Test:	Primary 5 Science (Term 2) - Nan Hua	
Points:	67 points	
Name:		Score:
Date:		
Signature:		
Select multiple Only selec	e choice answers with a cross or tick: ct one answer t multiple answers	

Question 1 of 61	Primary 5 Science (Term 2)	2 pts

-

For each question, four options are given. One of them is the correct answer. Make your choice (A, B, C or D) and choose the correct answer below. (28 x 2 marks)

Which statement(s) about cells is/are correct?

- A A cell is the smallest living thing.
- B Every living thing is made up of many cells.
- C Cells in a living thing grow bigger as the living thing grows bigger.
- A) A only
- OB) Bonly
- C) A and B only
- **D)** A, B and C

Which statement(s) about reproduction of plants is/are correct?

- A Flowering plants only reproduce from spores
- B Plants reproduce so that their own kind will continue to exist.
- C All the characteristics of the parent plants will be passed on to its offspring.

### **A**) A only

- OB) Bonly
- C) B and C only
- **D**) A, B and C

Question 3 of 61

Primary 5 Science (Term 2) 2 pts

The diagram below shows the cross-section of a flower.



Which one of the labelled parts helps to receive pollen grains during pollination?

- OA) Part J
- OB) Part K
- OC) Part L
- OD) Part M

The table below shows the comparison between the sexual reproduction in humans and plants.

Human	Plant
Testis	A
В	Egg
Fertilisation	C
D	Seeds are formed
	Human Testis B Fertilisation D

Which of the following correctly shows the missing information in the table above?

_										
○ A)	Α	В	С			D				
	Anther	Egg	Fertilisation			Baby is formed				
⊖В)	Α		B C		С	D		D		
	Pollen g	grains	Ovar	y	Fertilisation		Fruit is forme		ed	
() C)	Α		ВС		;	D				
	Pollen g	grains	Egg	g Pollina		ation Fr		uit is forn	ned	
O D)	Α	В	С			D				
			1			1			1	

Mary carried out an experiment to find out if plants take in water. She poured equal amount of water into cylinders X and Y which are of the same size. She then placed both cylinders in the same location as shown below.



Why did Mary set up cylinder X?

- A To confirm that the plant took in the water.
- B To measure how much water had evaporated away.
- C To act as a control for the experiment to compare the results against cylinder Y.
- **A**) A and B only
- **B**) A and C only
- **C**) B and C only
- **D**) A, B and C

The diagrams below show the respiratory system and part of the digestive system.



Which of the following statements is/are true about organ P and organ Q?

- A Organ Q transports food but not organ P.
- B Organ P and Q transport both water and food.
- C Organ P transports oxygen only but not organ Q.
- A) A only
- **B**) B only
- C) A and B only
- **D**) A and C only

Question 7 of 61

Primary 5 Science (Term 2) 2 pts

# What will happen if we do not have bones in our body?

- A We will faint constantly.
- B We will not be able to move.
- C Our body will not have any shape.
- D Some of our organs will not be protected.
- **A)** A and B only
- B) C and D only
- C) B, C and D only
- **D)** A, B, C and D

Which of the following are possible functions of the roots of the floating plant below?



- Make food for the plant. А
- Take in dissolved mineral salts. В
- Hold the plant firmly to the ground Take in water for all parts of the plant. C.D
- **A**) A and C only
- **B** B and D only
- C) C and D only
- **D**) B, C and D only

Janice conducted an experiment using bags made of two different materials. She poured starch and water mixture into the bags and left them in beakers of water with iodine solution. Iodine solution turns dark blue when it comes into contact with starch.



After one day, she recorded what she observed in the table below.

	Set-up A	Set-up B		
Starch and water mixture	turned dark blue	turned dark blue		
Water with lodine solution	remained brown	turned dark blue		

She related the experiment to what she had learnt about plant cells.



Which of the following statements best describes the experiment above?

- A) Both bags can be used to represent part Z of the cell.
- **B**) The bags can be used to represent part X which controls the movement of the starch particles.
- **C)** The bag in set-up A can be used to represent part Z of the cell while the bag in setup B can be used to represent part Y of the cell.
- **D)** The bag in set-up A can be used to represent part Y of the cell while the bag in setup B can be used to represent part Z of the cell.

Jia Xuan and Ben set up four beakers, P, Q, R and S as shown below. Beakers P, Q and R were kept at room temperature while beaker P was kept in the refrigerator.



Jia Xuan would like to find out if water is needed for germination. Ben would like to find out if warmth is needed for germinaten. Which set-ups should each of them germinition

_		
○ A)	Jia Xuan	Ben
	P and R	Q and S
() B)		_
00)	Jia Xuan	Ben
	Q and R	P and S
(C)	Jia Xuan	Ben
() C)	<b>Jia Xuan</b> Q and R	<b>Ben</b> Q and S
() C)	<b>Jia Xuan</b> Q and R	<b>Ben</b> Q and S
○ C) ○ D)	Jia Xuan Q and R Jia Xuan	Ben Q and S Ben
○ C) ○ D)	Jia Xuan Q and R Jia Xuan P and R	Ben Q and S Ben P and S

Flowers A, B, C and D were wrapped in plastic bags for a week to prevent them from being pollinated. After the plastic bags were removed, one part was removed from each of the flowers. A tick (J) shows that the part is present in the flower.

	anther	stigma	ovary	petals
A	1	J	7	removed
в	J	J	removed	J
c	J	removed	1	1
D	removed .	J	J	J

Which of the flowers cannot be developed into a fruit?

- A) A and B
- OB) B and C
- C) A, C and D
- **D**) A, B, C and D

### Question 12 of 61

2

Study the dispersal of seeds by plant P.



Which one of the following fruits belongs to plant P?

į.



ОВ)



OD)



Question 13 of 61

Primary 5 Science (Term 2) 2 pts

Which of the following statements are true about the reproduction in humans?

- A Fertilisation occurs in the female.
- B Two sperms are needed to fuse with the egg.
- C The fertilised egg develops in the male body.
- D Male produces sperms while the female produces eggs.
- **A**) A and C only
- **B**) A and D only
- **C**) B and C only
- **D**) B and D only

John prepared four set-ups as shown below. He placed all the set-ups in a room which has sunlight. He wanted to find out if an animal gives off carbon dioxide.



Which two set-ups should he use for his experiment?

- A) Set-ups A and C
- **B**) Set-ups A and D
- C) Set-ups B and C
- OD) Set-ups B and D

The diagrams below show the human and fish respiratory system.



Human Respiratory System

Fish Respiratory System

Which statements about the two systems are correct?

- Both human and fish take in oxygen from the air. A
- The human uses the lungs for gaseous exchange but the fish uses the gills. в
- The human takes in oxygen in the air whereas the fish takes in oxygen in the C water.
- The amount of carbon dioxide is greater than the amount oxygen in the D exhaled air of the human.
- **A**) A and B only
- **B**) A and D only
- **C**) B and C only
- **D**) B, C and D only

# Study the diagram below.



# Identify the functions of W and X.

○ A)	W	X				
	Breaks down food into smaller pieces	Allows water to be absorbed into the bloodstream				
ОВ)	W	X				
	Breaks down food into smaller pieces	Digested food is absorbed into the bloodstream				
() C	W	X				
	Breaks down food into simpler substances	Digested food is absorbed into the bloodstream				
O D)	W	X				
	Breaks down food into simpler substances	Allows water to be absorbed into the bloodstream				

# Study the human digestive system below.



Which parts of the digestive system do digestion occur?

- **A)** A, C and D only
- **B**) B, E and F only
- C) A, B, C and D only
- $\bigcirc$  **D**) A, B, C, D and E only

#### Question 18 of 61

The table below compares the properties of materials A, B, C and D. A tick (J) shows the presence of the property in the materials.

Material	А	В	c	D
strong	J	J	J	
lexible	J	J		J
vaterproof	1		1	J

in walking?

- **A)** A
- **В)** В
- **○C)** C
- OD) D

÷,

Question 19 of 61

Primary 5 Science (Term 2) 2 pts

A metal bar PQ is hung by a thin thread, it always comes to rest with one end of the bar, P, pointing North as shown in the figure below. Another bar XY made of the same metal as PQ does not rest in a fixed direction.



### What happens if the two bars are brought close to each other?

- **A)** End P attracts both end X and end Y.
- **B**) End P attracts end X but repels end Y.
- **C)** End P attracts end Y but repels end X.
- **D**) End P neither attracts nor repels end X.

Living things require water to survive. Which of the following statements show(s) that water is important to living things.

- A Water is home to many aquatic animals and plants.
- B Water is needed by many living things to carry out life processes.
- C Water is needed by plants to transport mineral salts in the water-carrying tubes to all parts of the plant.
- **A**) B only
- **B**) C only
- **C**) B and C only
- **D**) A, B and C

Question 21 of 61

Primary 5 Science (Term 2) 2 pts

Study the information provided in the classification chart below.



Based on the information above, which one of the following correctly represents objects A, B, C and D?

~			-					1
◯ A)	Α	ВС				D		
	cling wrap	car tyres	spe	spectacle lens			aluminium foil	
○В)	А	В		С		D		]
	light bulb	aluminium	n foil	cling \	wrap	frying pan		
() C)	Α	В	С	С				
	light bulb	car tyres	cling	cling wrap		aluminiun		
() D)	Α	В		С			D	
	cling wrap	aluminiu	m foil	spec	tacle	lens	frying	g pan

Question	22	of	61
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Which of the following objects does not require the use of magnets?

**A**) stapler

**B**) compass

**C**) computer

**D**) refrigerator

Question 23 of 61

Primary 5 Science (Term 2) 2 pts

Josiah set up an experiment using four strips made of different materials. All the strips have the same size.



He placed a cup containing 50 cm<sup>3</sup> of water on each strip and measured the distance, *d*, between the highest and lowest point of the strip.

What property of the strip was Josiah trying to find out?

- **A**) strength
- **B**) flexibility
- **C)** ability to absorb water
- **D**) ability to float or sink in water

The set-up below is made up of a plastic ring, X, and 2 ring magnets, Y and Z.



Which property/properties of magnets does/do the above set-up show?

- A Magnets attract magnetic materials.
- B Like poles of magnets repel each other.
- C Unlike poles of a magnet attract each other.
- **A**) B only
- **B**) C only
- C) A and B only
- **D**) A, B and C

The diagrams below show the poles of a magnetised iron bar using the "stroke" method of making magnets.



Janice made two magnets using the "stroke" method as shown below.



Which one of the following is a possible arrangement of the magnets?

(A (













Study the diagram below.



# Which one of the following correctly identifies the processes represented by the arrows A, B, C and D?

○ A)	Α	В			С		D			
	melting	evapo	evaporat		on boiling		j condensatio		ion	
○В)	Α	В	С				D			
	freezing	boilir	boiling		condensation		evaporation		tion	
○ C)	Α	В		С	D					
	melting	boilin	poiling f		reezing co		ondensation		ion	
O D)	Α		В		C	С		D		
	condens	ation	evapoi		ration		freezing		boi	ling

Study the three glasses of hot tea that were placed on a table in a room at 30°C.



Which of the following statements are true about the glasses of hot tea?

- A The hot tea in glass A has the most amount of heat energy.
- B The hot tea in the three glasses have the same temperature.
- C The hot tea in the three glasses have the same amount of heat energy.
- D The hot tea in the three glasses will lose heat to the cooler surroundings.
- **A**) A and B only
- **B**) B and C only
- **C**) C and D only
- **D**) A, B and D only

Question 28 of 61

Primary 5 Science (Term 2) 2 pts

Glasses M and N were stuck together as shown in the diagram below.



## Peter managed to separate glasses M and N. How did he manage to do it?

○ A) He added ice water in glass M and put glass N completely in a basin of ice water.

**B**) He added hot water in glass M and put glass N completely in a basin of hot water.

**C**) He added ice water in glass M and put glass N completely in a basin of hot water.

**D**) He added hot water in glass M and put glass N completely in a basin of ice water.







State the function of part X. (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

# The diagram below shows the cross-section of a big flower.



In the diagram above, name and label the part that produces pollen grains. (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

## The diagram below shows the cross-section of a big flower.



Give two reasons why the flower is likely to be pollinated by animals. (2 marks)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

The bird shown below feeds on the nectar of the flower.



## How does this bird help in one of the reproduction process of the plant? [1]

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

#### Question 35 of 61

Study the two groups of animals below.



How are the animals in Group A and Group B different in the way they reproduce? (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

#### Question 36 of 61

Study the two groups of animals below.



Give a reason why reproduction is important to living things. (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

The picture below shows the reproductive system of a male cat.



In order to control the cat population in the community, male cats will be caught and an operation will be done on the male cat to prevent it from reproducing. The operation involves cutting the tube at X.

Describe how does cutting the tube at X prevent the cats from reproducing? [2]

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.



Identify the chart that represents the composition of exhaled air. Explain your answer.

## The two charts below show the composition of inhaled and exhaled air.



Explain why the amount of nitrogen is the same in both charts? (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

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# The diagram below shows two single-cell organisms.

In the diagram above, name and label the part in both cells where cell activities take place. (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

21



## The diagram below shows two single-cell organisms.

Amy said that both organisms feed on other organisms based on the cell parts observed. Do you agree with her? Explain your answer for organisms A and B. (2 marks)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

Diane found three similar fruits, P, Q and R, with wing-like structures and decided to carry out an investigation on the fruits. She cut off parts of the wing-like structure of each fruit, dropped them from a height and measured the time taken for each fruit to reach the ground. She recorded her results in the table below.

Fruit	Length of wing-like structure (cm)	Time taken for fruit to reach the ground (s)
P	2.5	4.1
Q	1.5 -	3.0
R	0.5	2.3
and services		and the second sec

State the dispersal method of the three fruits.

Question 43 of 61

Primary 5 Science (Term 2) 0 pts

Diane found three similar fruits, P, Q and R, with wing-like structures and decided to carry out an investigation on the fruits. She cut off parts of the wing-like structure of each fruit, dropped them from a height and measured the time taken for each fruit to reach the ground. She recorded her results in the table below.

Fruit	Length of wing-like structure (cm)	Time taken for fruit to reach the ground (s)		
Р	2.5	4.1		
Q	1.5 -	3.0		
R	0.5	2.3		

What is the relationship between the length of the wing-like structure and the time the fruit can stay in the air? (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

Diane found three similar fruits, P, Q and R, with wing-like structures and decided to carry out an investigation on the fruits. She cut off parts of the wing-like structure of each fruit, dropped them from a height and measured the time taken for each fruit to reach the ground. She recorded her results in the table below.

Fruit	Length of wing-like structure (cm)	Time taken for fruit to reach the ground (s)		
Р	2.5	4.1		
Q	1.5 -	3.0		
R	0.5	2.3		

Diane wanted to test out another fruit, S, by cutting the wing-like structure. The fruit took 2.8 seconds to reach the ground. What is the possible length of the wing-like structure?



Identify two characteristics of the coconut that enabled it to be dispersed by water. (2 marks)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.



Explain why seed dispersal is needed to ensure the survival of the coconut plant. (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.



Alan observed a rubber tree which dispersed its seeds by splitting of the fruit. He concluded that the coconut had a higher chance of survival than the rubber tree. Explain why. (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.



How are the reproduction of human and flowering plant similar? (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.



Alice set up the experiment below to find out if the number of leaves will affect the amount of water being absorbed.



Which two set-ups should she use to test her aim?

Alice set up the experiment below to find out if the number of leaves will affect the amount of water being absorbed.



Besides the flask and stopper, identify two other variables that she must keep the same to ensure a fair test. (2 marks)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

Jason set up an experiment to rank different types of paper according to their strength. He clamped each piece of paper and added weights on the paper until the paper tear. Based on the number of weights it took to tear the paper, he ranked the strength of the different types of paper.



The results of his experiment are shown in the table below.

ype of paper Number of weights needed to tear the pape				
Paper A	Least number of weights			
Paper B	1			
Paper C				
Paper D	Most number of weights			

Which type of paper should Jason use to make a carrier bag for heavy gifts? Explain your answer using the result in the table.

Jason set up an experiment to rank different types of paper according to their strength. He clamped each piece of paper and added weights on the paper until the paper tear. Based on the number of weights it took to tear the paper, he ranked the strength of the different types of paper.



The results of his experiment are shown in the table below.

Type of paper	pe of paper Number of weights needed to tear the paper					
Paper A	Least number of weights					
Paper B						
Paper C						
Paper D	Most number of weights					

What should Jason do to ensure that the results of his experiment are reliable? (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

Jason set up an experiment to rank different types of paper according to their strength. He clamped each piece of paper and added weights on the paper until the paper tear. Based on the number of weights it took to tear the paper, he ranked the strength of the different types of paper.



The results of his experiment are shown in the table below.

Type of paper Number of weights needed to tear the paper					
Paper A	Least number of weights				
Paper B	2				
Paper C					
Paper D	Most number of weights				

Using the same set-up, describe the steps that Jason can carry out to find out which type of paper is most suitable for wiping away water spills. (2 marks)

Pour

Measure

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

A 'floating globe' desk ornament is made by fixing an electromagnet and a permanent magnet to a wooden stand as shown below. Both the electromagnets and permanent magnets are attracting the globe model causing it to float between them.



Give an example of the material the globe model should be made of in order for it to be able to float between the two magnets?

A 'floating globe' desk ornament is made by fixing an electromagnet and a permanent magnet to a wooden stand as shown below. Both the electromagnets and permanent magnets are attracting the globe model causing it to float between them.



Explain what will happen to the globe model if the batteries become flat. (2 marks)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

A 'floating globe' desk ornament is made by fixing an electromagnet and a permanent magnet to a wooden stand as shown below. Both the electromagnets and permanent magnets are attracting the globe model causing it to float between them.



Name two changes that can be made to the electromagnet in order for the globe model to float lower. (2 marks)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

All wanted to find out if the temperature of water will affect the rate of evaporation. He placed three similar containers with water of different temperature inside the living room which has a room temperature of 25°C for 30 minutes as shown in the diagram below.



Arrange the containers according to the amount of water left after the experiment starting from the least to the most. [1]



This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

All wanted to find out if the temperature of water will affect the rate of evaporation. He placed three similar containers with water of different temperature inside the living room which has a room temperature of 25°C for 30 minutes as shown in the diagram below.



Explain your answer in previous question. (2 marks)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

All wanted to find out if the temperature of water will affect the rate of evaporation. He placed three similar containers with water of different temperature inside the living room which has a room temperature of 25°C for 30 minutes as shown in the diagram below.



All's friend suggested that he poured the remaining water in each container into a measuring cylinder to find out the amount of water left after the experiment instead of observing the amount of water with his eyes. How does this help to improve the experiment? [1]

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

Natasha had four substances which she wanted to make into an ice-pack to be used at home when her siblings are unwell. She heated each substance for 10 minutes and measured the temperature of the substances as shown in the diagram below.



She recorded the readings in the table below.

Substance	W	X	Y	Z
Temperature at the start (°C)	25	25	25	25
Temperature after 10 minutes (°C)	45	38	30	52

Which substance is most suitable to be used in the ice-pack to apply on a child who is having a fever? Explain your answer. (2 marks)

Natasha had four substances which she wanted to make into an ice-pack to be used at home when her siblings are unwell. She heated each substance for 10 minutes and measured the temperature of the substances as shown in the diagram below.



She recorded the readings in the table below.

Substance	W	X	Y	Z
Temperature at the start (°C)	25	25	25	25
Temperature after 10 minutes (°C)	45	38	30	52

Natasha wanted to change the amount of substance in each beaker but her father told her if she had done that, it will no longer be a fair test. Explain why. (1 mark)

This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.