



EXAMINATIONS COUNCIL OF ESWATINI
Eswatini Primary Certificate

CANDIDATE
NAME

CENTRE
NUMBER

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NUMBER

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Science

Paper 2

513/02

October/November 2019

1 hour 30 Minutes

READ THESE INSTRUCTIONS FIRST

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

Write in dark blue or black ink pen in the spaces provided on the Question Paper.

You may use an HB pencil for any diagrams, graphs, tables or rough working.

Do **not** use staples, paper clips, highlighters or correction fluid.

This paper consists of two sections (Section A and B).

Answer **all** questions in sections A and answer **one** question in section B.

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

The total of the marks for this paper is 60.

Question	Examiner's use
Section A	
1	
2	
3	
4	
5	
Section B	
6	
7	
Total	

This document consists of 13 printed pages and 3 blank pages.

SECTION A

Answer **all** questions in this section

1 (a) Fig. 1.1 shows two seeds from different flowering plants.

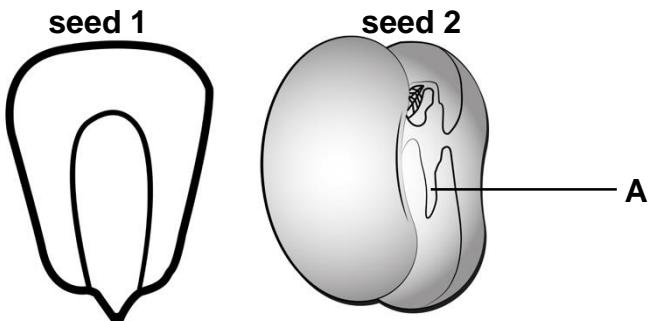


Fig. 1.1

(i) Name the part labelled **A** in Fig. 1.1.

..... [1]

(ii) Name the classes of plants to which seeds **1** and **2** belong.

seed **1**

seed **2** [2]

(iii) Complete the table by stating **one** difference in the seeds that helped you to classify the plants from which the seeds were taken.

seed 1	seed 2

[1]

(iv) State **two** conditions necessary for the seeds to germinate.

1

2 [2]

(b) Fig. 1.2 shows a plant cell.

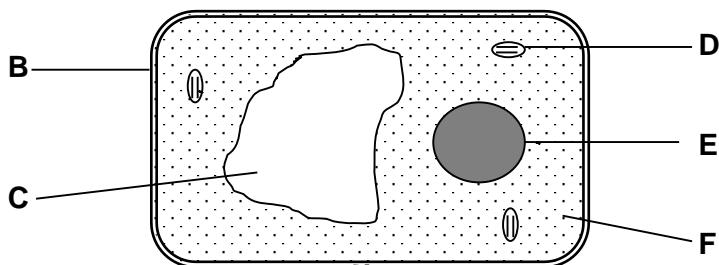


Fig. 1.2

(i) Name the parts labelled **E** and **F** in Fig. 1.2.

E.....

F..... [2]

(ii) State two features that are labelled on the diagram which are **not** found in an animal cell.

1.....

2..... [2]

[Total: 10]

2 (a) (i) Name the **two** forms of electricity.

1.....

2..... [2]

(ii) Describe **one** example of charging an object by friction.

.....

.....

..... [2]

(b) Simo's radio uses a battery.

State the energy conversions that take place when Simo switches on his radio to play music.

..... [2]

(c) Fig. 2.1 shows a bar magnet.

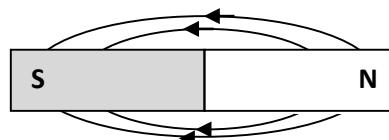


Fig. 2.1

(i) Complete Fig 2.1 by drawing the missing magnetic field lines at the poles. [2]

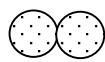
(ii) Circle **two** magnetic substances in the box.

metal spoon	glass
drinking	straw
jersey	nail

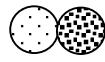
[2]

[Total: 10]

3 (a) Fig. 3.1 shows particles that make up matter.



G



H



I

Fig. 3.1

Identify and state the letter which represents an atom and an element.

an atom

an element [2]

(b) Fig. 3.2 shows a glass with sugar and cold water poured by Landi.

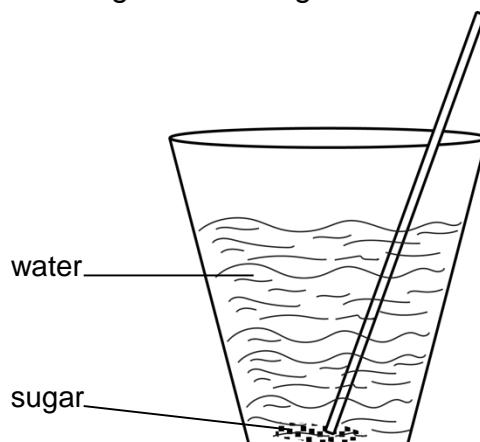


Fig. 3.2

Landi stirs the mixture.

(i) State the process that has occurred when she stirs the mixture.

..... [1]

(ii) State the names that are used to describe the sugar and the mixture formed after stirring.

sugar

mixture..... [2]

(c) A pupil accidentally mixes maize seeds, sand and small pieces of iron.

Describe how you would separate the mixed substances.

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

[3]

(d) Fig. 3.3 shows a burning candle.



Fig. 3.3

Indicate on Fig. 3.3 a part of the burning candle that shows:

(i) a physical change with the letter **K**
(ii) a chemical change with the letter **L**

[2]

[Total: 10]

4 (a) Fig. 4.1 shows jaws of two different animals.

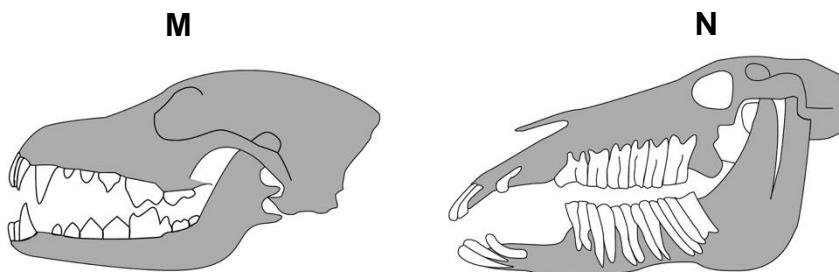


Fig. 4.1

(i) How many types of teeth does animal **M** have?

..... [1]

(ii) The diagram **N** represents the jaw of an animal that feeds on grass.

Describe how the teeth enable this animal to feed on grass.

.....
.....
.....
..... [3]

(b) Human beings chew food before swallowing it.

Describe what happens when the food is chewed in the mouth.

.....
.....
.....
..... [3]

(c) Table 4.1 shows some parts of the alimentary canal and their functions. Match, using lines, the part of the alimentary canal with its correct function. The first one has been done for you.

Table 4.1

part of the alimentary canal	function
anus	absorption of water
rectum	stores faeces temporarily
small intestines	passage of faeces
large intestines	absorption of the end products of digestion
	digestion of food

[3]

[Total: 10]

5 Light is a form of energy.

(a) (i) Define the term *energy*.

..... [1]

(ii) Name **two** natural sources of light.

1

2

(b) Fig. 5.1 shows a photograph taken by a Grade 7 class while investigating the properties of light.

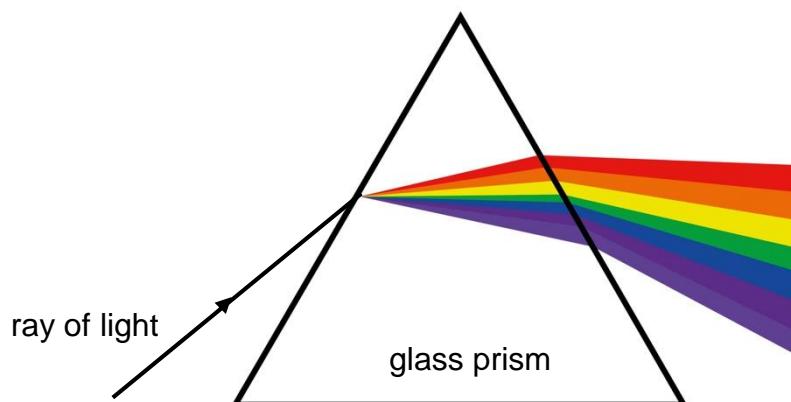


Fig. 5.1

(i) State the difference between a beam and a ray of light.

.....
..... [1]

(ii) Describe the property of light after passing through the glass prism.

.....
.....
.....
..... [2]

(c) Wind is a renewable and clean source of energy.

(i) Explain why wind is a renewable source of energy.

.....
..... [1]

(ii) State **another** clean source of renewable energy.

..... [1]

(iii) Suggest **one** way of conserving energy at home.

..... [1]

(iv) State the law of conservation of energy.

.....
..... [1]

[Total: 10]

SECTION B

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

6 (a) You are asked to measure the volume of a small stone using some of the apparatus listed in the box.

measuring cylinder thread beaker flask
displacement can thermometer

Describe how you will use some of the apparatus to measure the volume of the small stone.

[5]

(b) You have been given two liquids, **P** and **Q**.
Universal indicator solution is used to show that liquid **P** is an acid and liquid **Q** is an alkali.

(i) Name another indicator that could be used to identify liquids **P** and **Q**.

..... [1]

(ii) Describe the colours observed when drops of the universal indicator were added to liquids **P** and **Q**.

liquid **P**

liquid **Q** [2]

(iii) You have also been asked to mix liquid **P** and liquid **Q** to neutralise them.

Describe how you would use the universal indicator to show that when liquid **P** is added to liquid **Q** a neutral solution is formed.

.....

.....

..... [2]

[Total: 10]

7 (a) Fig. 7.1 shows an electromagnet made by some pupils in a science laboratory.

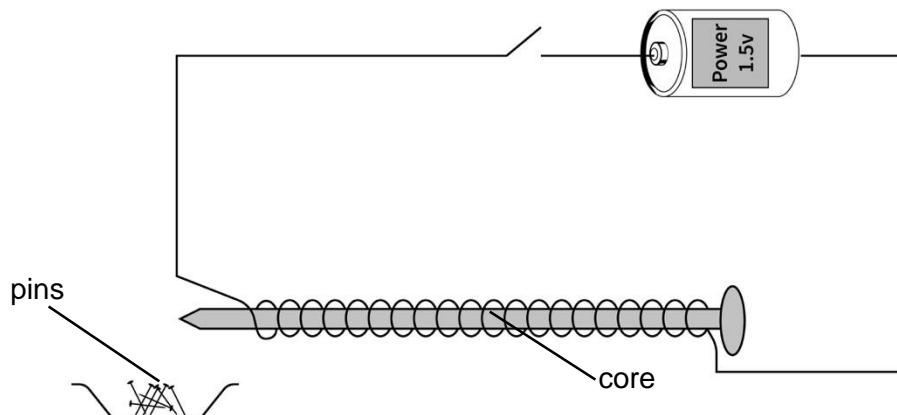


Fig.7.1

(i) Name the material that is suitable to be used as the core.

..... [1]

(ii) Describe what happens when the switch is closed.

.....

.....
..... [2]

(iii) Describe **two** changes that can be made on the set-up to increase the strength of the electromagnet.

1

2 [2]

(b) Fig. 7.2 shows a set-up made by Lunga to get pure water and salt from a salt solution.

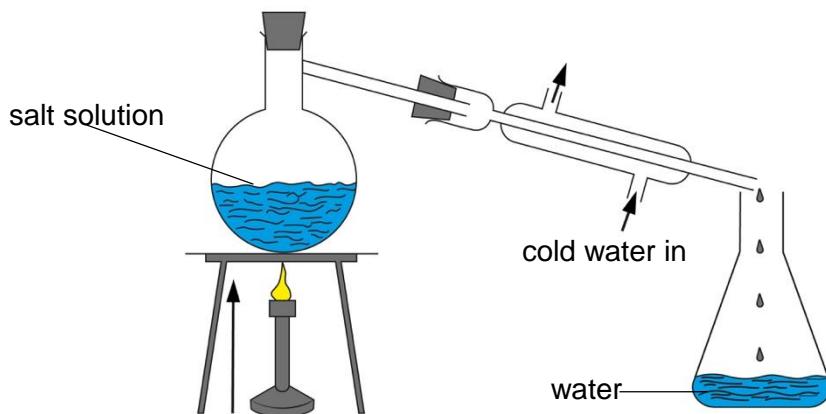


Fig. 7.2

(i) State the purpose of the stove in the set-up.

..... [1]

(ii) State the scientific name for the water that collects in the glass.

..... [1]

(iii) Explain why the tube is passed through cold water.

.....
.....
..... [2]

(iv) Label on the diagram above, with the letter **R**, the part where the salt will be formed.

[1]

[Total: 10]

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