CONTINUAL ASSESSMENT 1 / 2017
PRIMARY 5

STANDARD SCIENCE

(BOOKLET A)

Name : _____ _____ ( ) Date : 6 March 2017

Class : P5 _____ Total Time for Booklet A & Booklet B : 1 hour

INSTRUCTIONS TO CANDIDATES

1. Write your name, index number and class in the space above.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. For Section A, shade your answers for questions 1 to 10 in the Optical Answer Sheet (OAS) provided.
6. For Section B, write your answers for questions 11 to 16 in the space provided in the booklet.
7. The total marks for Booklet A is 20 marks.

Section A (20 marks)

For each question 1 to 10, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. The table below provides some information on three cell specimens P, Q and R taken from parts of animal or plant.

   A tick (✓) indicates the presence of the part of the cell.

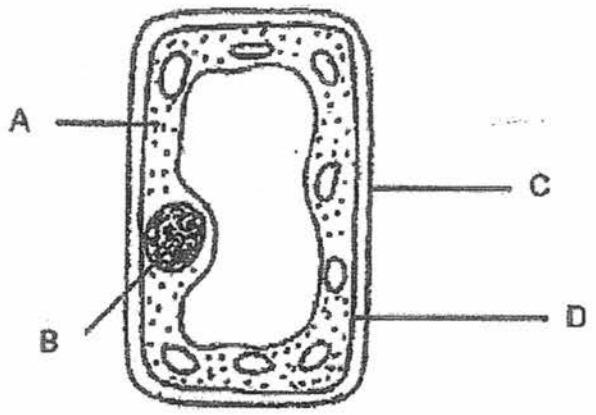
	Cell P	Cell Q	Cell R
Nucleus	✓	✓	✓
Chloroplasts		✓	
Cell wall	✓	✓	

Which of the following best represent the characteristics of the three cell specimens above?

	Cell P	Cell Q	Cell R
(1)	Stem	Leaf	Cheek
(2)	Leaf	Stem	Cheek
(3)	Stem	Cheek	Leaf
(4)	Cheek	Leaf	Stem

( )

2. The diagram below shows a cell.



Different parts of the cell are labelled as A, B, C,and D.

Which of the following correctly identifies the parts of the cell?

	Can also be found in animal cells	Allows water to enter the cell	Maintains the size of the cell
(1)	A and B	C	A
(2)	A, C and D	D	B
(3)	A, B and D	C and D	C
(4)	A, B, C and D	C and D	D

3. The table below shows the similarities between parts of the reproductive systems in a human and flowering plant.

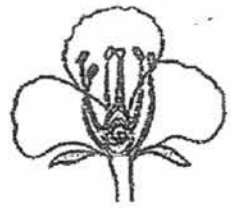
Parts of reproductive system	Flowering plant	Human
Male reproductive part	P	Testis
Male sex cell	Pollen grain	Q
Female reproductive part	R	Ovary
Female sex cell	Ovule	Egg
After fertilisation	S is formed	A foetus is formed

Which one of the following correctly shows what P, Q, R and S are?

	P	Q	R	S
(1)	filament	penis	stigma	seed
(2)	anther	sperm	stigma	fruit
(3)	filament	penis	ovary	seed
(4)	anther	sperm	ovary	fruit

( )

4. Rahim identified three flowers from the same plant and labelled them W, X and Y. After removing one part from each flower, he dusted pollen grains from the same plant onto the three flowers W, X and Y.



The table below shows the results after one month.

Flower	Part removed	Did the flower become a fruit?
W	L	No
X	M	Yes
Y	N	Yes

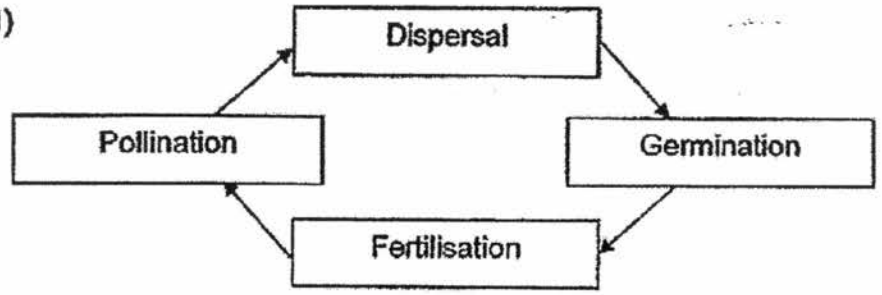
What could parts L, M and N be?

	L	M	N
(1)	Anther	Ovules	Petal
(2)	Stigma	Petal	Anther
(3)	Petal	Anther	Stigma
(4)	Stigma	Ovules	Anthers

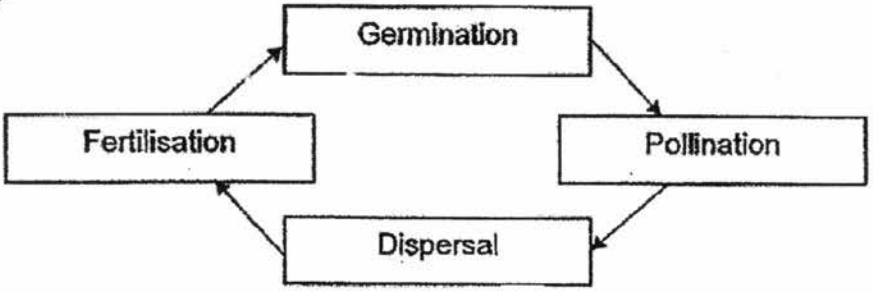
( )

5. Which one of the following shows the correct order of the processes in the life cycle of a flowering plant?

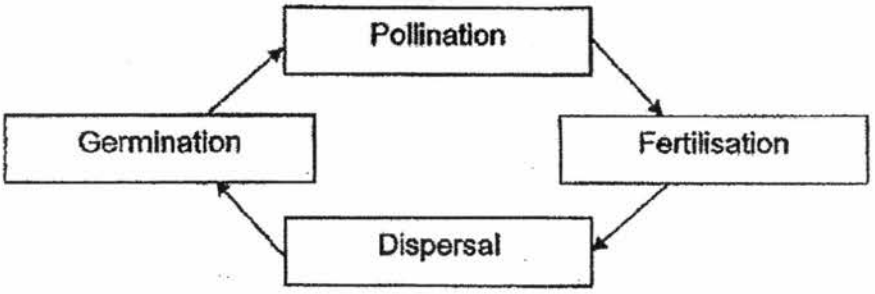
(1)



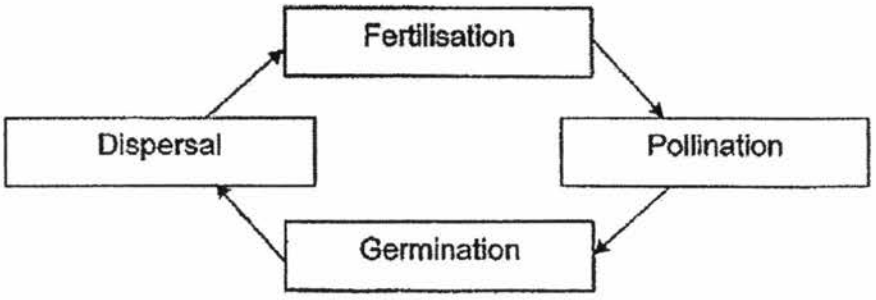
(2)



(3)



(4)



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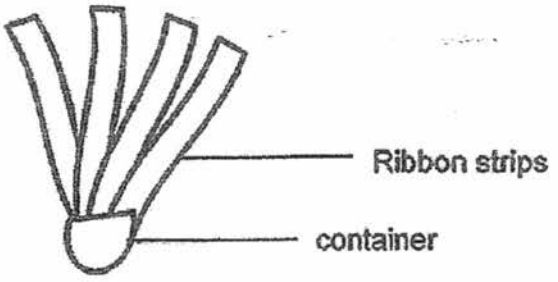
6. Hayley wanted to find out how the structure of a fruit would affect the time it stay in the air. She made a few fruit models to conduct her experiment. A sample setup is as shown below.

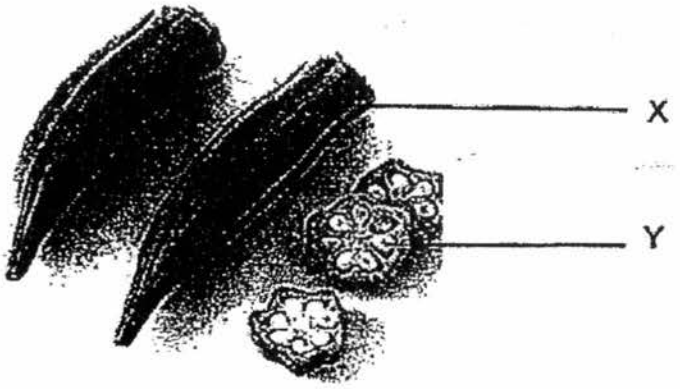


Which of the following must Hayley keep the same to ensure a fair test?

A. Number of ribbon strips
B. Mass of container
C. Height at which the fruit model was dropped
D. Time taken for fruit model to stay in the air

(1) A and D only
(2) B and C only
(3) A, B and C only
(4) A, B, C and D ( )

7. The diagram below shows the cross section of Fruit A.

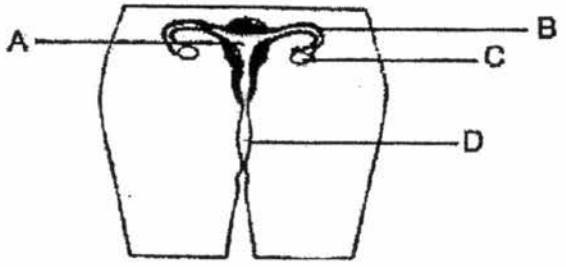


Which part of Fruit A does X and Y develop from?

	X	Y
(1)	stigma	Pollen grains
(2)	petals	anther
(3)	ovary	ovules
(4)	Pollen tube	petals

( )

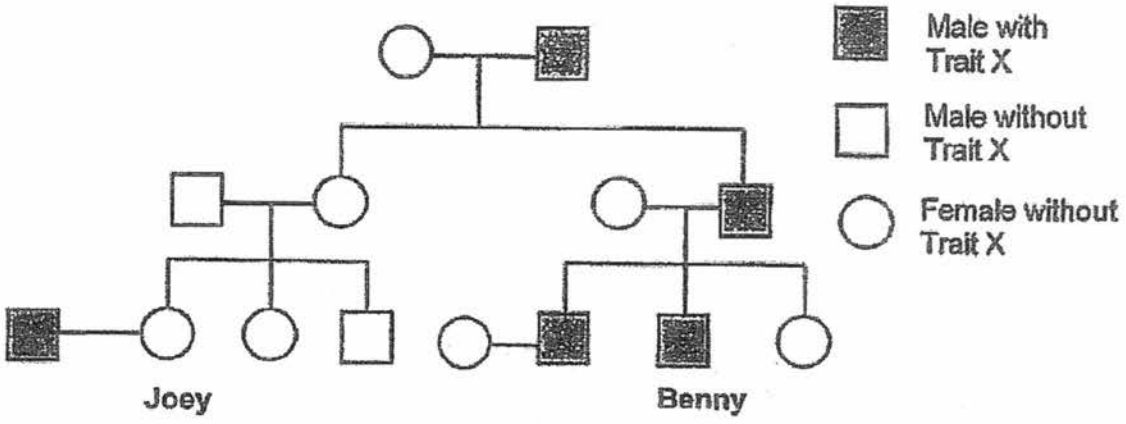
8. The diagram below shows the human female reproductive system.



At which part of the female reproductive system, A, B, C or D, are the female reproductive cells produced?

(1) A
(2) B
(3) C
(4) D ( )

9. The diagram below shows the members of Benny's family who carry the genetic trait for Disease X.



Based on the information above, which of the following statements can be concluded?

A: Only males will have Trait X.

B: Benny inherited the genes of Trait X from his father.

C: Parents without Trait X will not have offspring with Disease X.

(1) A only

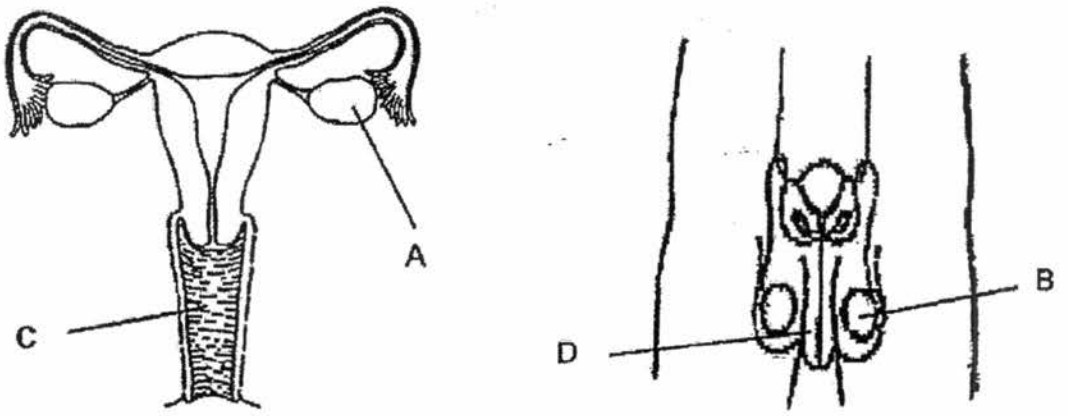
(2) B only

(3) B and C only

(4) A, B and C

( )

10. Kamal studied the two reproductive systems as shown below.



He made the following statements.

A. Part A and Part B contain the female and male reproductive cells respectively.

B:The fertilised egg will develop in Part C.

C. It takes 9 months for cells in Part A and Part B to fertilise.

D. Part D releases 1 sperm to fertilise with the egg cell.

Which statement(s) is/are correct?

(1) A only

(2) A and D only

(3) B and C only

(4) A, C and D only

( )

~ End of Booklet A ~

CONTINUAL ASSESSMENT
1 / 2017 PRIMARY 5

STANDARD SCIENCE

(BOOKLET B)

Name : _____ ( ) Date : 6 March 2017

Class : P5 _____ Total Time for Booklet A & Booklet B : 1 hour

INSTRUCTIONS TO CANDIDATES

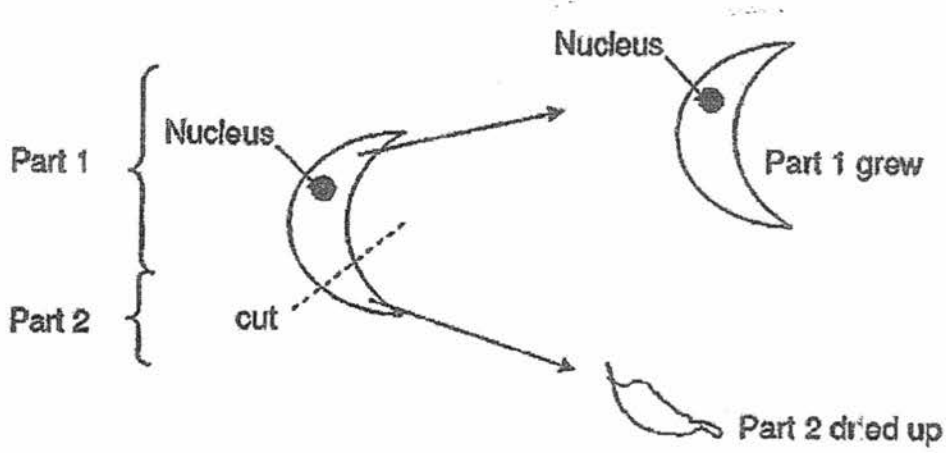
1. Write your name, index number and class in the space above.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. For Section A, shade your answers for questions 1 to 10 in the Optical Answer Sheet (OAS) provided.
6. For Section B, write your answers for questions 11 to 16 in the space provided in the booklet.
7. The total marks for Booklet B is 30 marks.

Booklet A		/20
Booklet B		/30
Total		/50
Parent's Signature		

Section B (30 marks)

Write your answers to questions 11 to 16 in this booklet.

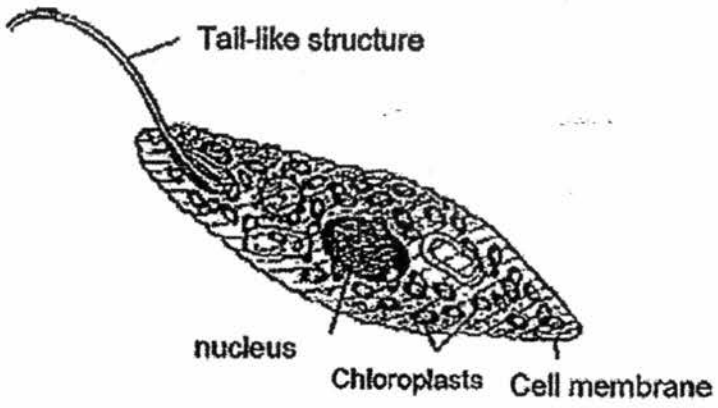
11. Some students observed a cell when it cut on as shown below.



(a) It was observed that after the cut, Part 1 grew into the same identical cell. However Part 2 shrivelled and dried up. Explain how did it happen? (2m)

	2

(b) The scientist found another cell, Cell X, as shown below.



(i) From your observation of Cell X above, is the cell a plant cell or an animal cell? Explain your answer.(1m)

_____

_____

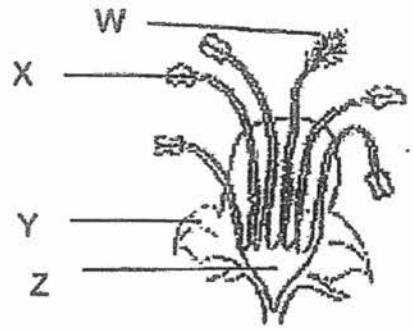
(ii) What are the two possible functions of the tail-like structure of the cell above? (2m)

_____

_____

	3

12. Jianwei found two flowering plants in his garden as shown below.



Plant A

Plant B

A disease has killed the insects in his garden. After some time, he recorded the number of fruits found on both plants.

	Plant A	Plant B
Number of fruits on Day 1	0	0
Number of fruits on Day 25	18	2
Number of insects surrounding the plants	0	0
Presence of wind	Yes	Yes

(a) Which plant is less affected by the absence of insects? Explain your answer. (2m)

_____

_____

(b) Which part(s), W, X, Y and Z of flower of plant A must be present for flowers to develop into a fruit? (1m)

_____

(c) From his record, Jianwei noticed that fruits of Plant B were still able to develop despite the absence of insects. What could be the possible reason? (2m)

_____

_____

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13. Azza conducted an experiment to investigate the effects of temperature on the distance seeds are scattered from their parent plants.
He selected three fruits, M, N and P, from the same species of plant located at three locations with different surrounding temperature.


Fruit M


Fruit N


Fruit P

He recorded his findings in the table below.

Fruit	Temperature of the surrounding (°C)	Distance the seeds were scattered from the parent plant (m)
M	18	0.6
N	25	1.5
P	39	2.8

(a) Based on the results in the table, how did the temperature of the surrounding affect the distance at which the seeds were scattered? [1m]

_____

_____

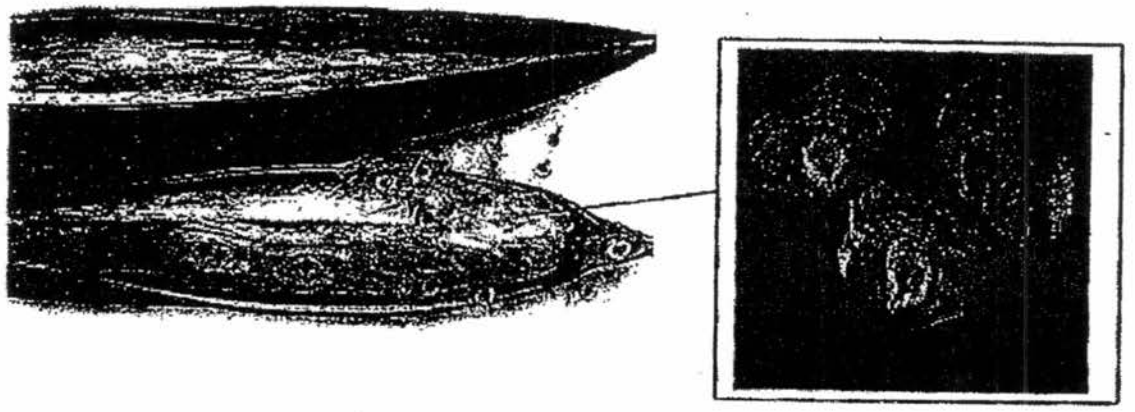
(b) Name one other variable that should be kept constant to ensure the experiment is carried out fairly. [1m]

_____

_____

	2

(c) Azza found Fruit Q as shown below.



He noticed that Fruit Q dispersed in the same way as Fruit M, N and P. The seeds of Fruit Q scattered further than seeds of Fruit M, N and P. Give a reason for this. [1m]

(d) Azza concluded that Fruit Q allows its young plants to grow better than Fruit M, N and P. Explain Azza's conclusion. [2m]

	3

14. Gillian found 2 types of plants in a field and recorded her observations in the table below.

	Leaves	Stems	Flower	Fruits/ seeds
Plant 1	Small	Long	Small and coloured	Pod-like. Turns brown and dry when ripe.
Plant 2	Long and thin	Thick and long	Has white, feather-like stigmas	Has a fibrous husk

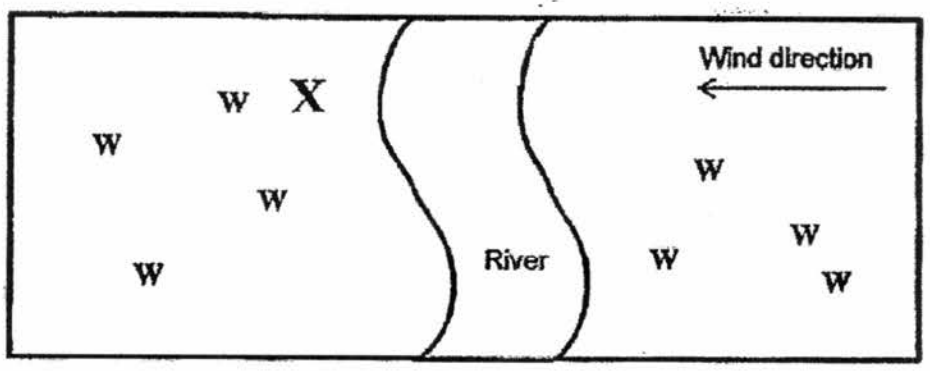
(a) Based on her observations above, state the methods of pollination and seed dispersal of Plant 1 and Plant 2. (2m)

	Method of pollination	Method of seed dispersal
Plant 1		
Plant 2		

	2

(b) The diagram below shows the locations of Plant 3 in an area.

X shows the parent plant and W shows the young plants.



(i) Gillian concluded that Plant 3 is dispersed by wind. Is she correct? Explain your answer. (1m)

_____

_____

(ii) Based on the diagram above,identify the method of dispersal and the possible characteristics of Plant 3. (1m)

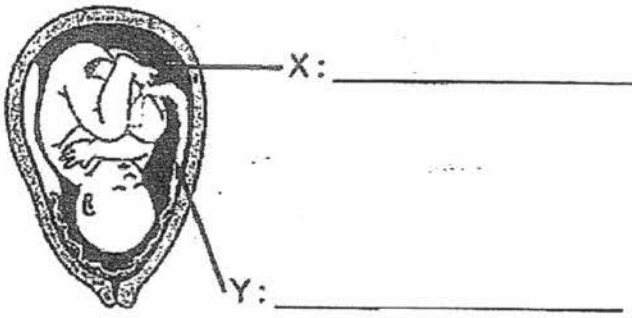
_____

_____

(c) Gillian noticed a new type of plant, Plant A. The fruits of Plant A contain a fibrous covering. Draw the symbol - (A) in the above diagram to show where the fruits of Plant A are **most likely** to be found. (1m)

	3

15 The diagram below shows a baby in a female reproductive system.



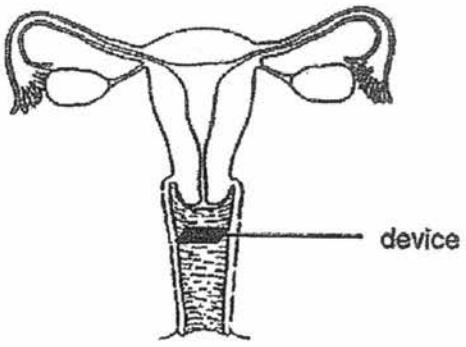
(a) Identify and label clearly the parts X and Y in the **diagram above**. [1m]

(b) If part Y is not able to function properly, give 2 ways in which the developing baby would be affected. [2m]

(i) _____

(ii) _____

(c) To control birth, a device is placed in the female reproductive system as shown below.



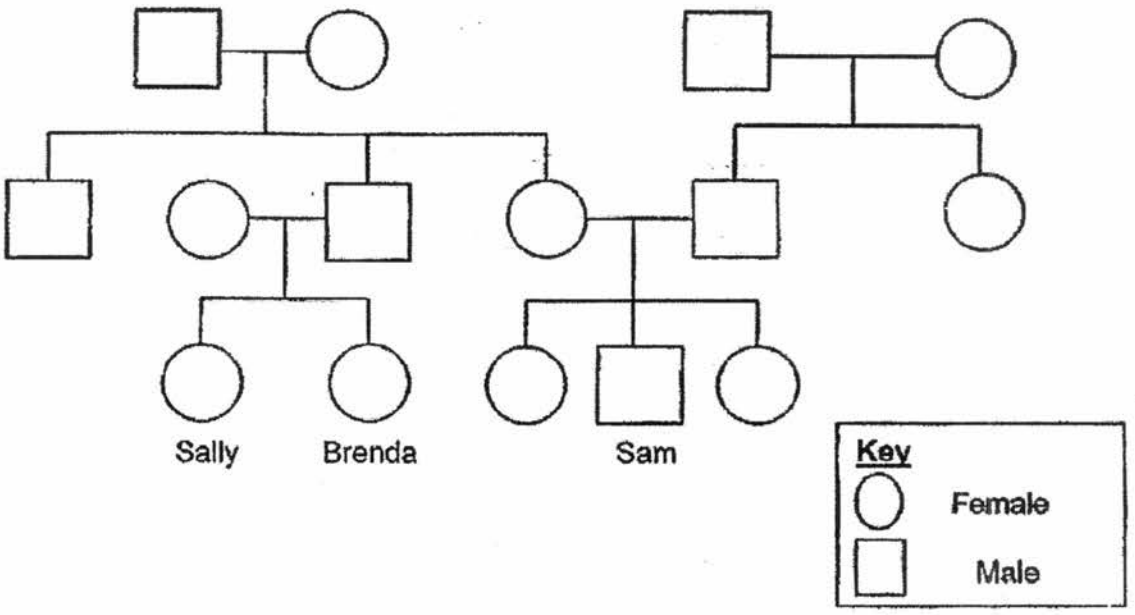
How does the device prevent fertilisation from taking place? (2m)

_____

_____

	5

16. The diagram below shows the family tree of Sally, Brenda and Sam.



(a) Based on the information above, put a tick (✓) in the correct boxes to indicate whether the statements are True, False or Not possible to tell. [2m]

	Statements	True	False	Not possible to tell
(a)	Sam has two sisters.			
(b)	Brenda and Sally are twins.			
(c)	Sam's father has four nieces.			
(d)	Brenda's father and Sam's mother are siblings.			

(b) Draw on the family tree based on the following information below. (2m)

- Sally got married a few years ago.
- She has 2 sons and 1 daughter.

(c) Sally has straight hair. She noticed that her daughter has curly hair like her mother. Explain how Sally's daughter has curly hair. (1m)

_____

	5

~ End of Paper ~

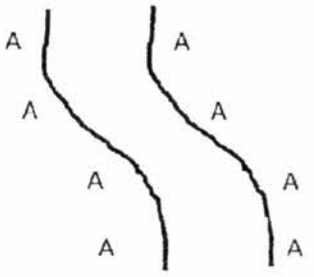
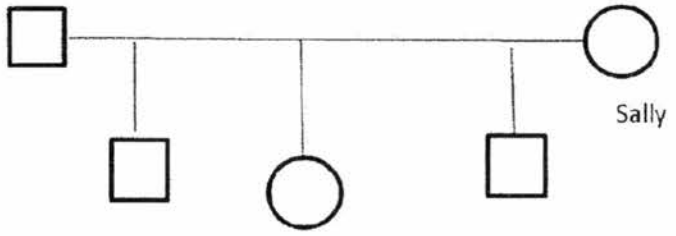
SCHOOL : RIVER VALLEY PRIMARY SCHOOL
LEVEL : PRIMARY 5
SUBJECT : SCIENCE
TERM : CA1

BOOKLET A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	3	4	2	3	2	3	3	4	1

BOOKLET B

Q11)	(a) As there is a nucleus in Part 1, it would be able to grow. As part 2 does not have a nucleus, it will not grow like part 1 and dry up. (b) (i) It is an animal cell. Although it has chloroplasts, it does not have a cell wall. (ii) The functions are to swim away from predators and to enable it to swim while looking for food.
Q12)	(a) Plant A. Although there was no presence of insects, the number of fruits increased from 0 to 18 in the presence of wind. (b) W and Z (c) There could have been other pollinators carrying pollen grains that came into contact with the stigma of B and fused with the female reproductive cell of B during fertilization. This allowed fruits to be developed.

Q13)	(a) The greater the temperature, the further the seeds scatter from the parent plant. (b) The size of the fruit. (c) Fruit Q has a wing-like structure and is light. (d) It is to prevent overcrowding and competition for water, space and mineral salts.
Q14)	(a) Plant 1: By animals, Explosive/Splitting action. Plant 2: By wind, By water (b)(i) No. This is because the seeds are scattered everywhere but not in the wind's direction. (ii) By animals. Its fruit should be sweet and fleshy. (c) 
Q15)	(a) X: womb Y: umbilical cord (b)(i) The baby cannot get enough food and nutrients. (ii) Waste products cannot be removed from the developing baby. (c) The sperm cannot enter the fallopian tube to fuse with the egg and fertilization cannot take place.
Q16)	(a) T, NPTT, F and T (b)  (c) Sally's daughter has inherited her curly hair from Sally's mother.