Let the mind manage the body
Que l'esprit gère le corps

Index Number: .....

MAURITIUS EXAMINATIONS SYNDICATE

Primary School Achievement Certificate Assessment

March 2021

Time: 1 hour 45 Minutes **Total Marks: 100**

SCIENCE

(Subject code No. P141/3)

INSTRUCTIONS TO CANDIDATES

1. Check that this assessment booklet contains **10** questions printed on **15** pages numbered 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13,14, 15, and 16.
2. Write your Index Number on the assessment booklet in the space provided above.
3. You should not use red, green or black ink in answering questions.
4. Write all your answers clearly in the assessment booklet.
5. Attempt all questions.

Question	Marking			Revision			Control		
	Marks		Sig	Marks		Sig	Marks		Sig
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
Total									
Sig (HoG)									

Marks

Question 1 (10 marks)

Circle the correct answer.

1. At which temperature does pure water **freeze**?

A 0° C **C** 70° C

B 25° C **D** 100° C

2. Which one of the following gases is present in the **greatest** amount in the atmosphere?

A Carbon dioxide **C** Oxygen

B Nitrogen **D** Water vapour

3. Why are **leaves** important to plants?

A They absorb the nutrients from the soil.

B They attract insects.

C They carry water to the other parts of the plant.

D They produce food for the plant.

4. By which process does water vapour present in air form clouds?

A Condensation **C** Freezing

B Evaporation **D** Melting

5. Which **one** of the following gases is needed for **a fire to burn**?

A Carbon dioxide **C** Oxygen

B Nitrogen **D** Water vapour

Marks

6. Which one of the following is a characteristic of **reptiles**?

A They have gills.

B They have scales on their body.

C They have six legs.

D They have a pair of wings.

7. Which one of the following teeth is used to **tear** food?

A Incisors

B Canines

C Premolars

D Molars

8. Which one of the following sources of energy is used by **sugarcane factories** to produce electricity in Mauritius?

A Bagasse

B Charcoal

C Water

D Wind

9. **Diagram 1** shows an electric kettle.

Which energy transformation takes place when water is boiled in this kettle?

A Chemical energy to light energy

B Heat energy to chemical energy

C Electrical energy to heat energy

D Light energy to electrical energy

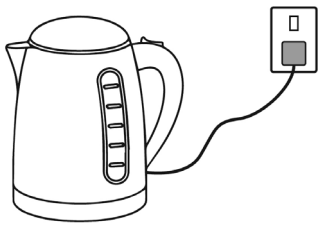


Diagram 1: An electric kettle

10. Which one of the following explains why it is **unsafe** to use a plastic spoon while cooking?

A Plastic conducts electricity.

B Plastic may damage the pot.

C Plastic conducts heat.

D Plastic can melt in the pot.

Please turn over this page

Marks

Question 2 (7 marks)

(a) **Diagram 2** shows a flowering plant.

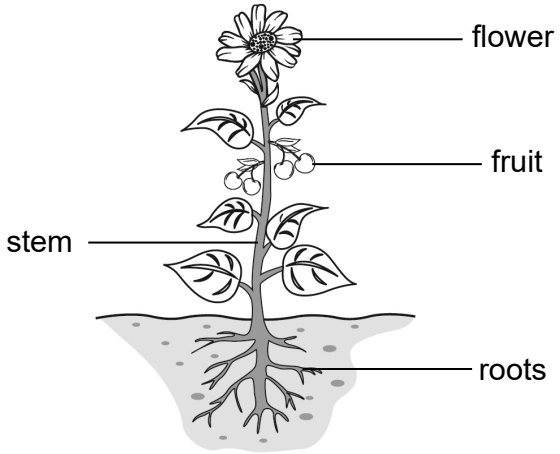


Diagram 2: A flowering plant

Match each labelled part to its function in the plant.

Part
Flower
Fruit
Stem
Roots

Function
Holds the plant upright.
Absorb water and anchor the plant.
Contains the male and female parts.
Manufactures food for the plant.
Protects the seeds as they develop.

[4]

(b) Name the green substance in plants necessary for photosynthesis.

_____ [1]

(c) Give two causes of soil erosion.

1. _____

2. _____

[2]

Marks

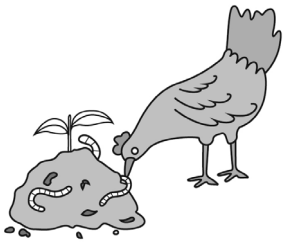
Question 3 (10 marks)

(a) Name the natural habitat of each of the following animals. An example is given.

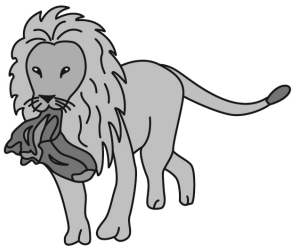
Animal	Habitat
Bat	Cave
Worm	
Camel	
Whale	
Kestrel	
Wild pig	

[5]

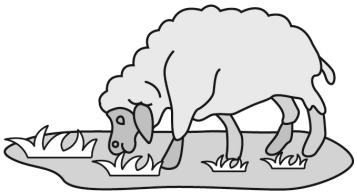
(b) **Diagram 3** shows three animals eating.



A hen eating grains and worms



A lion eating meat



A sheep eating grass

Diagram 3: Animals eating

(i) Use the appropriate word given below to classify the three animals shown in **Diagram 3**.

Carnivore **Herbivore** **Omnivore** **Granivore**

Hen: _____

Lion: _____

Sheep: _____

[3]

Marks

(ii) Apart from their diet, the hen and the lion have different characteristics. Give **two other different** characteristics between the hen and the lion.

1. _____

2. _____

[2]

Question 4 (10 marks)

(a) Complete each of the following sentences by using the appropriate word from the list below.

spices **carbon dioxide** **cactus**

oxygen **mangrove** **pollen**

(i) The male parts of plants contain _____ .

(ii) Plants are used as _____ to give flavour and taste to food.

(iii) During photosynthesis, plants take in _____ and release _____ .

(iv) The _____ grows well in deserts whereas the _____ grows well in wetlands.

[6]

(b) Give **two reasons** why forests have been cut down in Mauritius.

1. _____

2. _____

[2]

(c) Give **two measures** that the Government has taken to protect our rare birds.

1. _____

2. _____

[2]

Marks

Question 5 (13 marks)

(a) Robin is having **a slice of bread** and **butter, a banana**, **an apple** and a glass of **milk** for breakfast.

In the table below:

(i) name the three food groups.

(ii) classify the food items in Robin's breakfast under each food group.

Food for ……	**Food for ……**	**Food for ……**

[8]

(b) (i) Is Robin's breakfast a balanced meal?

_____ [1]

(ii) Explain the answer you gave in part **(b)(i)**.

_____ [1]

(c) Explain why it is important to have a balanced diet.

_____

_____ [1]

(d) Our body uses food and oxygen to produce energy.

State **two** ways in which this energy is used.

1. _____

2. _____ [2]

Marks

Question 6 (10 marks)

(a) Match each material in column **A** to its most appropriate use in column **B**. An example is given.

Column A: Material	Column B: Use
Wood	To make thread
Cotton	To make tyres
Silk	To make T-shirts
Rubber	To make furniture
Glass	To make window panes
	To make electrical wires

[4]

(b) Name a metal which is used

(i) to make precious jewellery: _____

(ii) for constructing airplanes: _____

(iii) to make kitchen utensils: _____

[3]

Marks

(c) **Diagram 4** shows two similar iron nails in two different tubes.

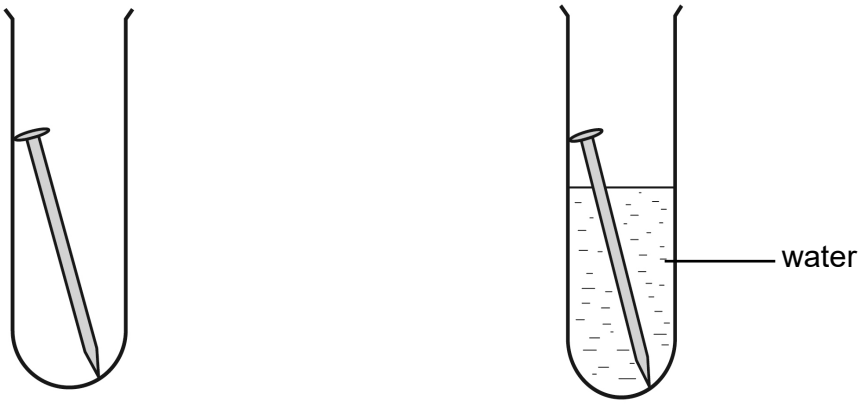


Diagram 4: Nails in tubes A and B

(i) Why will the iron nail in **Tube B** rust more rapidly than the one in **Tube A**?

_____ [1]

(ii) Give two ways how you can prevent the iron nail in **Tube A** from rusting.

1. _____

2. _____ [2]

Marks

Question 7 (10 marks)

(a) The sentences below describe the process of generating electricity in a thermal power station.

Order the different processes in electrical production by numbering the given sentences.

The first one has been done for you.

	Heat is used to boil water.
	The turbines generate electricity.
1	Fuel is burnt to generate heat.
	Steam turns the turbine.

[3]

(b) **Diagram 5** shows a power station and its surrounding area.

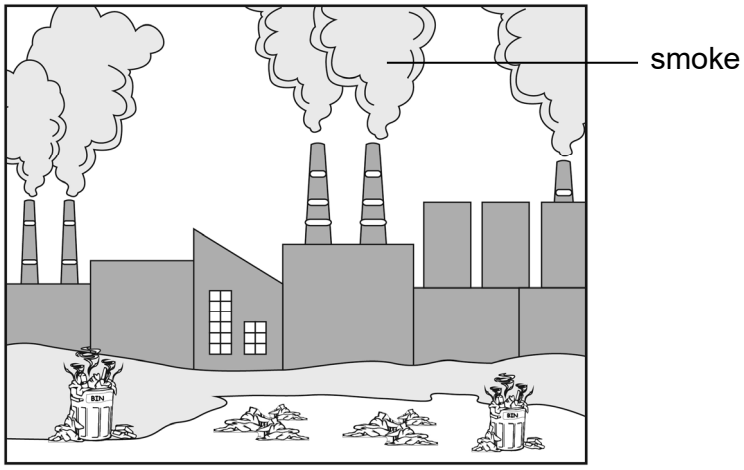


Diagram 5: Power station and its surroundings

(i) Name the type of pollution caused by the **smoke**.

_____ [1]

(ii) Explain how pollution caused by smoke can be **reduced**.

_____

_____ [1]

(iii) Name two **renewable** sources of energy which will **not** cause the type of pollution in part **(b)(i)**.

1. _____

2. _____ [2]

(c) (i) From where are fossil fuels obtained?

_____ [1]

(ii) Name one fossil fuel that the power station in **Diagram 5** could use to produce electricity.

_____ [1]

(iii) Give one **advantage** of using fossil fuels to produce electricity.

_____ [1]

Question 8 (9 marks)

(a) **Diagram 6** shows **Jar A** and **Jar B** which are placed on a table in a classroom.

Jar A contains water at room temperature.

Jar B contains ice.

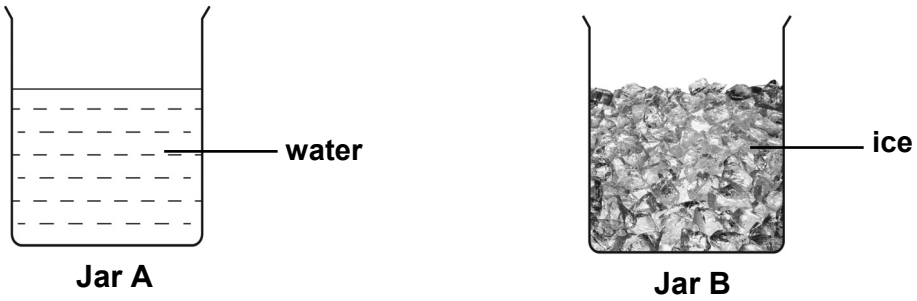
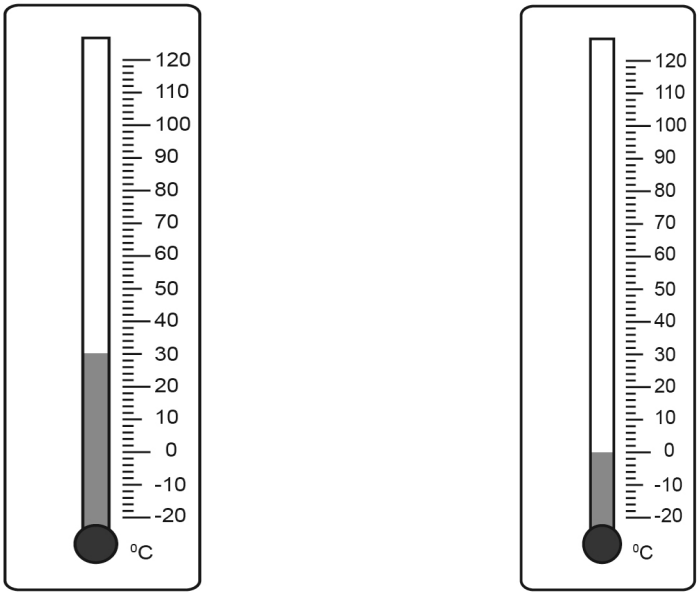


Diagram 6: Jars **A** and **B**

A thermometer is placed in each jar to measure the temperature.

Marks

Diagram 7 shows the thermometers recorded in jars **A** and **B**.



Thermometer in **Jar A** Thermometer in **Jar B**

Diagram 7: Thermometers placed in jars A and B

(i) Read and record the temperature in **Jar A** and **Jar B**.

Temperature in **Jar A** = _____ °C

Temperature in **Jar B** = _____ °C

[2]

(ii) What will happen to the ice in **Jar B** after about 15 minutes?

_____ [1]

(iii) Suggest a temperature in **Jar B** after about 15 minutes.

_____ [1]

(b) State **two** properties of ice.

1. _____

2. _____ [2]

(c) Tom measures the temperature of air in the school ground from 9 a.m. to 3 p.m.

His results are shown in the table below.

Time	**9 a.m.**	**10 a.m.**	**11 a.m.**	**12 p.m.**	**1 p.m.**	**2 p.m.**	**3 p.m.**
Temperature	20°C	19°C	22°C	24°C	25°C	27°C	25°C

(i) At what time was the air temperature **highest**?

_____ [1]

(ii) At what time was the air temperature **lowest**?

_____ [1]

(iii) Suggest what could have caused the decrease in temperature at 10 a.m.

_____

_____ [1]

Question 9 (11 marks)

Devina is investigating one of the conditions necessary for the germination of bean seeds.

She places 3 bean seeds in damp cotton wool and 3 bean seeds in dry cotton wool as shown in **Diagrams 8A** and **8B**.

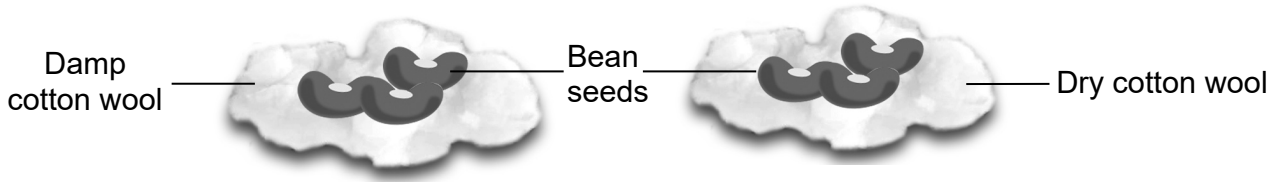


Diagram 8A: Bean seeds in damp cotton wool

Diagram 8B: Bean seeds in dry cotton wool

She makes sure that the cotton wool in **Diagram 8A** remains damp.

Marks

Her results are found in the following table.

	Number of seeds which germinated
In damp cotton wool	2
In dry cotton wool	0

(a) (i) What can Devina **conclude** from her experiment?

_____ [1]

(ii) Name **two other** conditions necessary for the germination of seeds.

1. _____

2. _____ [2]

(b) (i) **Fill in the blanks with the correct words.**

When a seed germinates, the _____ appears first and then the

_____ comes out. [2]

(ii) Why does the seed become **smaller** after germination?

_____

_____ [2]

(c) In the space below draw:

(i) a seed which has germinated. [2]

(ii) a seedling. [2]

Seed which has germinated	**A seedling**

Marks

Question 10 (10 marks)

(a) (i) A device that is used to open or close an electric circuit is called a _____ .

(ii) A dry cell has_____ ends.

[2]

(b) **Diagram 9** shows an electric circuit.

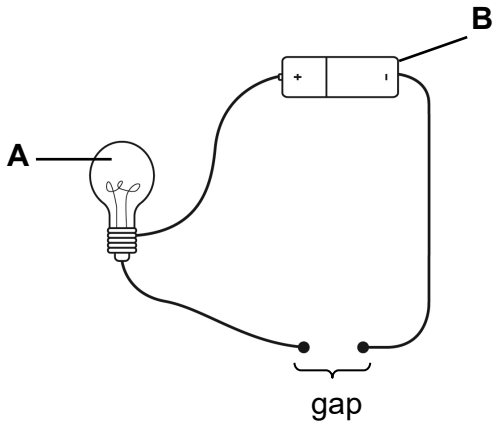


Diagram 9: Electric circuit

(i) Is the circuit open or closed? Explain your answer.

_____

_____ [2]

(ii) Name components **A** and **B** of the electric circuit.

A: _____

B: _____

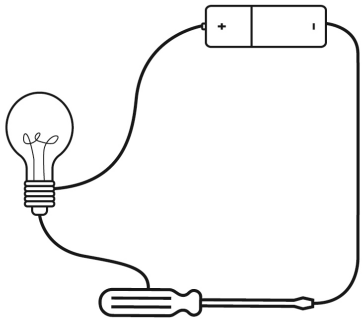
[2]

(iii) Which metal is used inside electrical wires?

_____ [1]

Marks

(iv) **Diagram 10** shows a screwdriver which has been placed in the gap.



Screwdriver

Diagram 10: Electric circuit with screwdriver

1. Which material is **usually** used to make **handles** of screwdrivers?

   _____ [1]

2. Give a reason why this material is suitable to make handles of screwdrivers.

   _____ [1]

3. Why will the bulb **not** light up in the circuit in **Diagram 10**?

   _____ [1]

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