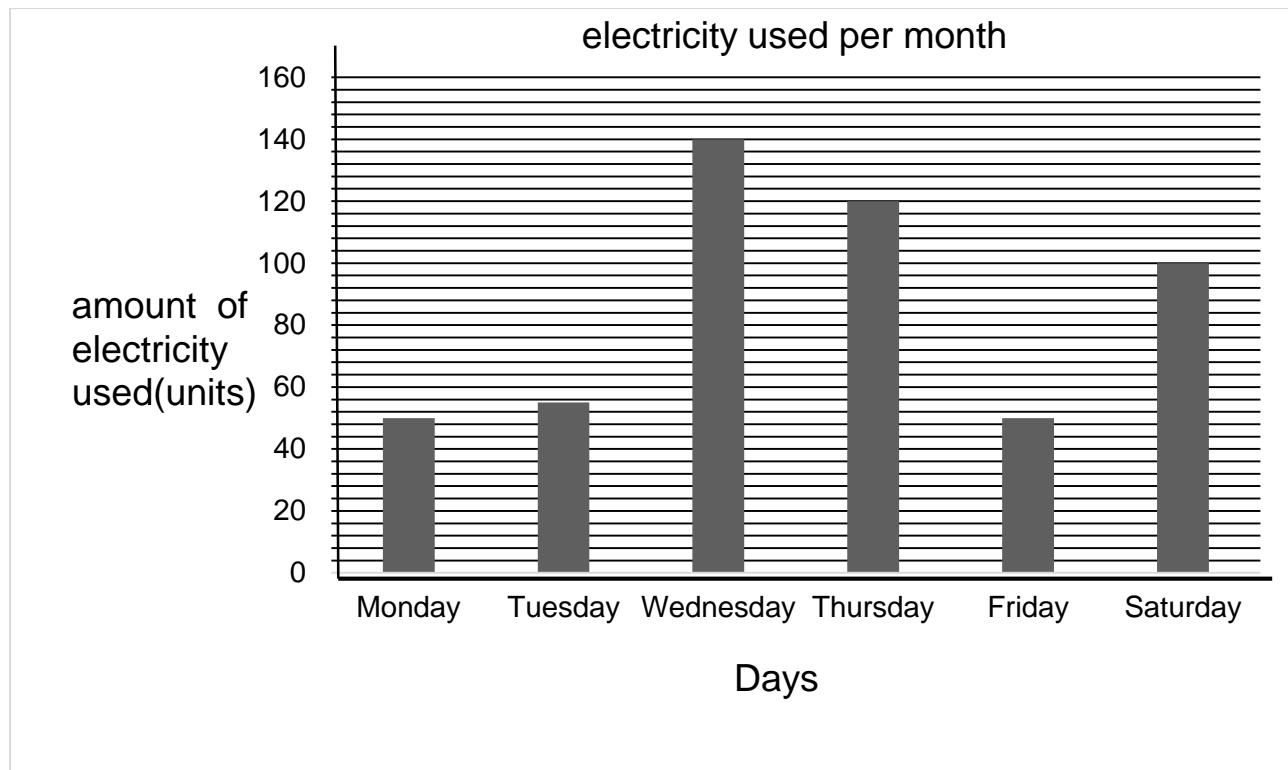
1

2

[2]

[Total: 10]

4 (a) The graph shows the amount of electricity used in Khabo's house in a week.



(i) State the day in which less electricity is used.

..... [1]

(ii) State the source of electricity in the house.

..... [1]

(iii) State the days in which almost the same amount of electricity is used.

..... [1]

(iv) Suggest a possible reason for the high amount of electricity used on Wednesday.

.....

..... [2]

(v) Calculate the average amount of electricity Khabo used in the six days.

Answer = [2]

(vi) State why it would be wise to switch off lights at night.

..... [1]

(b) (i) Name **one** other form of energy that can be used for lighting in the house.

..... [1]

(ii) Name **one** form of renewable energy that can be used for cooking.

..... [1]

[Total: 10]

5 (a) Mandla forgot his one Lilangeni coin in an open container outside his house. He found his coins rusted after a long time.

(i) State what has caused the coins to rust.

.....

[1]

(ii) Describe the difference between the change in the rusted coins and the change when ice melts.

.....

.....

[2]

(b) Milk is a liquid and a stone is a solid.

Describe the difference in terms of volume between milk and a stone.

.....

.....

[2]

(c) The following is a list of substances:

silver, carbon dioxide, sodium hydroxide, air, water

Choose from the list:

(i) an element,

.....

[1]

(ii) an alkali.

.....

[1]

(iii) a mixture.

.....

[1]

(d) Mandla is given an unknown solution which is either acidic or alkaline.

Describe how Mandla would identify the solution?

.....

.....

.....

[2]

[Total: 10]

Section B

Answer only **one** question in this section.

6 Zola and Veli weigh the mass of packets of marbles every time before selling them.

The table shows the records of the mass of the marbles sold in four days.

days	mass of marbles per pocket	number of marbles
Monday	10 g	10
Tuesday	15 g	10
Wednesday	8 g	20
Thursday	10 g	15

(a) Define the term *mass*.

.....

[1]

(b) State the instrument used to measure the mass of the marbles.

.....

[1]

(c) State the day in which the highest mass of the marbles was sold.

.....

[1]

(d) Describe how you would find the volume of the marbles sold on Thursday.

.....
.....
.....
.....
.....
.....
.....

[4]

(e) Describe how you would calculate the density of the marbles sold on Thursday.

.....
.....

[2]

(f) State the units of density.

.....

[1]

[Total: 10]

7 (a) Scientists carry out experiments in order to understand the Nature and behaviour of things.

(i) Describe an experiment you would carry out to find out how light travels.

You can choose the correct words from the list below to describe the experiment.

measuring cylinder, candles, stone, cardboard cards, matches, white sheet of paper, water, soap.

.....
.....
.....
.....
.....
.....
.....

[4]

(ii) Describe what would happen if a plant is kept in a place where there is no light.

.....

[1]

(b) In many years ago, people did not have advanced technology devices that produced light at night.

(i) Describe the technology that uses light nowadays and state how this technology improves the security of people in their homes.

technology.....

.....

[1]

how it improves security

.....

[2]

(ii) Name the main source of light on the Earth.

..... [1]

(iii) Explain why the moon is referred to as non-luminous.

..... [1]

[Total: 10]

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