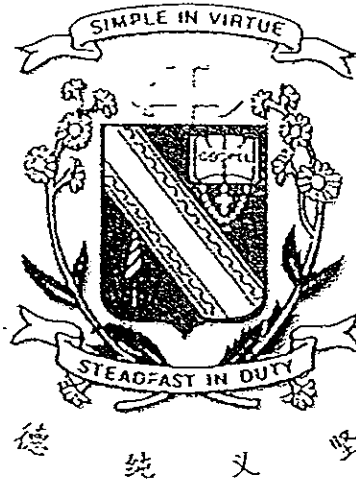


Name : _____ ()

Class : Primary _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 5

Continual Assessment 2 – 2008

SCIENCE

BOOKLET A

21st August 2008

Total Time for Booklets A and B: 1 hour 30 minutes

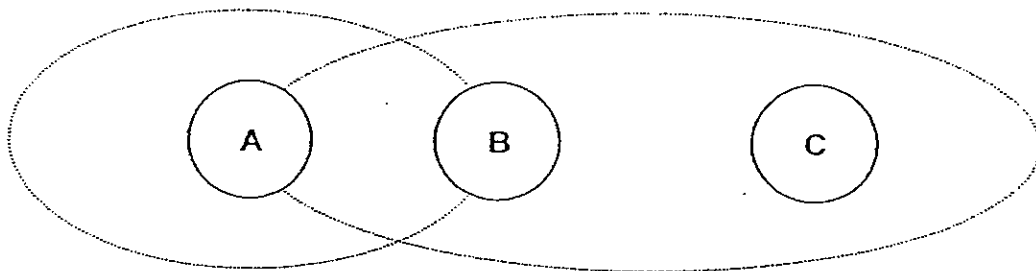
25 questions
50 marks

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

Section A : (25 x 2 marks)

For each question from 1 to 25, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

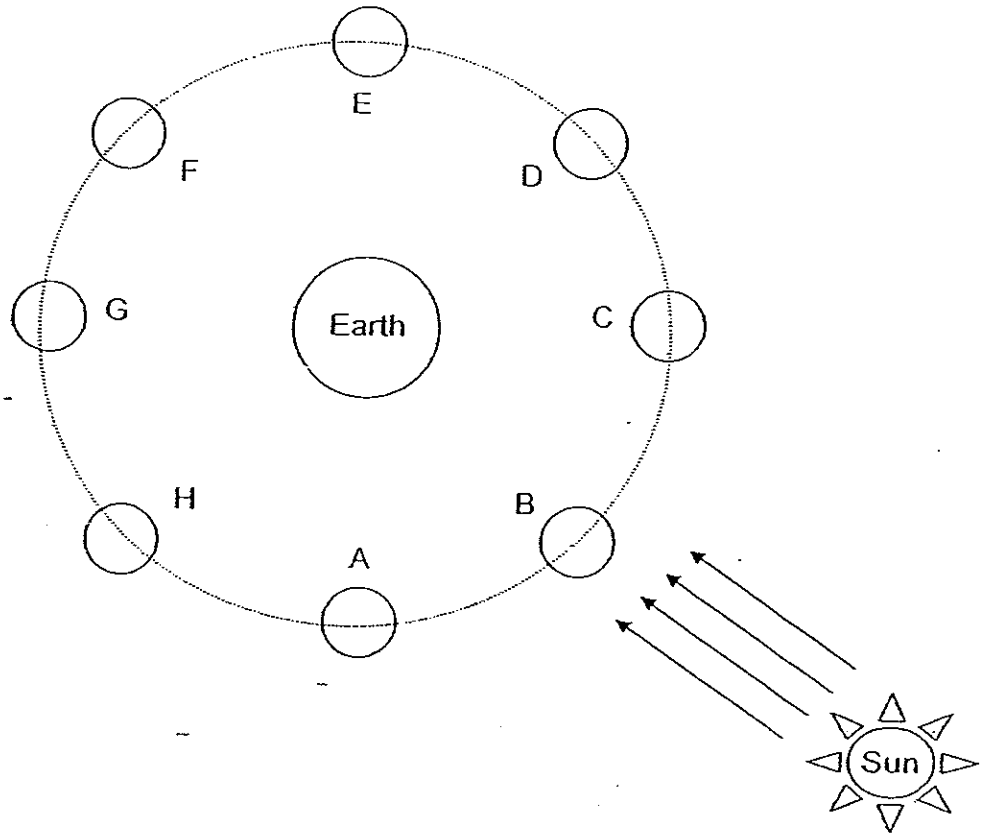
1. The diagram shown below is not drawn to scale. A, B and C represent 3 objects found in space. B revolves around A while A revolves around C.



What can A, B and C be?

	A	B	C
(1)	Venus	Earth	Sun
(2)	Earth	Moon	Sun
(3)	Mars	Moon	Earth
(4)	Moon	Jupiter	Earth

2. The diagram shows the position of the Moon at different times of the month.



At which positions will the gibbous moons be observed?

- (1) A and C only
- (2) D and H only
- (3) C and G only
- (4) E and G only

3. Sheyanne and Michaela studied the following data on five unknown planets, P, Q, R, S and T.

Planets	Distance from the Sun (million km)	Presence of water	Number of moons	Presence of oxygen
P	5723	Yes	0	Yes
Q	4800	No	4	Yes
R	6431	No	5	No
S	2600	Yes	0	No
T	3578	Yes	5	Yes

Each of them then classified the planets in the following tables.

Sheyanne	
Group A	Group B
P	Q
T	R
	S

Michaela	
Group A	Group B
P	Q
S	R
	T

Which characteristics did Sheyanne and Michaela use to group the planets?

	Sheyanne	Michaela
(1)	Number of moons	Ability to support life
(2)	Presence of oxygen	Presence of water
(3)	Ability to support life	Number of moons
(4)	Distance from Sun	Number of moons

4. Joseph observed 3 cells and recorded his observations in the table below.

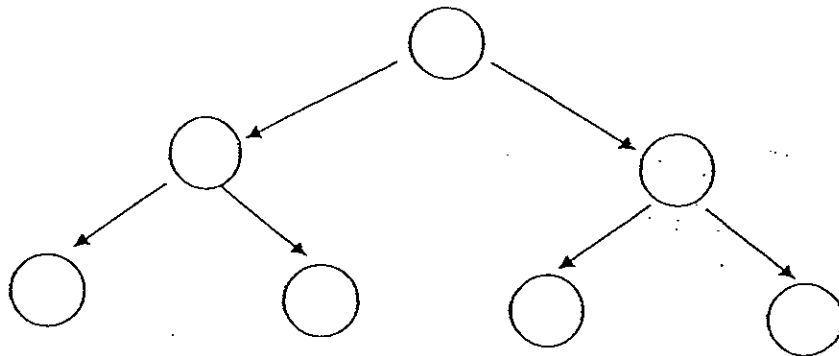
Cell Structure	Cell R	Cell S	Cell T
Nucleus	Absent	Present	Absent
Cell Wall	Present	Present	Absent
Cytoplasm	Present	Present	Present
Chloroplast	Present	Present	Absent
Cell Membrane	Present	Present	Present

Based on the information recorded in the above table, which of the following statements are true?

- A: Cell T cannot make food but Cell R and S can.
- B: Cell R and S can reproduce but Cell T cannot.
- C: Cell R and S are regular in shape but Cell T is not.
- D: Cell T is an animal cell but Cell R and S are plant cells.

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

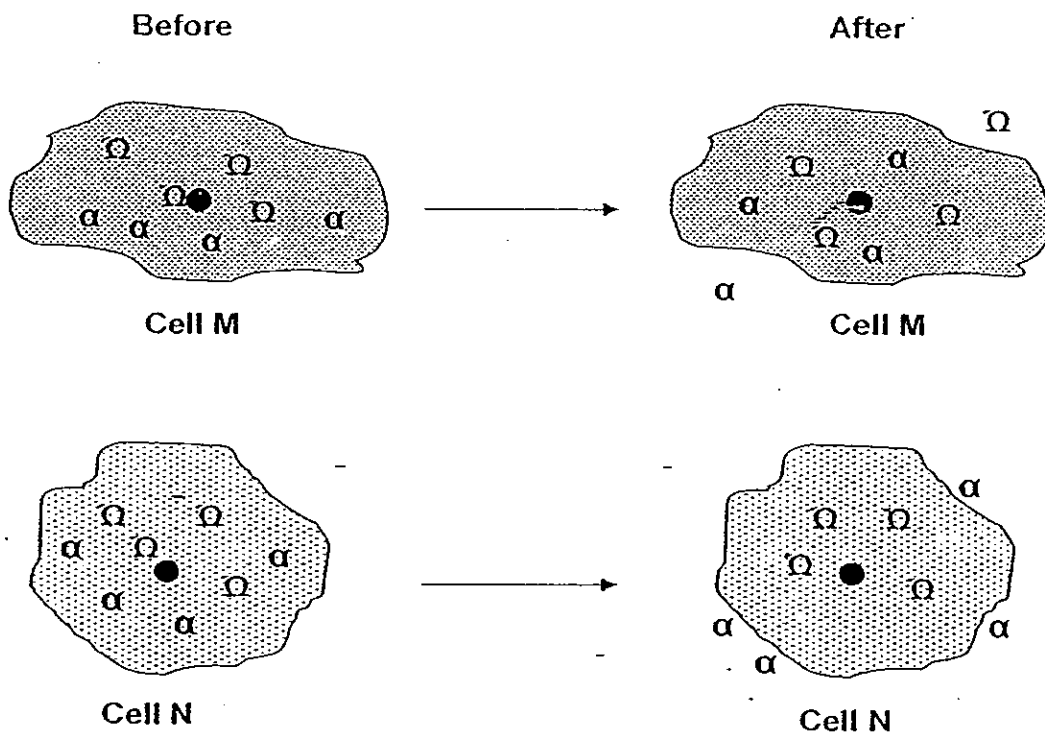
5. The diagram below shows the process of cell division.



At the 6th generation, how many cells would there be?

- (1) 16
- (2) 32
- (3) 64
- (4) 128

6. α and Ω were naturally occurring chemicals in animals. Two animal cells, M and N, were placed in some water. After a few minutes, Helen removed them from the water and examined them under a microscope.



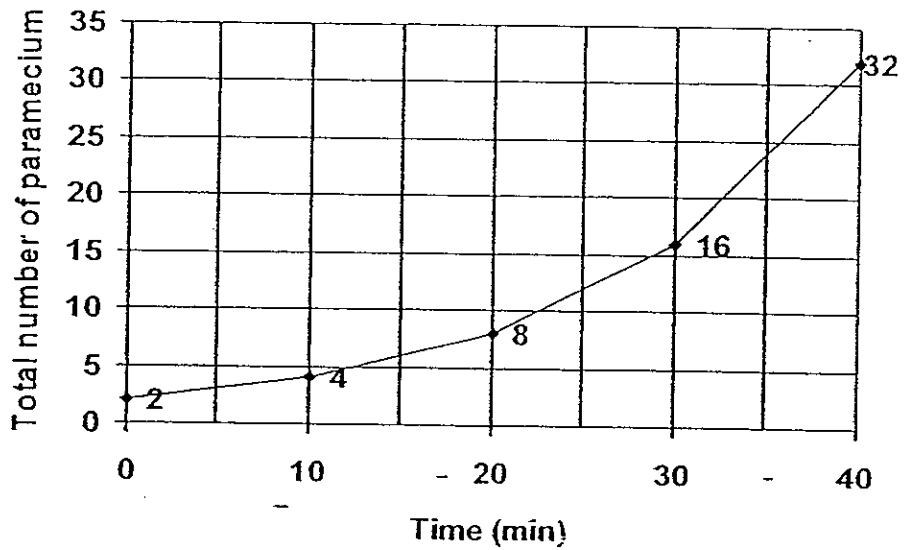
Based on her observations, Helen came to the following conclusions:

- A: Cell M's cell membrane is thicker than that of Cell N.
- B: Chemical Ω cannot pass through the cell membrane of Cell N.
- C: The cell membrane of Cell M allows both chemicals α and Ω to pass through.
- D: Chemical α is able to pass through the cell membrane of Cell M at a faster rate than that of Cell N.

Which of the above conclusions made by Helen are incorrect?

- (1) B and C only
- (2) A and D only
- (3) A, B and D only
- (4) All of the above

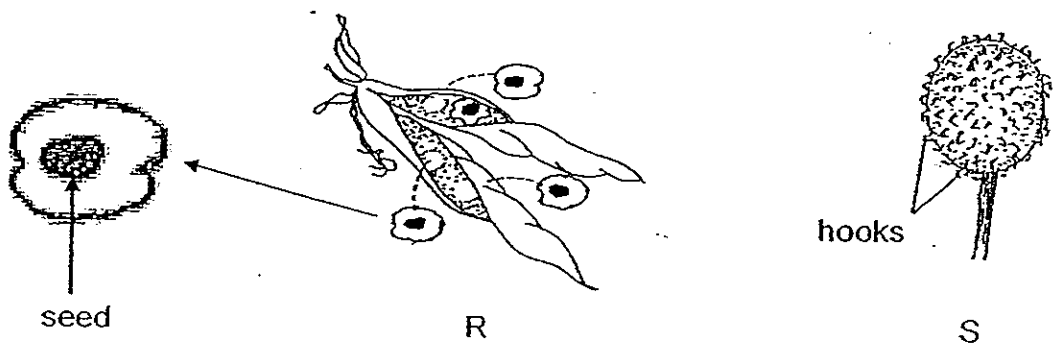
7. The graph below shows the number of paramecium over a period of time.



How long is the reproduction cycle of the paramecium?

- (1) 10 mins
- (2) 20 mins
- (3) 30 mins
- (4) 40 mins

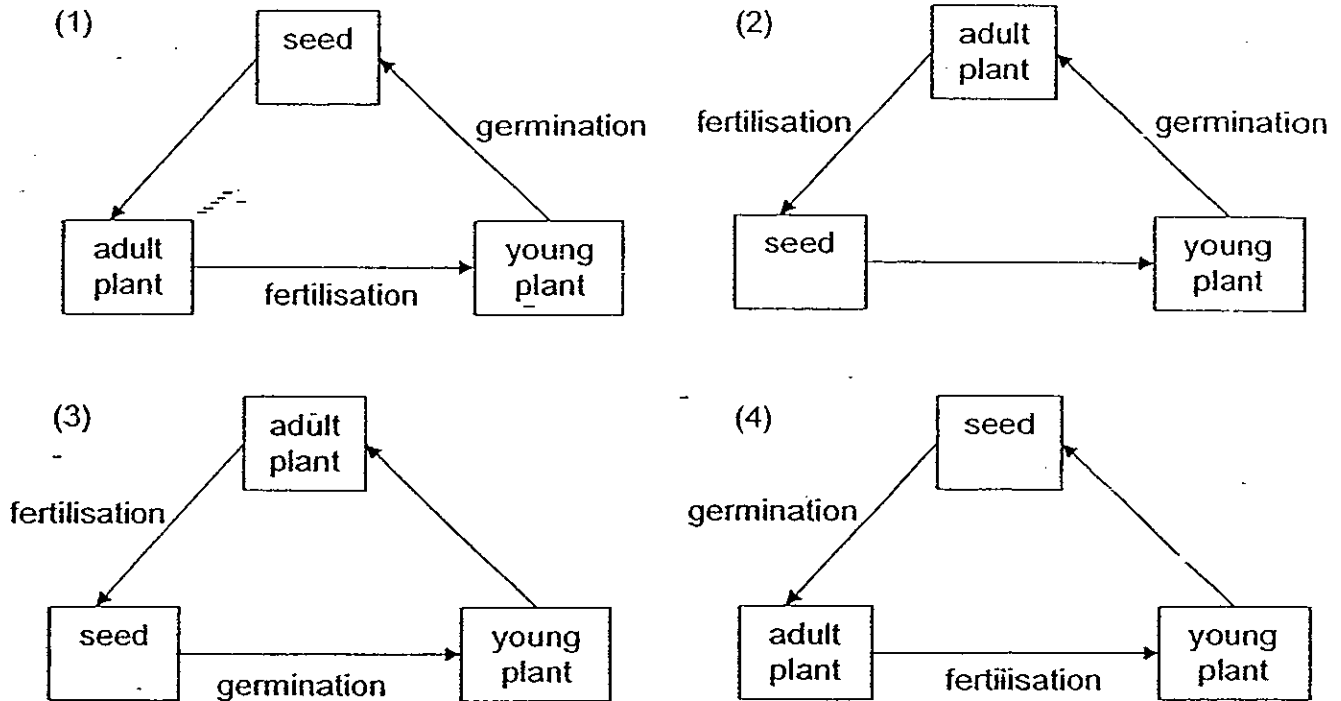
8. The diagram below shows the fruits, R and S, of two plants.



What is the dispersal method of each fruit, R and S?

	R	S
(1)	Wind	Water
(2)	Splitting and Wind	Animals
(3)	Splitting	Animals
(4)	Splitting and Wind	Wind

9. Which one of the following diagrams shows the order of stages and processes in the life cycle of a flowering plant?

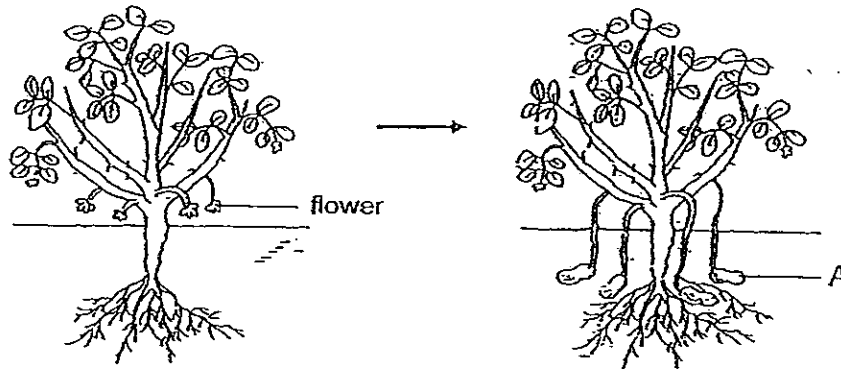


10. Which of the following is true for all spore-producing plants?

- A: They do not bear flowers.
- B: They do not have chlorophyll.
- C: They do not need sunlight to make food.
- D: They take in oxygen and give out carbon dioxide only.

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

11. The diagrams below show the development of structure A in a plant.



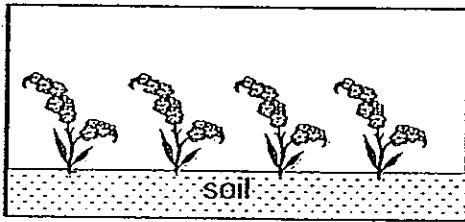
Which of the following statement(s) about A is/are correct?

- A: It can reproduce.
 - B: It helps the plant to absorb water.
 - C: It stores excess food made by the plant.
- (1) C only
- (2) A and C only
- (3) B and C only
- (4) A, B and C

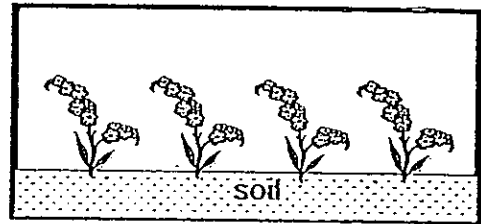
12. Timmy wanted to find out how the amount of light affects the growth of a type of plant. He then proceeded to set up the two set-ups shown below and placed them out in the open.



glass tank covered with tracing paper

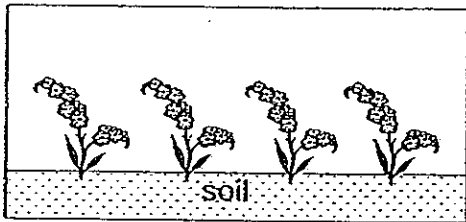


glass tank covered with black paper

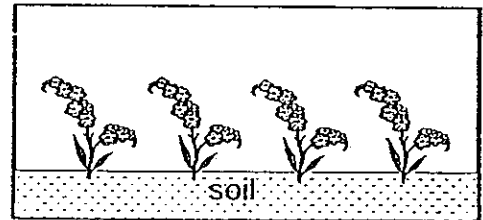


Which one of the following set-ups should he use as a control for his experiment?

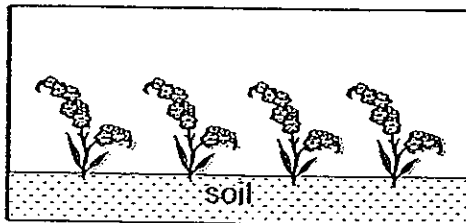
(1) glass tank



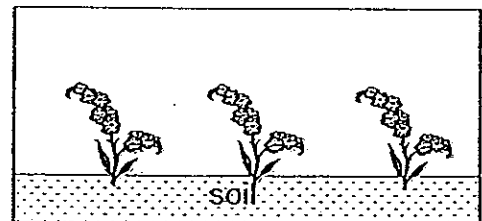
(2) glass tank covered with newspaper



(3) glass tank covered with cardboard



(4) glass tank

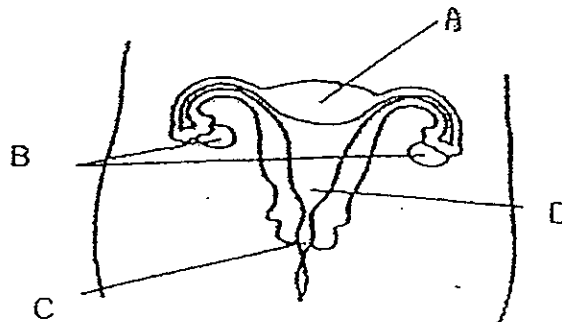


13. Which of the following correctly show(s) the differences between external and internal fertilisation?

	Internal Fertilisation	External Fertilisation
A	Laying of eggs does not occur.	Laying of eggs does occur.
B	The sperm meets the ovum inside the female's body.	The sperm meets the ovum outside the female's body.
C	All embryos are developed inside the female's body.	All embryos are developed outside the female's body.
D	The fertilisation and development of eggs take place outside the mother's body.	The fertilisation and development of eggs take place inside the mother's body.

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

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

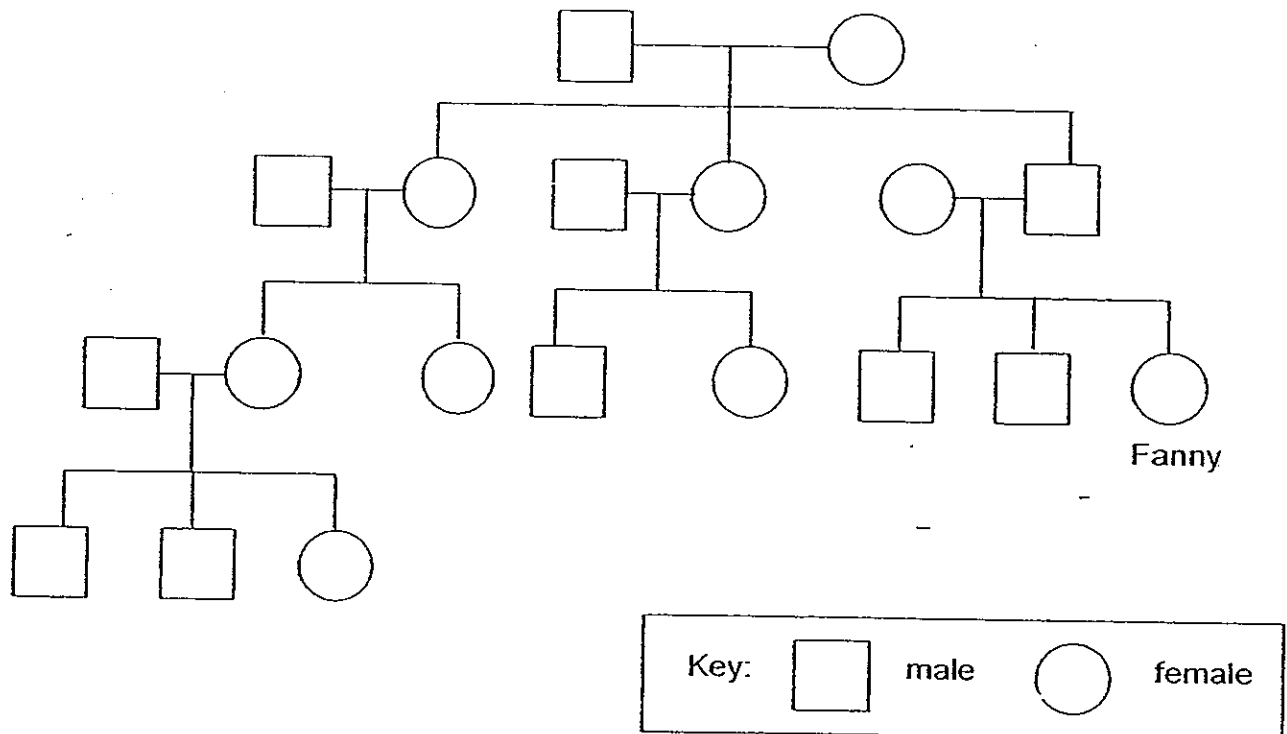


Female

In which part of the female reproductive system does the development of the fertilised egg cell take place?

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

15. The following is Fanny's family tree.

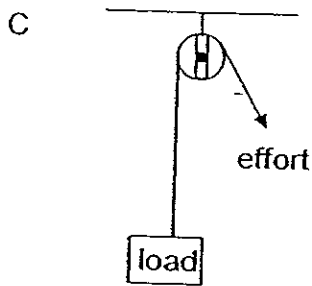
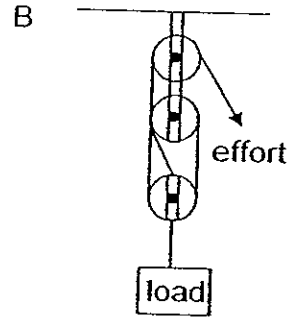
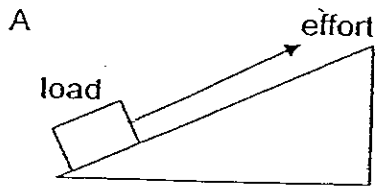


Based on the information given, which of the following statements about her family tree is/are true?

- A: Fanny's father has 2 sisters and 2 brothers.
- B: Two of Fanny's female cousins are unmarried.
- C: Fanny's grandparents gave birth to six children.
- D: Fanny belongs to the 3rd generation of her family.

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

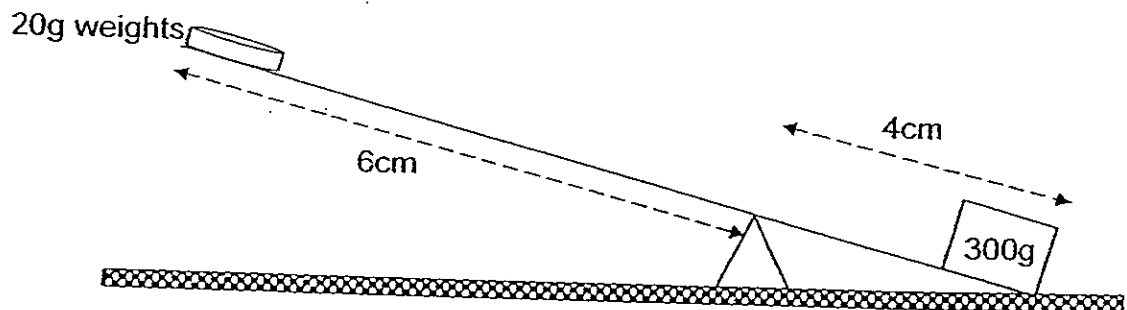
16. The diagrams below show four different ways of moving a 200g load.



Which one of the following statements is true?

- (1) The amount of effort needed for A and C is less than 200g.
- (2) The amount of effort needed for A and D is greater than 200g.
- (3) The effort and the load moves in the opposite direction for B and C.
- (4) The effort moves through a longer distance than the load for B and D.

17. The diagram below shows a lever in which weights are made to lift a load of 300g.

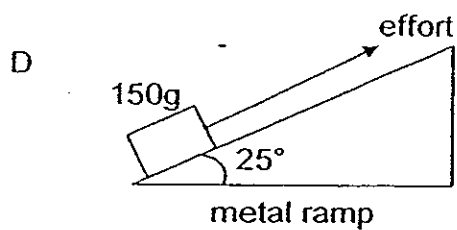
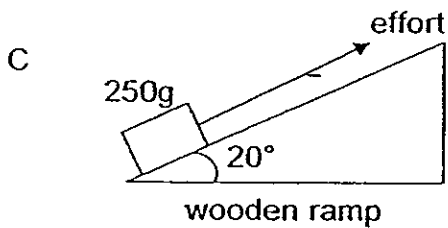
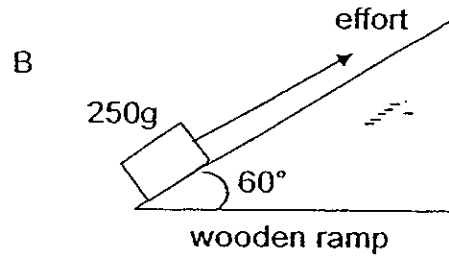
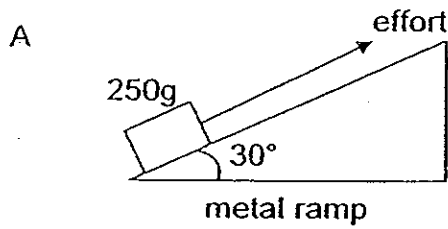


How many pieces of 20g weights are needed to balance the lever?

- (1) 8
- (2) 9
- (3) 10
- (4) 20

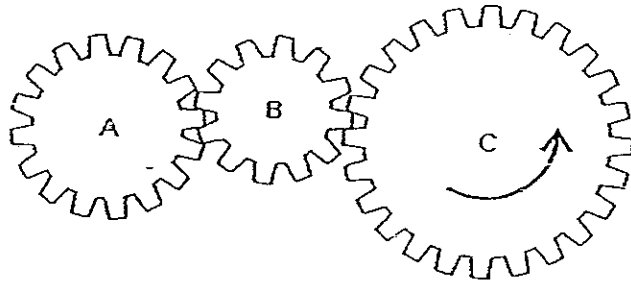
18. Johann wants to find out if the steepness of an inclined plane would affect the amount of effort needed to pull a load up the inclined plane. The distance moved by the load on each ramp is 50cm.

Which two of the following set-ups should he use to ensure that his experiment is a fair one?



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

19. The diagram shows three gears A, B and C. Gear C is turning in the direction shown.



The number of teeth in each of the gears is shown in the table below.

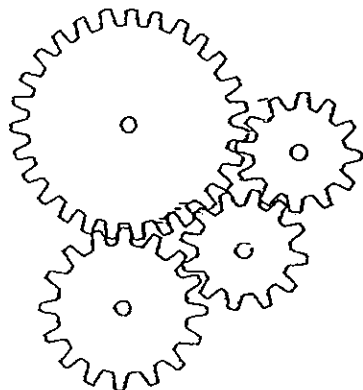
Gear	Number of teeth
A	16
B	12
C	24

Which one of the following shows the correct number of turns for gears A, B and C?

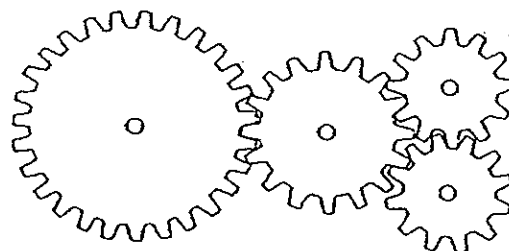
	A	B	C
(1)	2	3	4
(2)	3	4	2
(3)	4	2	3
(4)	4	3	2

20. Which of the following gear systems will not allow all the gears to turn at the same time?

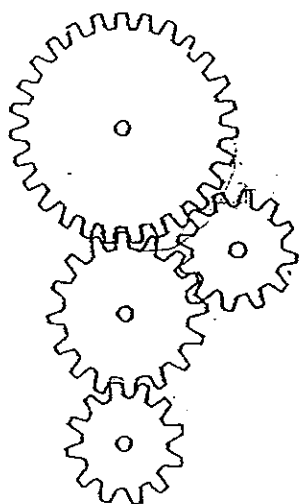
A:



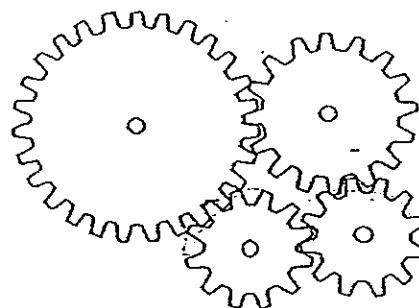
B:



C:

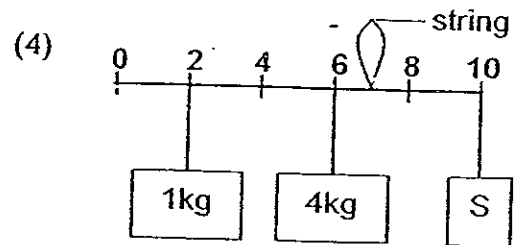
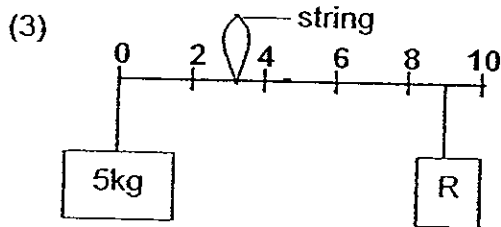
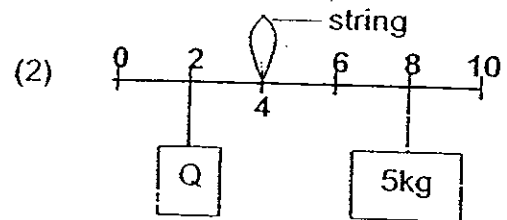
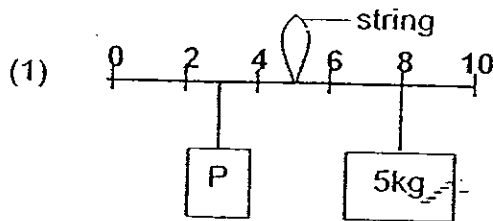


D:

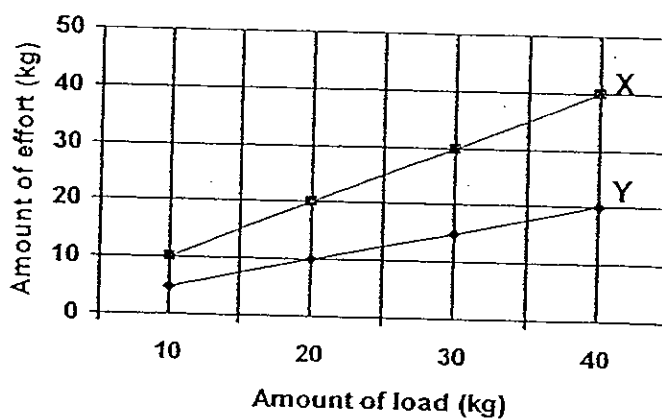


- (1) A and C only
- (2) B and D only
- (3) A, B and C only
- (4) All of the above

21. 4 objects, P, Q, R and S, are weighed on a balance as shown below. Which object is the lightest?



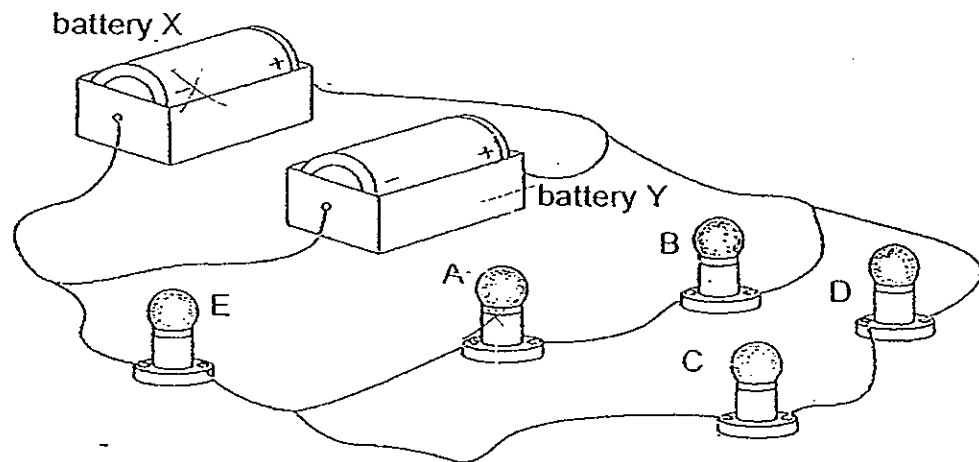
22. Karen conducted an experiment with 2 simple machines, X and Y, to find out the amount of effort needed to lift a load. She plotted her results in the following graph.



Which one of the following is the best representation for machines X and Y?

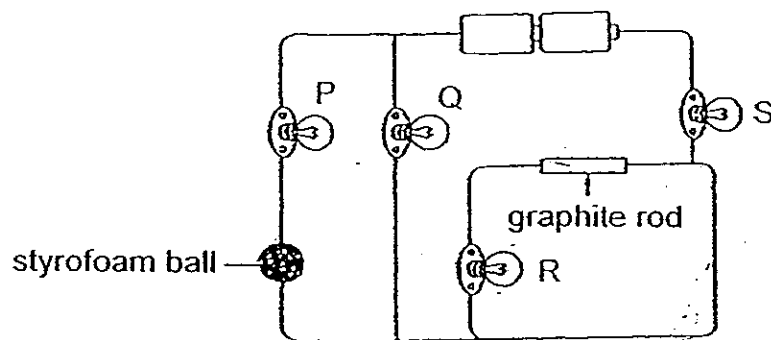
	X	Y
(1)	Fixed Pulley	Inclined Plane
(2)	Fixed Pulley	Movable Pulley
(3)	Lever	Gears
(4)	Inclined Plane	Pulley System

23. Bee Eng set up the circuit shown below. At first, bulbs A, B, C and D lit up to the same level of brightness.



She then removed bulb A from the bulb holder and battery X from the battery holder. What would Bee Eng observe?

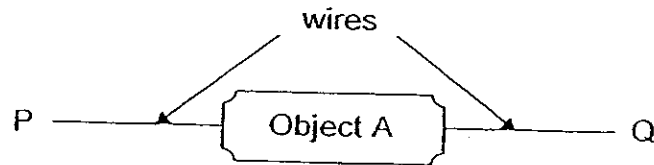
- (1) Bulbs C, D and E will still light up.
 - (2) Bulbs B, C, D and E do not light up at all.
 - (3) Bulbs B, C, D and E are dimmer than before.
 - (4) Bulbs B and E are slightly brighter than bulbs C and D.
24. There are 4 identical bulbs, P, Q, R and S, in the circuit below.



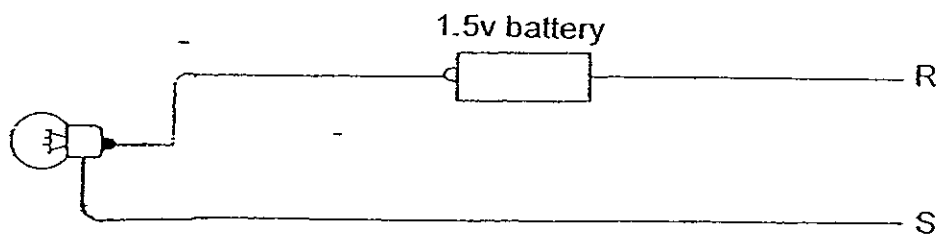
Which of the bulbs will light up when all the circuit components are connected properly?

- (1) P and S only
- (2) Q, R and S only
- (3) P, Q and R only
- (4) None of the above

25. P and Q are wires joined to an object A placed in a casing as shown in the diagram below.



Halim decided to use a circuit tester as shown below to find out what object A was.



Firstly, he connected the wires P to R and Q to S. He noticed that the bulb lit up brightly. Next, he connected the wires P to S and Q to R. This time, he noticed that the bulb lit up less brightly.

Which one of the following could most likely be object A in the casing?

- (1) pencil lead
- (2) 1.5v battery
- (3) plastic bar
- (4) two 1.5v batteries

- END OF SECTION A -

Name : _____ ()

Class : Primary _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 5

Continual Assessment 2 – 2008

SCIENCE

BOOKLET B

21st August 2008

Total Time for Booklets A and B: 1 hour 30 minutes

**9 questions
30 marks**

Booklet A	50
Booklet B	30
Total	80

**Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.**

Parent's Signature/Date

Section B : 30marks

For questions 26 to 34, write your answers in this booklet.

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

26. Annelise observed a few buds growing on a piece of potato. She removed one of the buds from the potato and planted it in a pot of soil. She placed the pot and the potato near the window. She watered the bud in the pot and the potato everyday.

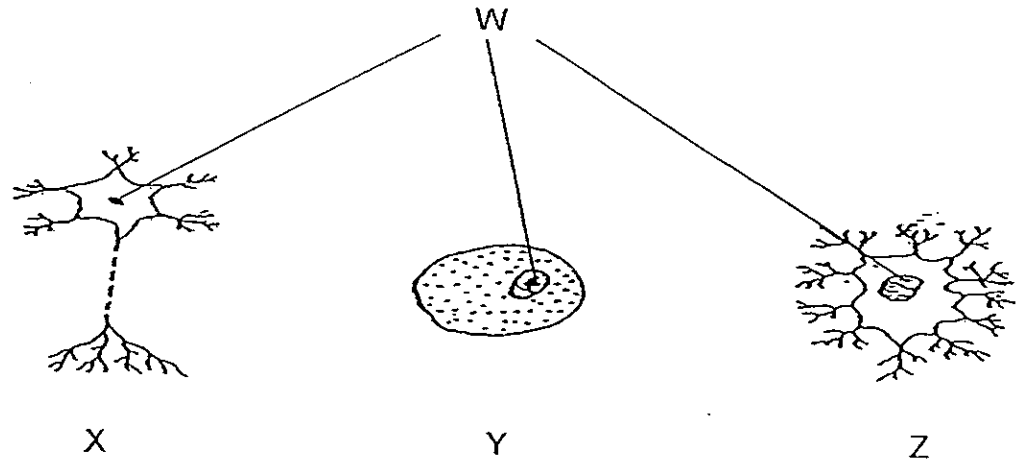


- (a) What would Annelise observe about the bud in the pot and the buds on the potato after one week? [1]

- (b) Give a reason for her observation. [2]



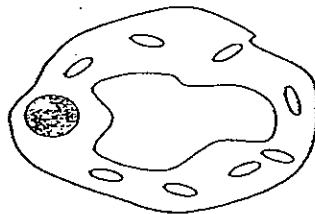
27. Henry was shown the microscopic slides of 3 different animal cells, X, Y and Z, by his teacher. He was then asked by his teacher to observe the cells under a microscope and to list down a similarity and a difference among the 3 cells.



- (a) In what way are the three animal cells similar? [1]

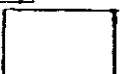
- (b) Part W is found in all the 3 cells. In what way is part W similar in function to the human's brain? [1]

Henry was then given a cell from a multicellular organism to observe under the microscope. His teacher told him that a part of the cell has been removed.

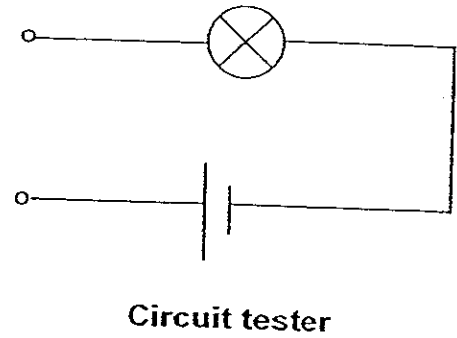
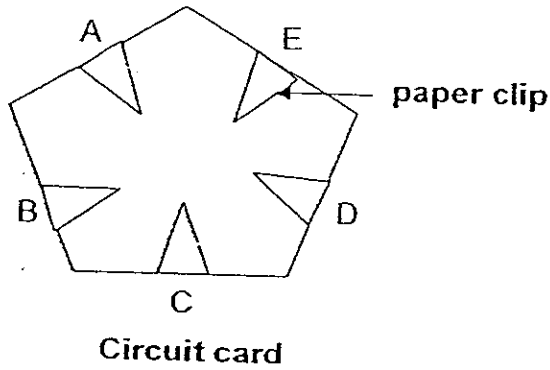


- (c) Name the part of the cell that has been removed. [1]

- (d) What type of organism was the specimen taken from? Give a reason for your answer. [1]



28. Jolynn's Science teacher asked her to use a circuit tester to test the circuit connections at the back of the circuit card shown below.



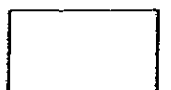
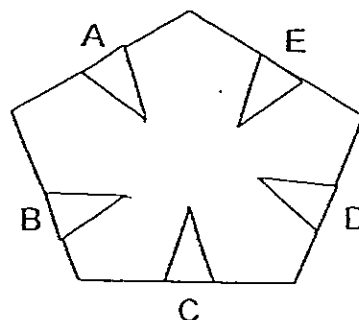
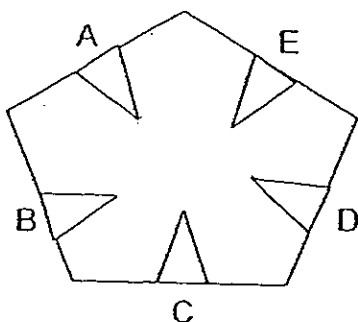
She recorded her test results in a table as shown below:

Clips Tested	Did the bulb light up?	
	Yes	No
A and B	√	
A and C	√	
A and D	√	
A and E		√
B and C	√	
B and D	√	
B and E		√
C and D	√	

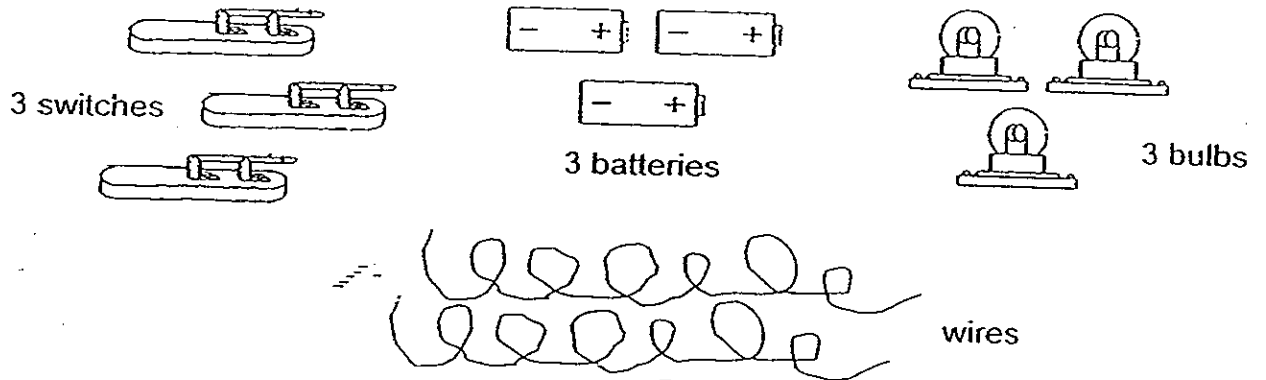
From the results obtained, Jolynn concluded that there were several possible connections on the circuit card.

- (a) Draw 3 lines on each circuit card below to show 2 different circuit connections.

[2]

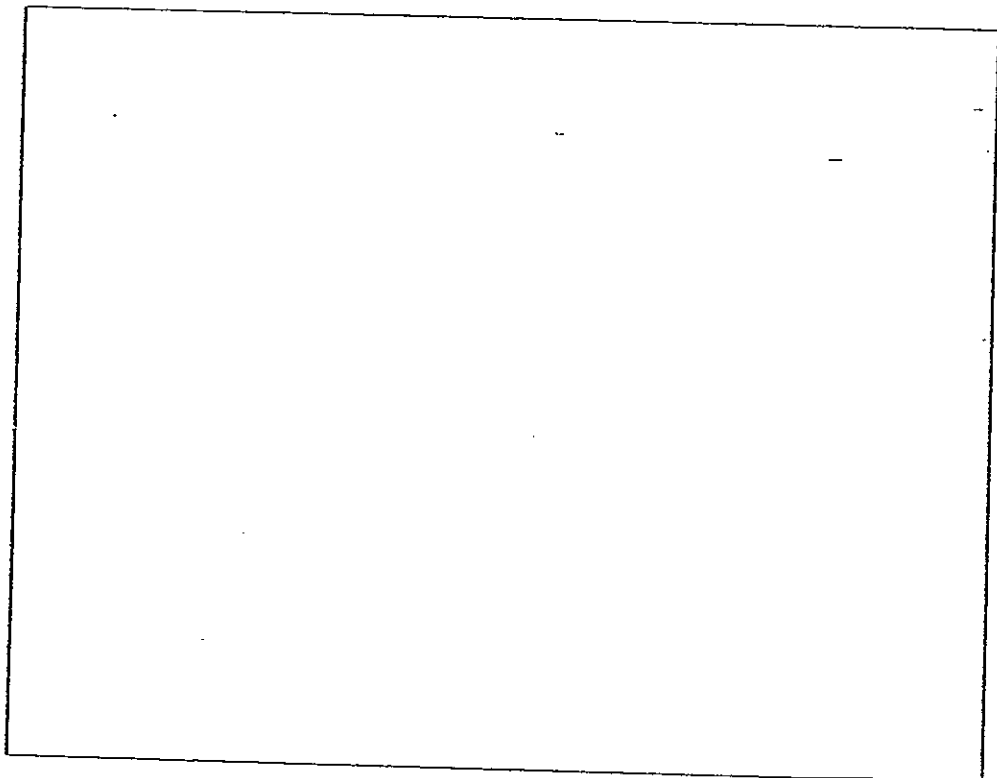


28(b) Jolynn was then given some electrical components as shown below.

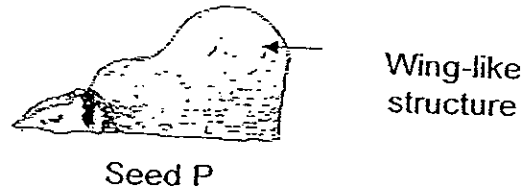


She was asked to construct a circuit such that she could control each bulb independently. Draw a circuit diagram in the box provided to show the circuit that Jolynn would set up. (Jolynn has to use all the components given.)

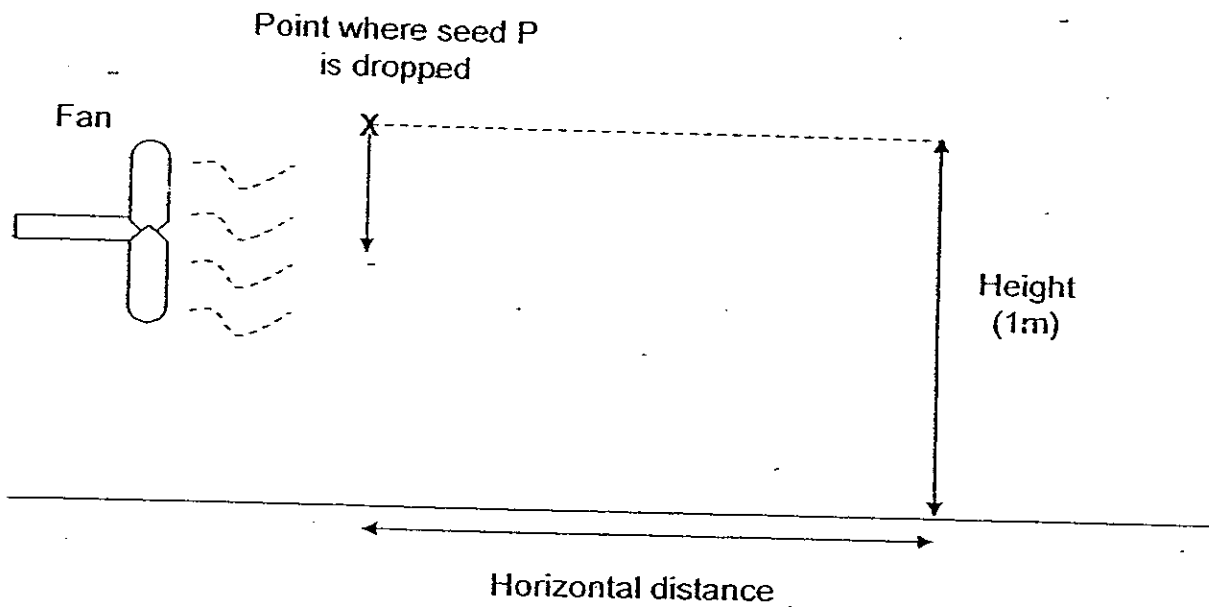
[2]



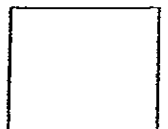
29. Mike wanted to find out how the wing-like structure of a seed affects the distance it will travel. He obtained a seed P with a 3cm wing-like structure from a plant as shown below.



He dropped it from a height of 1m and measured the horizontal distance it travelled as shown in the set-up below.



Next, he trimmed off 1cm of the wing-like structure of seed P and repeated the experiment above. Finally, he trimmed off another 1cm from the wing-like structure and repeated the experiment again. He did this a few times before plotting his results on a graph as shown in diagram 1.



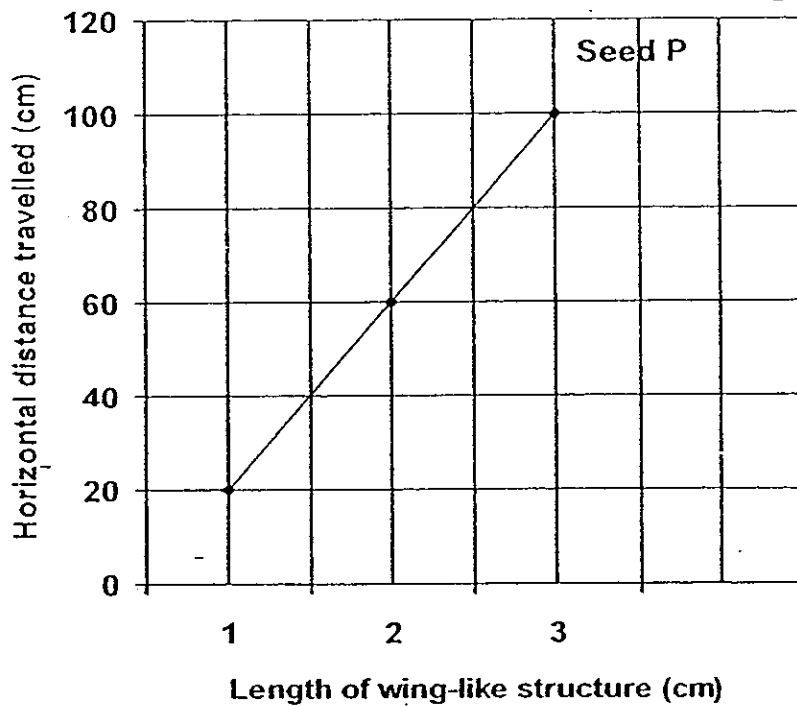


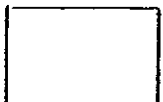
Diagram 1

- (a) What is the relationship between the length of the wing-like structure of seed P and the horizontal distance travelled? [1]

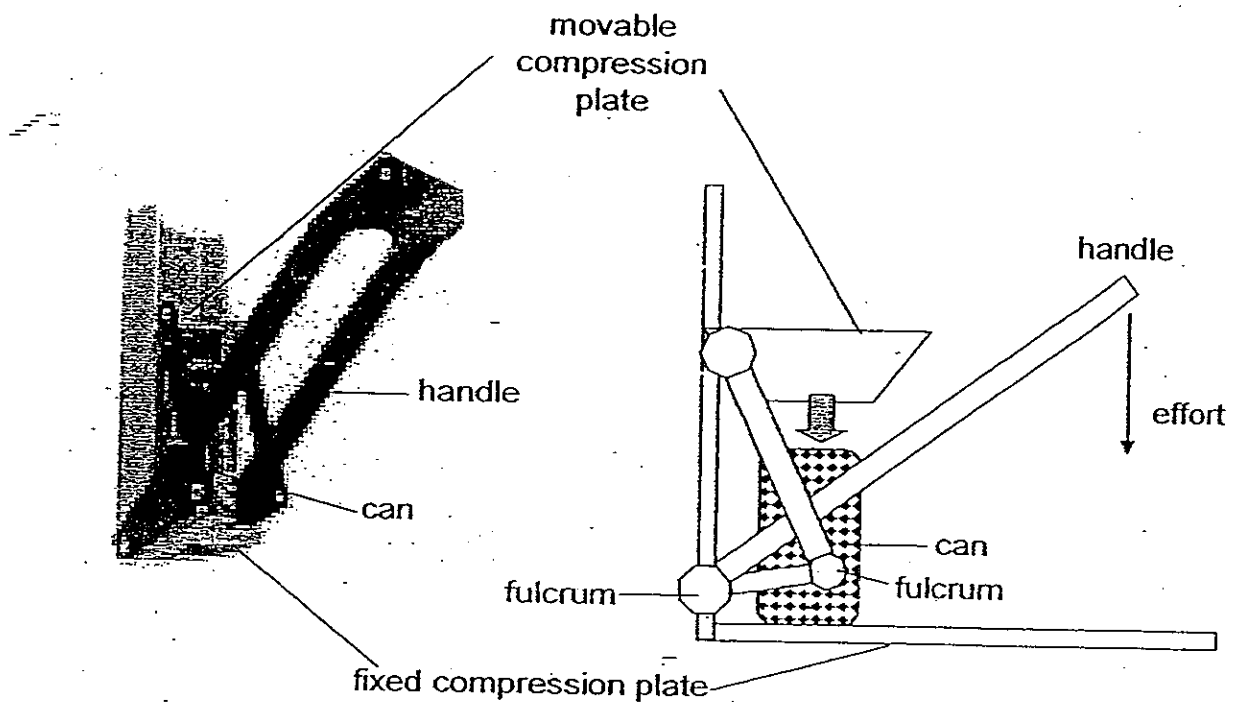
- (b)(i) If Mike were to cut off the wing-like structure of seed P, what do you think would happen to the horizontal distance travelled? [1]

- (ii) Give a reason for your answer in (bi). [1]

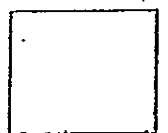
- (c) Mike found another seed R, with the same wing-like structure as seed P, from the same plant. However, Seed R was lighter than seed P. He then repeated the experiment with seed R. Will the horizontal distance travelled by seed R be the same, longer or shorter than that of seed P? Give a reason for your answer. [1]



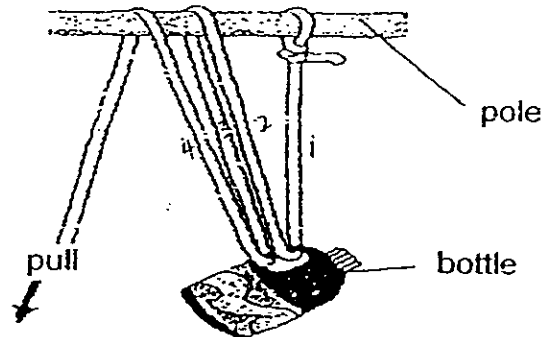
30. Bobby bought a can crusher to crush aluminium cans for recycling as part of his recycling effort. The following diagram shows a can crusher bought by Bobby. The can crusher is able to reduce the size of the empty aluminium cans to a quarter of their original size. When the handle is pulled down, the movable compression plate will move downwards to crush the can.



- (a) What type of simple machine is the can crusher? [1]
-
- (b) Suggest a way to reduce effort in crushing the can. [1]
-
- (c) Name another machine that works on the same principle as the can crusher. [1]
-



31. The diagram below shows a pole with ropes looped around it in order to lift a bottle filled with washing detergent by pulling one end of the rope.



- (a) Put a tick in the box above the pulley system that best matches the system shown in the diagram above.

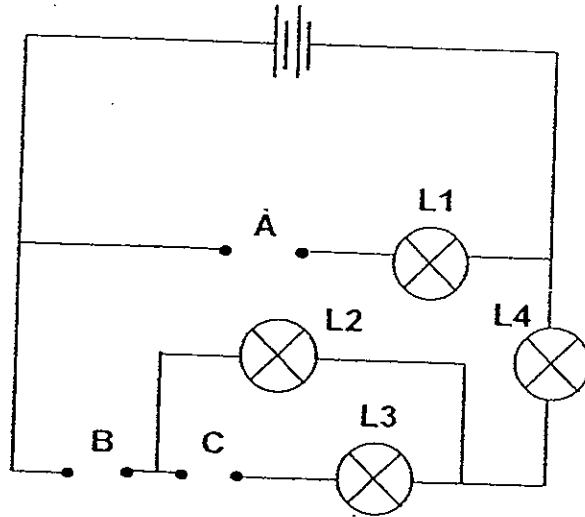
A	B	C	D
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
load	load	load	load

- (b) Give an explanation for your answer in (a).

[1]



32. Nerissa was given 3 rods, R, S and T, of unknown materials. She placed them at positions A, B and C, respectively of the circuit shown below.



The results of her experiment were shown in the table below. When any of the lamps, L1, L2, L3 or L4, lit up during the experiment, a tick (✓) was placed in the box.

Positions where rods were placed			Lamp			
A	B	C	L1	L2	L3	L4
R	S	T	✓	✓		✓

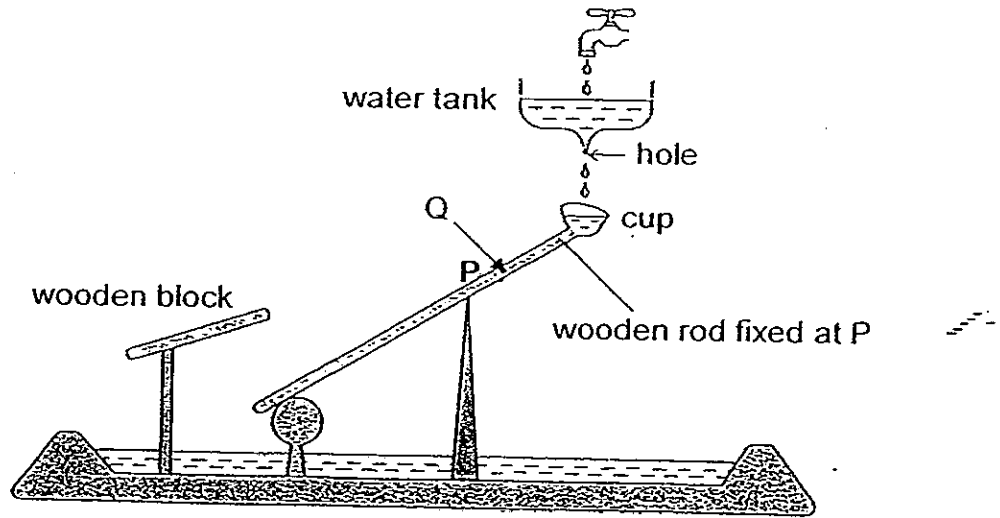
- (a) What can you say about the electrical conductivity of the 3 rods? [1]

- (b) To conduct further tests on the rods, Nerissa then placed the rods at different positions as shown in the table below. Indicate with a tick (✓) the lamps that would light up when the rods were placed at different positions.

[2]

	Positions where rods were placed			Lamp			
	A	B	C	L1	L2	L3	L4
(i)	S	T	R				
(ii)	T	S	R				

33. Mei Ling designed a toy for a Science exhibition as shown below.



Water from the tank dripped into the cup, which was fixed onto a wooden rod. When the cup was filled up, it moved down. This in turn caused the other end of the rod to move up and hit the block. A "click" sound was produced when the two wooden surfaces hit each other.

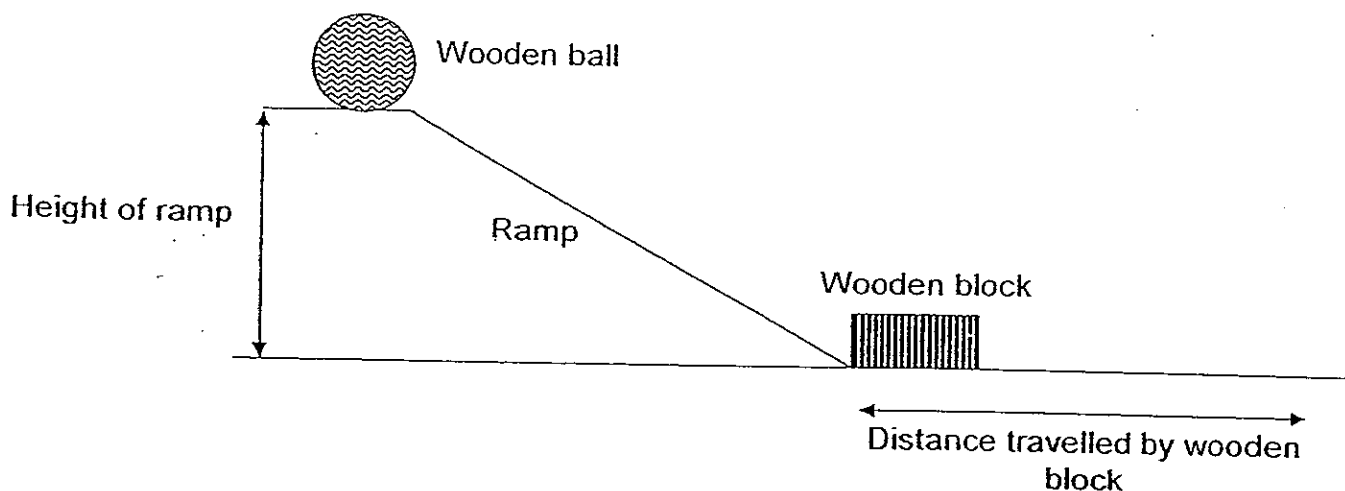
(a) Describe how the cup was emptied and refilled with water. [1]

(b) What would happen if Mei Ling reduced the size of the hole of the water tank? [1]

(c) If Mei Ling fixed the rod at Q instead of P, how would the time between the sound produced change? Give a reason for your answer. [2]



34. The diagram below shows the set-up of an experiment conducted by Fernando.



When Fernando allowed the ball to roll down the ramp, the ball would hit the wooden block and move it to a new position. He repeated the experiment 3 times to study the effect of changing the height of the ramp.

The table shows the result of his experiment.

Height of ramp (cm)	15	25	30
Distance moved by the wooden block (cm)	19	27	33

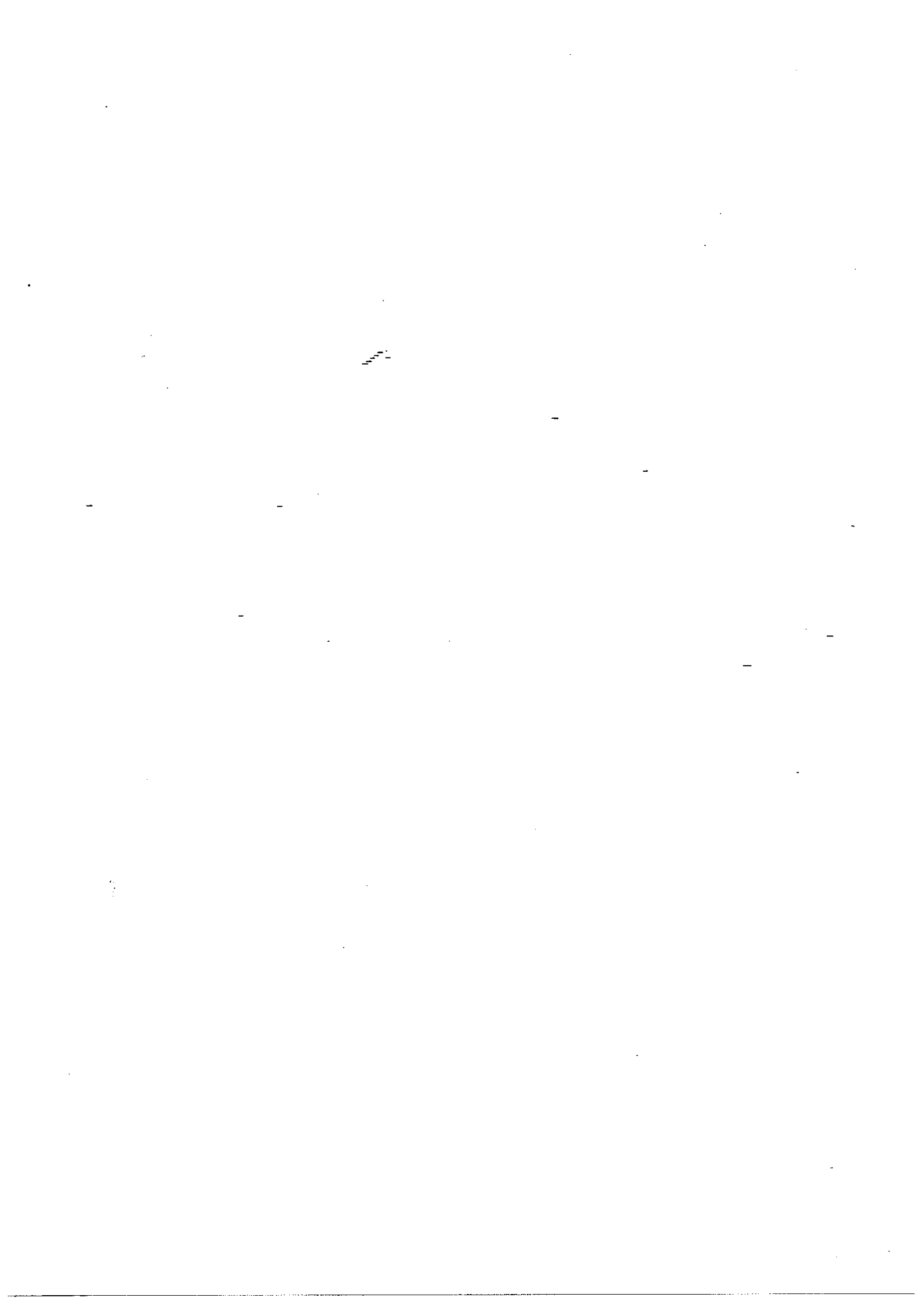
(a) What was the relationship between the height of the ramp and the distance moved by the block? [1]

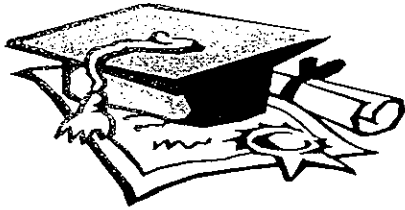
(b) Name one variable that had to be kept the same in order for the experiment to be a fair one. [1]

(c) What would be the effect on the distance moved by the wooden block if Fernando changed the wooden ball to a metal one of the same size? [1]

END OF PAPER







ANSWER SHEET

EXAM PAPER 2008

SCHOOL : CHIJ PRIMARY SCHOOL
 SUBJECT : PRIMARY 5 SCIENCE

TERM : CA 2

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
2	4	3	3	3	2	1	2	3	1	2	1	1	4	4	3	3
Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25									
3	2	3	3	2	1	2	4									

26)a) The bud in the pot would not grow but the buds on the potato will grow.

b) The buds on the potato are able to receive nutrients from the potato but the bud in the soil has nutrients and will not grow.

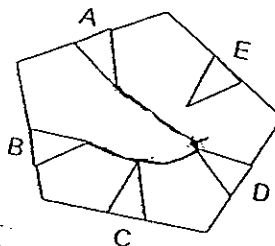
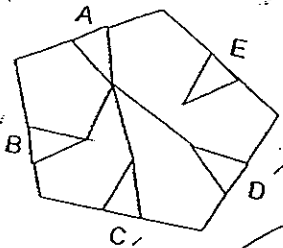
27)a) They all have nucleus.

b) It controls all the activities in the cell.

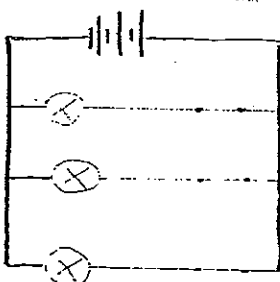
c) Cell wall.

d) Plant. It has a central vacuole.

28)a)



b)



29)a)The longer the length of the wing-like structure, the longer the distance of seed P travels.

b)i)The distance would be shorter.

ii)Without the wing-like structure, the seed would not be able to float in the air and be carried over a greater distance.

c)It would be longer as seed R being lighter be carried over a longer distance.

30)a)A level.

b)Make the handle longer.

c)Nutmacker.

31)a)D

b)The pulley system reduces the effort four times.

32)a)Rods R and S are electrical conductors while Rod T is an electrical insulator.

b)i)L1 ii)L2,L3

33)a)As the cup gets heavier as water from the water hole dripped, the wooden rod would move down wards and the other end of the would hit the block and the wooden rod will move upwards again.

b)The cup would be filled up at a slower rate and the rod would hit the block at a slower rate, less clicks are heard.

c)The time will be longer. More H₂O will need to fill the cup before it is heavy enough to move the wooden rod down and produce the "click" sound.

34)a)The steeper the ramp, the longer the distance moved.

b)The surface of the ramp.

c)It would increase.