Pei Chun Public School
Continual Assessment – 2017
Science
Primary 5

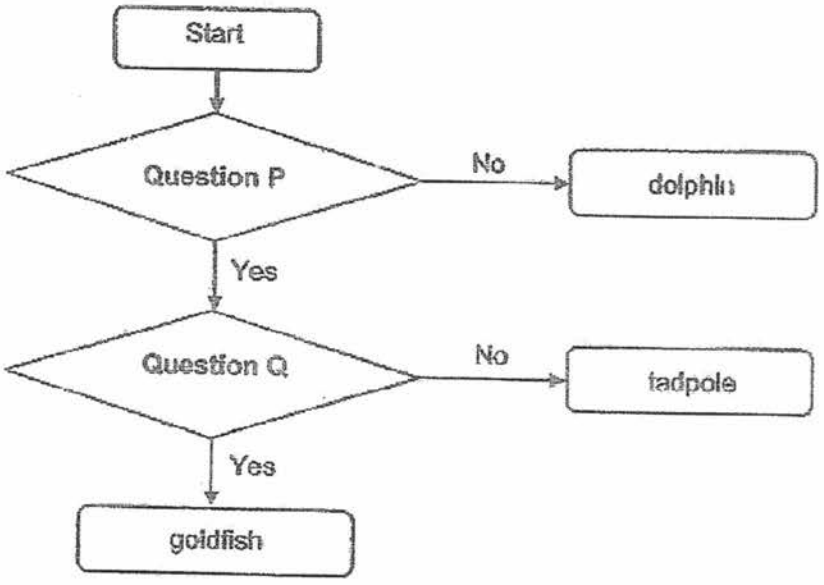
Name : _____ ( ) Date : 22 August 2017

Class : Pri. 5 ( )

Science Teacher : _____ Time : 1 h 45 min

Section A (28 × 2 marks)
For questions 1 to 28, choose the most suitable answer and shade its number (1, 2, 3 or 4) on the Optical Answer Sheet (OAS) provided.

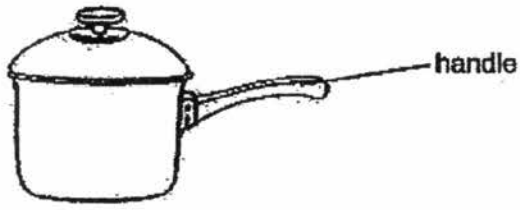
1. Study the flowchart given below.



Which of the following is correct?

	Question P	Question Q
(1)	Does it have gills?	Does it have scales?
(2)	Does it have scales?	Does it have gills?
(3)	Is it a fish?	Does it have scales?
(4)	Is it a fish?	Does it have gills?

2. The diagram below shows a cooking pot with a handle.



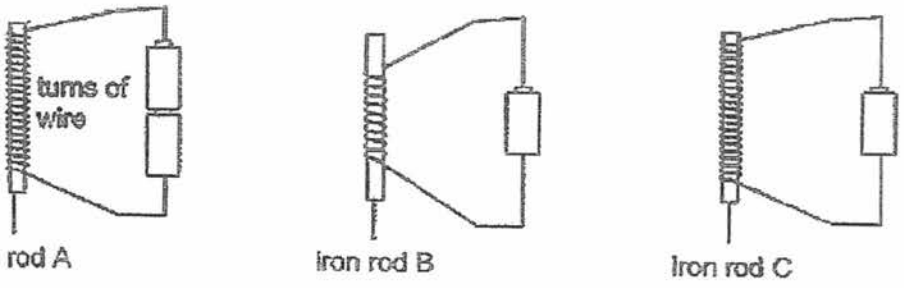
Study the properties of the four materials shown below.

Material	Property of material	
	Does it bend easily?	Does it conduct heat easily?
A	yes	yes
B	yes	no
C	no	yes
D	no	no

Which material is most suitable for making the handle?

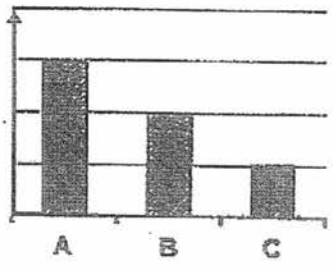
(1) A
(2) B
(3) C
(4) D

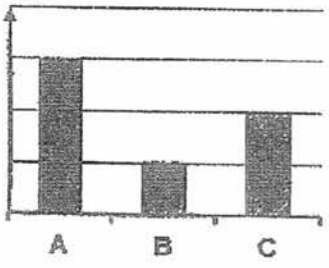
3. Mandy constructed three electromagnets with identical batteries and iron rods as shown below.

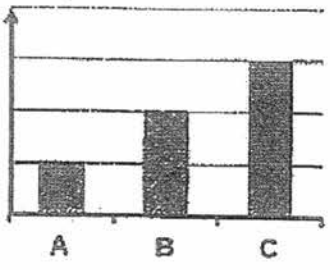


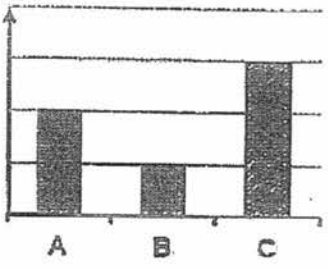
She placed each of the iron rods an equal distance away from a tray of identical steel pins and counted the number of steel pins attracted by the iron rods.

Which of the graphs correctly shows the results of her experiment?

(1)


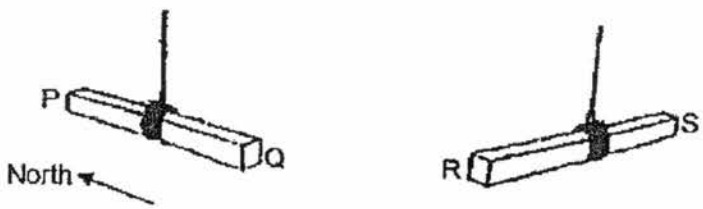
(2)


(3)


(4)


4. A metal bar, PQ, is freely suspended on a piece of string. It was spun and it came to rest with one end of the bar pointing to the North. It was spun a second time and again, the same end of the bar came to rest pointing to the North.

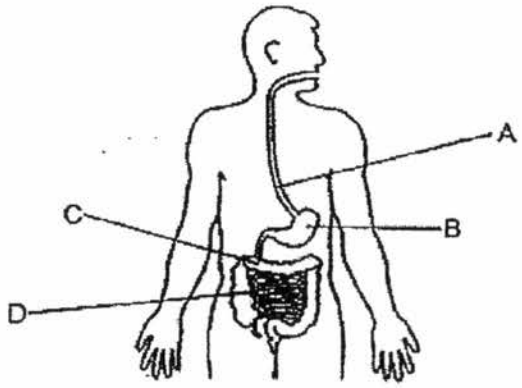
Another bar RS, made of the same metal, was also freely suspended and then spun a few times. However, the bar came to rest in no particular direction each time after it had been spun.



What would most likely happen if the two bars are brought near to each other?

(1) End P attracts S but repels R.
(2) End P repels S but attracts R.
(3) End P attracts neither S nor R.
(4) Both ends P and Q attracts end S.

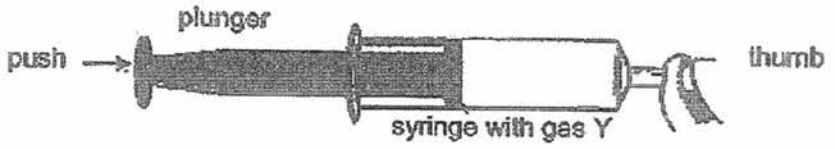
5. The diagram below shows the human digestive system.



At which part is digested food absorbed into the bloodstream?

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

6. Sue filled a syringe with gas Y.

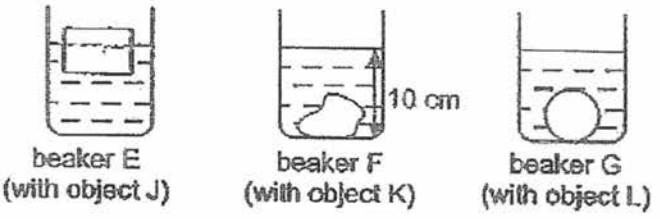


She pushed the plunger in as hard as she could.

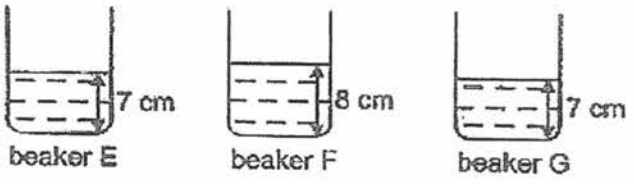
How would the volume and mass of gas Y be affected by the pushing of the plunger?

	volume	mass
(1)	decrease	decrease
(2)	decrease	unchanged
(3)	unchanged	decrease
(4)	unchanged	unchanged

7. Ahmad placed three objects, J, K and L, into three identical beakers as shown below. He added water to each of the beakers and the water levels in the three beakers were the same.



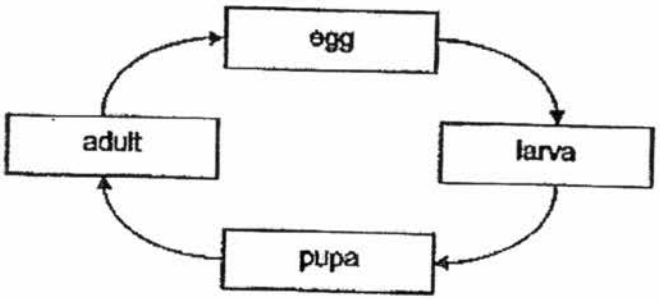
He removed the objects from the water. The diagram below shows the water level in the three beakers.



Which of the following shows the correct order of the objects starting from the smallest volume to the greatest volume?

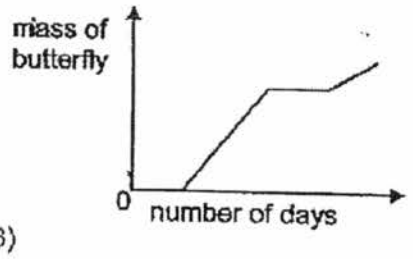
(1) K , J , L
(2) K , L , J
(3) J , L , K
(4) L , J , K

8. The diagram shows the life cycle of a butterfly.

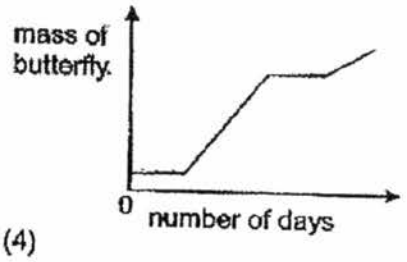


Which of the following graphs correctly represents the mass of the butterfly during its stages of the life cycle?

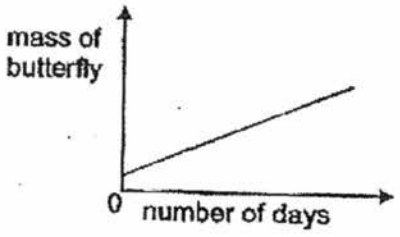
(1)



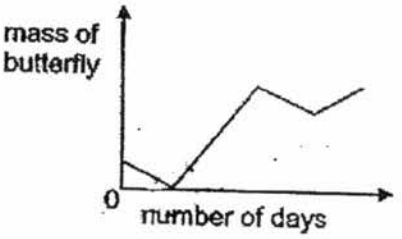
(2)



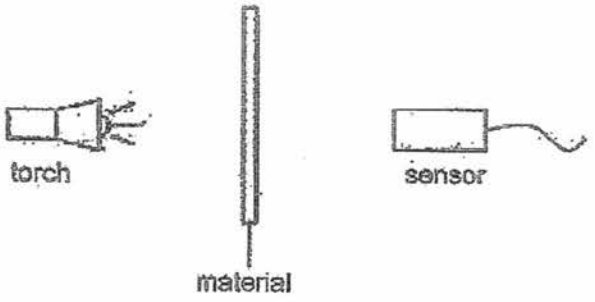
(3)



(4)



9. Maya wanted to find out how much light can pass through three materials, A, B and C, by using the set-up shown below. The amount of light detected by the sensor was recorded. She conducted the experiment in a dark room.



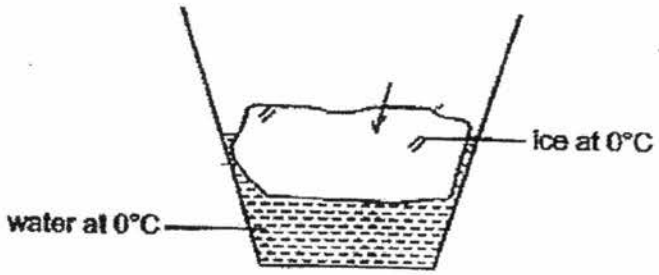
The results of the experiment are shown in the table below.

Type of material	Amount of light detected (units)
Without material	5000
A	0
B	4900
C	2500

Which type of glass is most suitable to make the lens of a pair of reading glasses and a pair of sunglasses?

	Reading glasses	Sunglasses
(1)	C	A
(2)	B	A
(3)	B	C
(4)	C	B

10. A glass containing a block of ice and some water was placed in a room. The room temperature was 25°C.

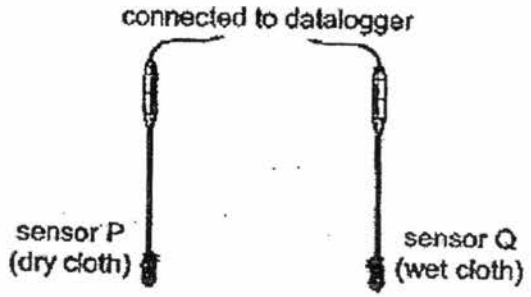


When the ice and the water were at 0°C, which of the following statements is correct?

(1) The ice would not melt as it remained at 0°C.
(2) The ice would not melt as it did not gain heat.
(3) The ice would melt as it gained heat from the water.
(4) The ice would melt as it gained heat from the surrounding air.

11. Bala conducted an experiment with a datalogger and two temperature sensors, P and Q. The ends of the sensors were covered with cloth.

P was kept dry. Q was dipped in water at room temperature for 2 seconds and then taken out.



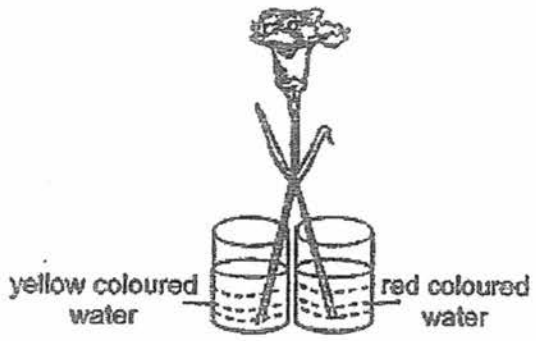
Every five minutes, the datalogger recorded the temperatures of the sensors and the results are shown in the table below.

Time (min)	0	5	10	15
Temperature of sensor P (°C)	25	25	25	25
Temperature of sensor Q (°C)	25	23	22	22

The temperature of sensor Q was lower than room temperature because _____.

(1) water was evaporating from the wet cloth
(2) the wet cloth conducted heat to the sensor
(3) water vapour was condensing on the wet cloth
(4) the wet cloth acted as a poor conductor of heat

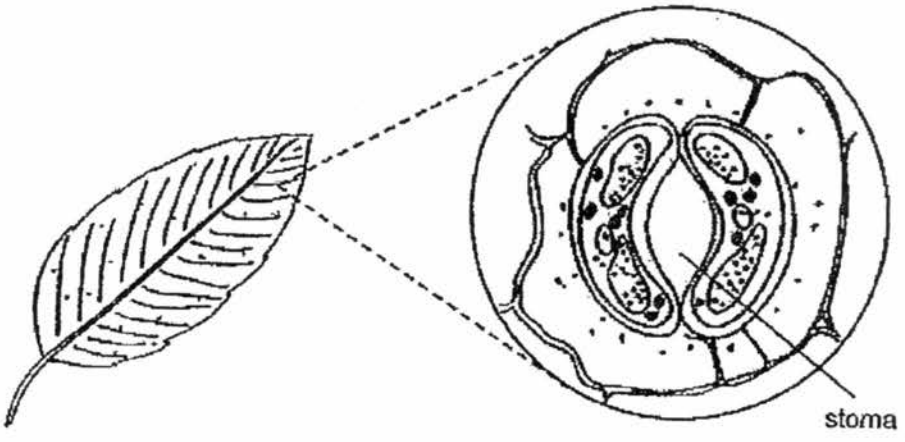
12. Cassandra wanted to give her mother an orange flower. She bought a stalk of white flower and cut the stalk into two before placing the stalk of flower into two beakers as shown in the diagram below.



Cassandra learnt that mixing yellow and red will produce orange.
Will she obtain an orange flower at the end of the experiment? Why?

		Reason
(1)	Yes	Water in the water-carrying tubes will combine in the stem.
(2)	Yes	The colourings will be mixed when they reach the white flower.
(3)	No	The two coloured water are carried by separate water-carrying tubes so the food colourings do not mix.
(4)	No	The roots have been removed. Roots take in water for the plant.

13. Stomata are tiny openings found mostly on the underside of leaves. These openings allow for gaseous exchange. The size of the stomata of plant X changes throughout the day as shown in the table below.



Time	Average size of stomata (units)
5 a.m.	1
11 a.m.	5
3 p.m.	5
8 p.m.	1

Which of the following explains why the stomata changes in size?

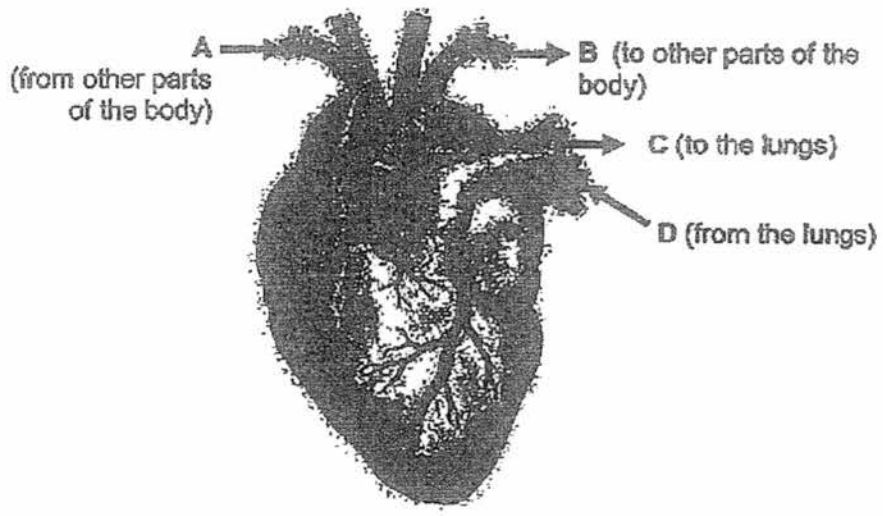
(1) The size of the stomata increases to allow more sunlight to enter the plant for photosynthesis.

(2) The size of the stomata increases to allow more carbon dioxide to enter the plant for photosynthesis.

(3) The size of the stomata decreases to allow less carbon dioxide to enter the plant for it to produce energy.

(4) The size of the stomata decreases to allow more oxygen to enter the plant for it to produce energy.

14. The diagram below shows the heart with its main blood vessels, A, B, C and D.



Which of the blood vessels carry blood that is rich in oxygen?

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

15. Study the classification table below.

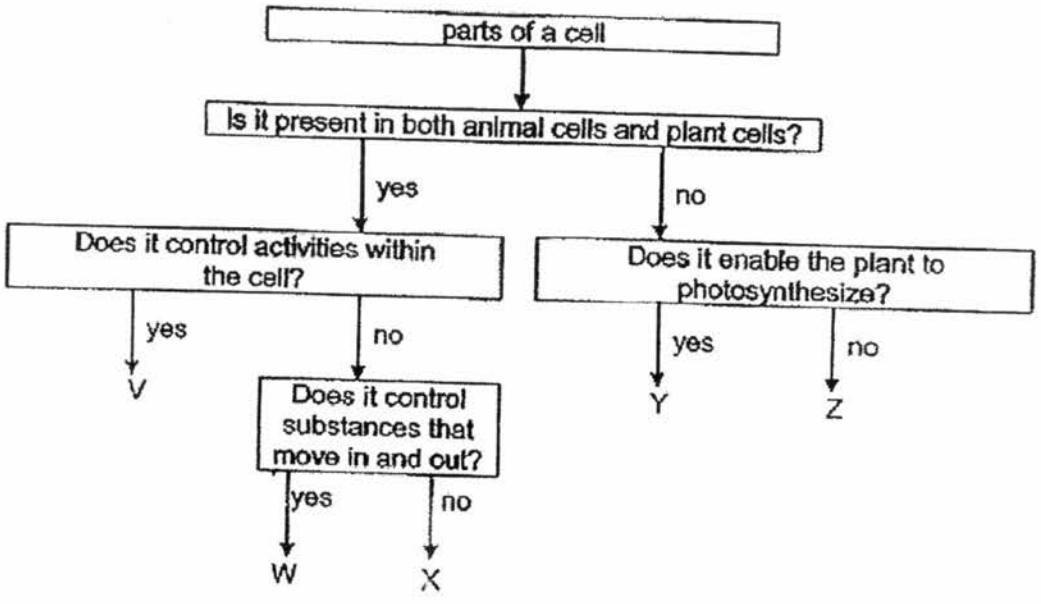
Circulatory System	Respiratory System
lungs	nose
heart	gullet
blood	blood vessels

Which of the following have been wrongly classified?

A : heart
B : lungs
C : gullet
D : blood vessels

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

16. The diagram below can be used to identify parts, V, W, X, Y and Z, of a cell.



Which of the following correctly represent parts V, W, X, Y and Z?

	V	W	X	Y	Z
(1)	nucleus	chloroplasts	cytoplasm	cell membrane	cell wall
(2)	cytoplasm	nucleus	cell membrane	chloroplasts	cell wall
(3)	cytoplasm	cell membrane	chloroplasts	cell wall	nucleus
(4)	nucleus	cell membrane	cytoplasm	chloroplasts	cell wall

17. Halim observed the following cell under a microscope for a few minutes and concluded that it is an animal cell.

Based on the diagram above, what characteristic of the cell led Halim to make his conclusion?

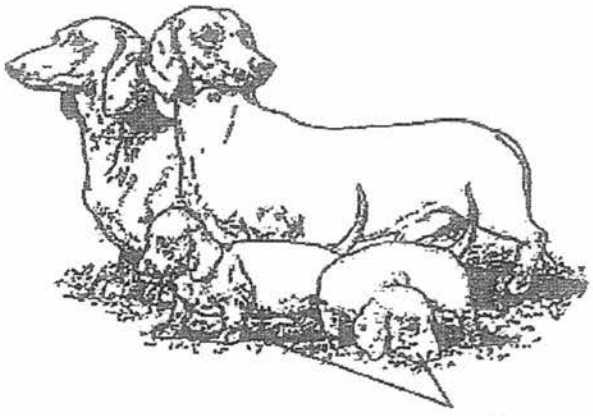
(1) It has a cell wall.

(2) It has a nucleus.

(3) It has a cell membrane.

(4) It is of an irregular shape.

18. The diagram below shows two puppies and their parents.



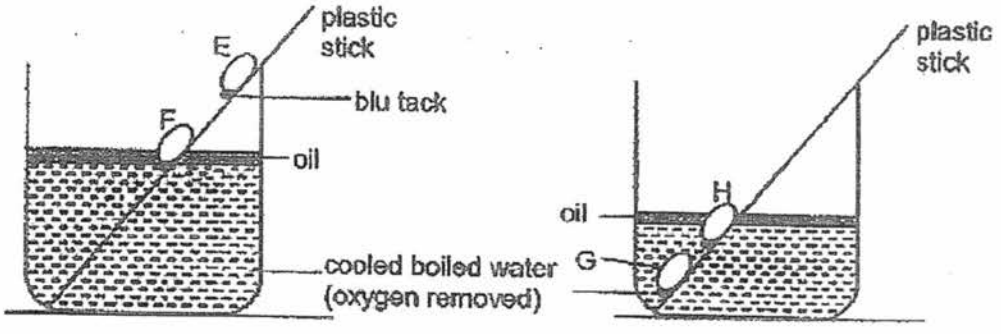
puppies

Why do the puppies look like their parents?

A : Genetic information was passed from the mother in an egg.
B : Genetic information was passed from the father in a sperm.
C : Genetic information was passed from the mother in her milk.
D : Genetic information was passed from the mother in the blood.

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

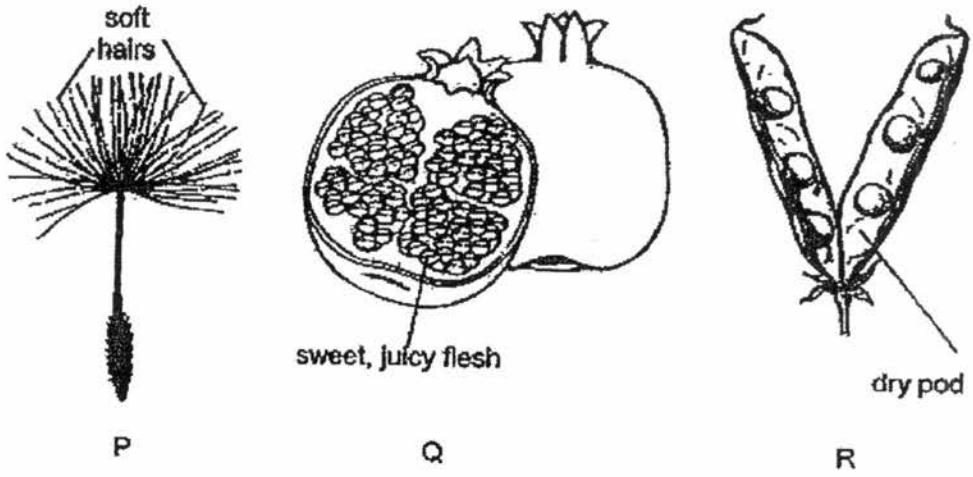
19. Jing Ting conducted an experiment to find out the conditions required for germination of seeds.



Which seed would most likely germinate?

(1) E
(2) F
(3) G
(4) H

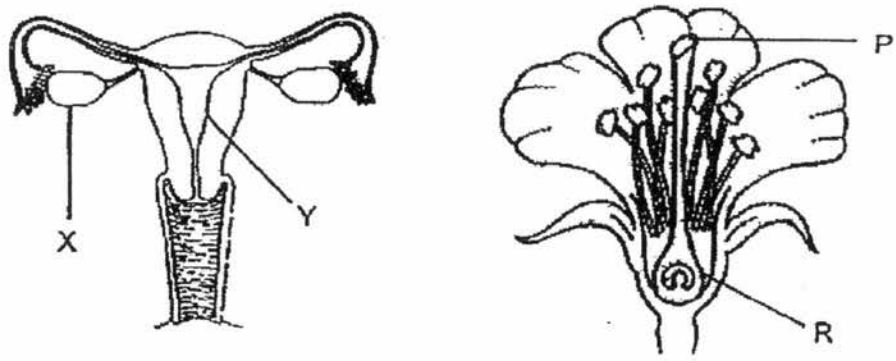
20. The diagrams below show three fruits, P, Q and R.



Which of the following correctly matches the methods of dispersal of P, Q and R?

	P	Q	R
(1)	animal	wind	splitting of fruit
(2)	animal	water	wind
(3)	wind	animal	splitting of fruit
(4)	wind	animal	water

21. The diagram below shows the reproductive parts of a human and a plant, respectively.



Based on the diagrams, which are the parts that contain the female reproductive cells?

(1) P and X
(2) P and Y
(3) R and X
(4) R and Y

22. The table below shows the states of three different substances, W, X and Y, at various temperatures.

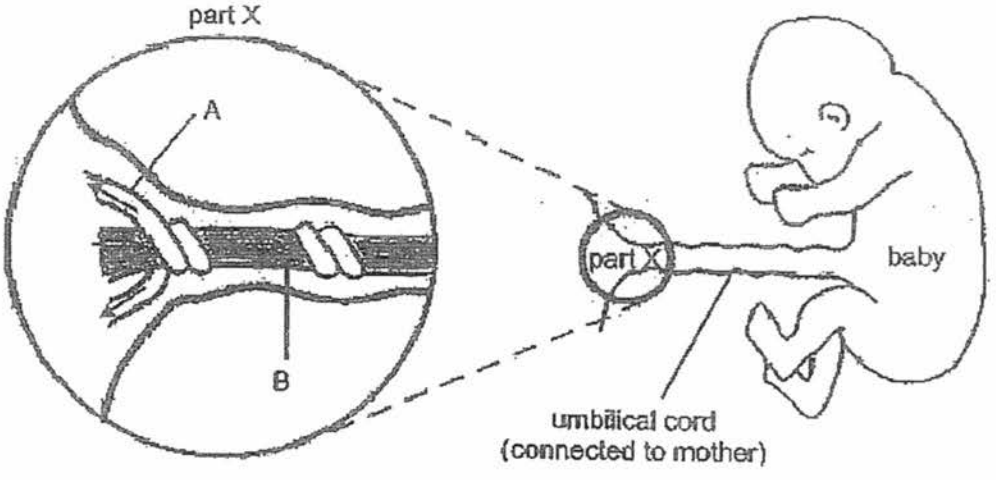
Substance	State of substance at		
	35 °C	50 °C	75 °C
W	solid	solid	liquid
X	solid	liquid	gas
Y	solid	solid	solid

Which of the following statements is/are definitely true?

A : W boils at 75 °C.
B : X is a solid at 40 °C.
C : Y has the highest freezing point.

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

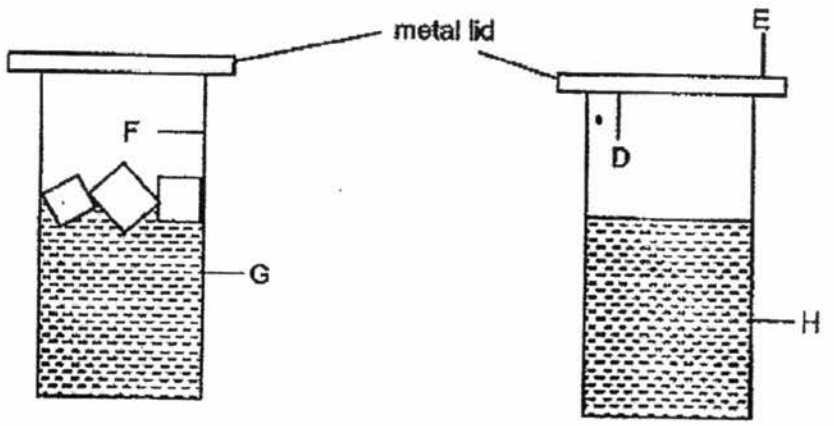
23. The diagram below shows a developing baby and the movement of blood in and out of the baby through the umbilical cord.



Which of the following about the blood in blood vessels A and B is correct?

	A	B
(1)	rich in oxygen	rich in digested food
(2)	rich in oxygen	poor in digested food
(3)	poor in oxygen	rich in digested food
(4)	poor in oxygen	poor in digested food

24. Shanti placed the following set up below in her room at the temperature of 27 °C.



cylinder of cold water with ice cubes

cylinder of hot water at 75 °C

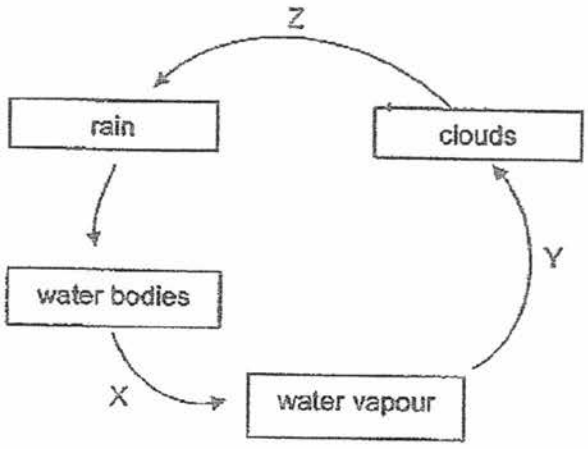
Key:

D – inner surface of metal lid
E – outer surface of metal lid
F – inner surface of cylinder
G, H – outer surface of cylinder

On which of the following surfaces, D, E, F or G, would Shanti observe water droplets after a few minutes?

(1) G only
(2) D and G only
(3) D, G and H only
(4) E, F and H only

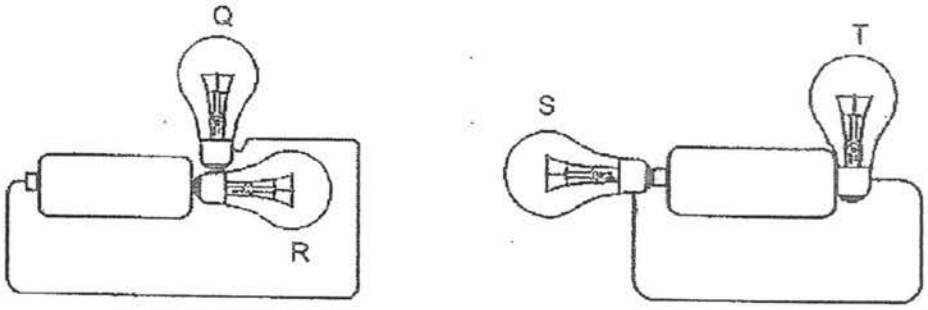
25. The diagram below shows the water cycle.



Which of the following is correct?

	Evaporation occurs at	Condensation occurs at
(1)	X	Z
(2)	X	Y
(3)	Y	Z
(4)	Y	X

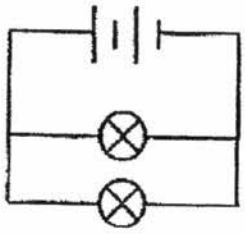
26. Barissa set up two electrical circuits with four light bulbs, Q, R, S and T. The batteries and bulbs were in good working condition.



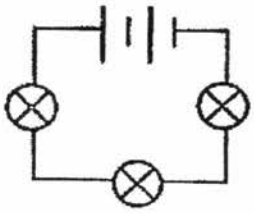
Which of the following correctly shows what she would observe?

	Bulbs that lit up	Bulbs that did not light up
(1)	Q and S	R and T
(2)	Q and R	S and T
(3)	Q, R and S	T
(4)	Q, R, S and T	none

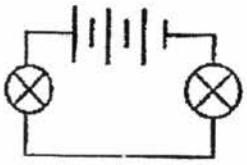
27. Jun Jie wanted to investigate if the arrangement of the bulbs in a circuit affects their brightness. He set up four circuits, A, B, C and D, as shown in the diagrams below.



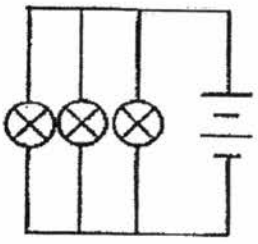
circuit A



circuit B



circuit C



circuit D

Which two circuits should he use in his investigation to ensure a fair test?

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

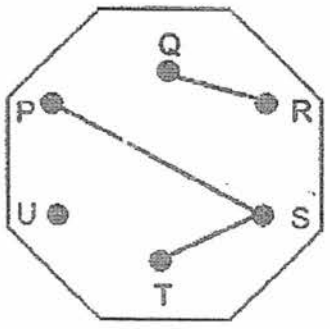
28. Samuel made a circuit card. He tested his circuit card with a circuit tester.

The results of his test are shown below.

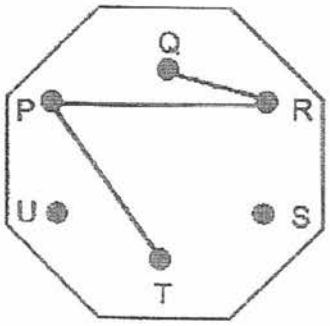
Clips tested	Did the bulb in the circuit light up?
P and Q	No
Q and R	Yes
P and S	Yes
P and T	Yes

Which of the following shows the correct connection on Samuel's card?

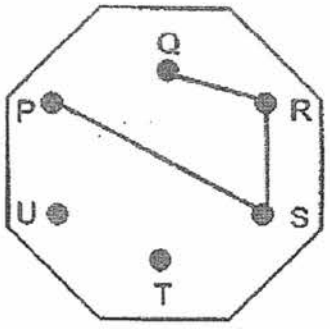
(1)



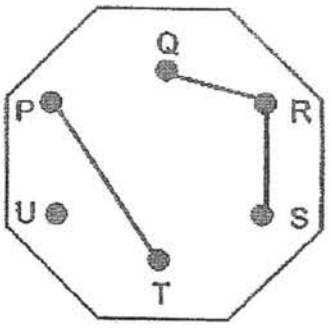
(2)



(3)



(4)



End of Section A

Pei Chun Public School
Continual Assessment – 2017
Science
Primary 5

Name : _____ ( )

Class : Pri. 5 ( )

Date : 22 August 2017

Time : 1 h 45 min

Science Teacher : _____

Parent's Signature: _____

Section A	/56
Section B	/44
Total	/100

Section B (44 marks)

For questions 29 to 41, write your answers in the spaces provided.

29. The statements below describe the different stages in the process of fertilisation of the human female reproduction system.

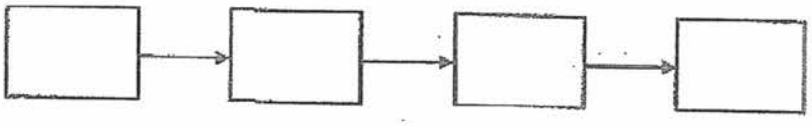
A: The nucleus of the sperm fuses with the nucleus of the egg.

B: Many sperms reach the egg.

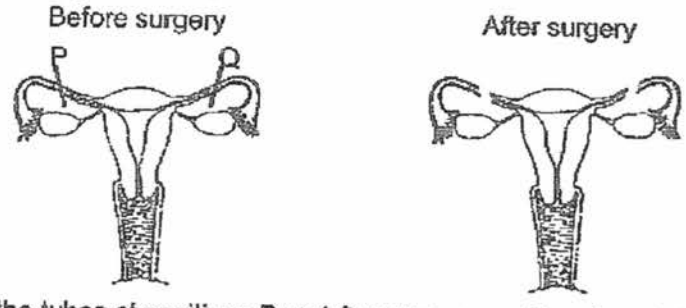
C: The fertilized egg starts to divide.

D: One sperm enters the egg successfully.

a) Arrange the above stages of fertilisation in the correct order in the boxes below. [1]



b) Study the diagram below.



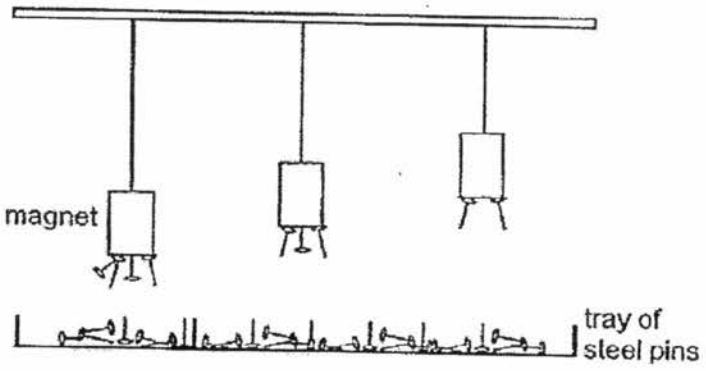
Part of the tubes at positions P and Q were removed in a female body during a surgery. Fertilisation of the eggs could not take place naturally in the female body after this surgery. Explain why this is so. [1]

_____

_____

SCORE

30. Raymond hung three identical bar magnets above a tray of identical steel pins. His observation is shown below.



a) Based on his observation, state how the magnetic attraction of a magnet is affected by its distance from the pins. [1]

b) Raymond lowered a ring magnet on to a tray of steel pins as shown in diagram 1. Diagram 2 shows the bottom view of the ring magnet.

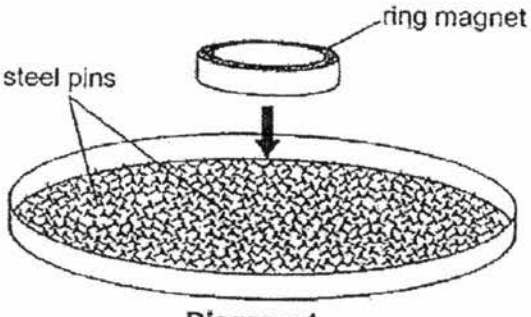


Diagram 1

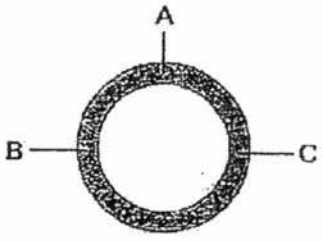


Diagram 2

A total of 18 pins were attracted to the bottom of the magnet at positions A, B and C. Raymond's friends, Alan and Muthu, predicted the number of pins attracted at the three positions. Their predictions are shown below.

Alan's prediction:

Positions	A	B	C
Number of pins attracted	9	0	9

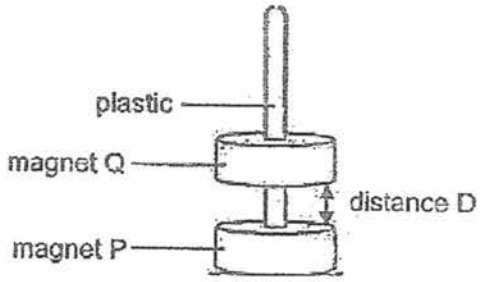
Muthu's prediction:

Positions	A	B	C
Number of pins attracted	6	6	6

Whose prediction, Alan's or Muthu's, is most likely to be correct?
Give a reason for your answer. [1]

SCORE	

c) Raymond placed two ring magnets, P and Q, through a plastic pole as shown in the diagram below.

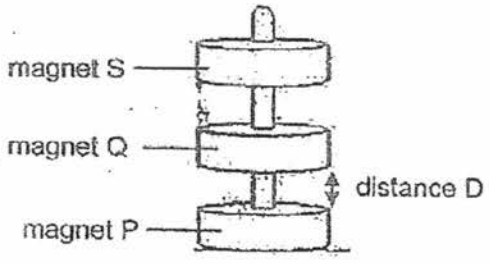


Raymond observed that magnet Q was suspended in the air.
Explain why magnet Q was not touching magnet P. [1]

d) Raymond pushed magnet Q towards magnet P. He found that he needed to push harder as distance D decreased. Explain why. [1]

e) Raymond measured the distance D between magnet P and Q. Then, he placed magnet S on top of magnet Q.

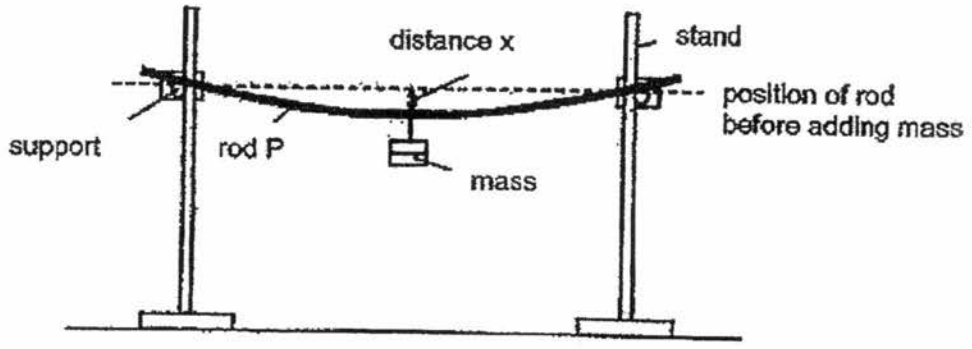
Magnet Q was still suspended in the air as shown in the diagram below.



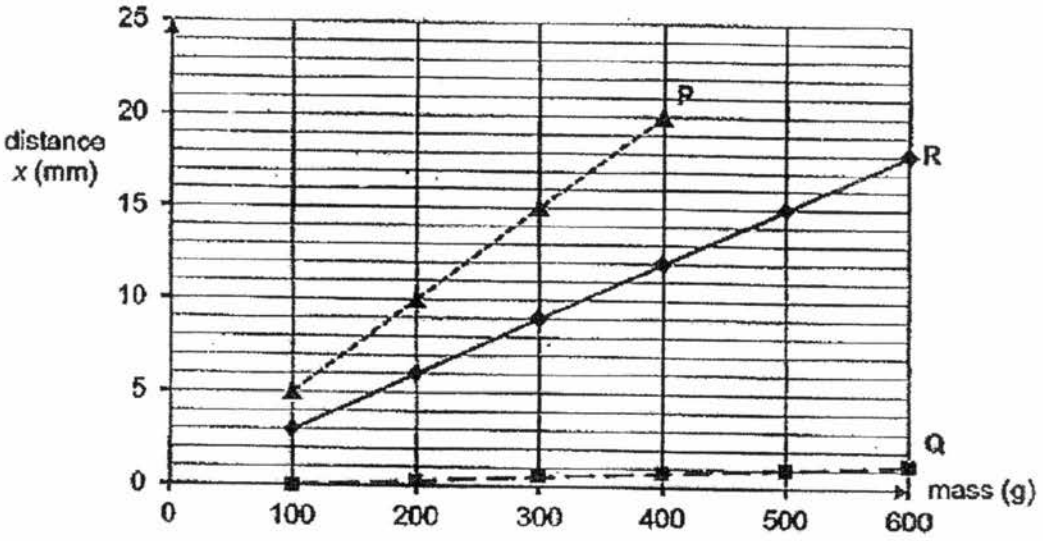
He observed that distance D decreased when magnet S was placed on top of magnet Q. Explain his observations. [1]

SCORE	

31. Brian carried out an experiment on rod P using the set-up shown below. He measured distance *x*, at the middle of the rod after adding each mass.



He repeated the experiment using rods Q and R of different materials but the same length. His results are shown below.



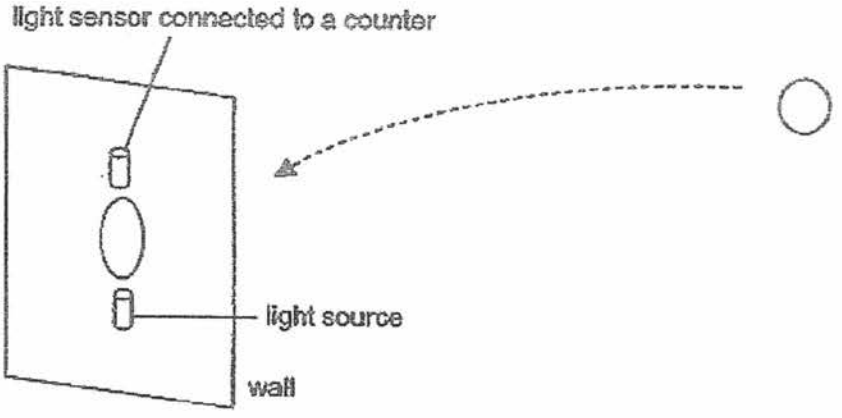
a) What was distance *x* before any mass was added to the rods? [1]

b) Give a reason why Brian was not able to obtain a reading for rod P when the mass hung was more than 400 g. [1]

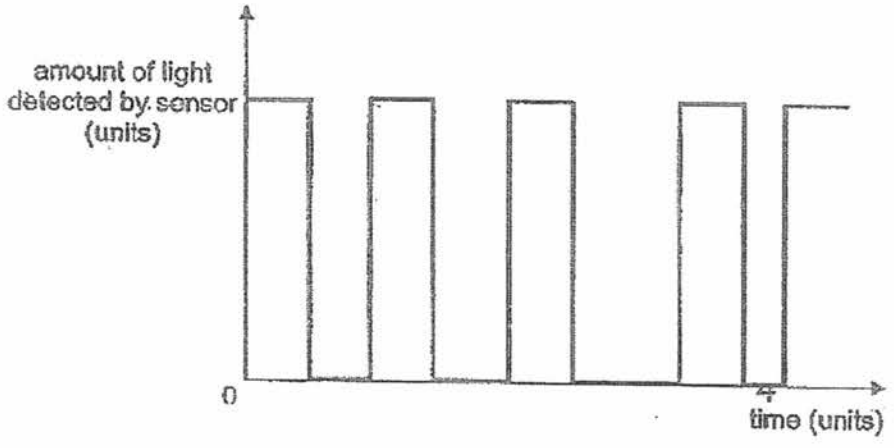
c) Based on his results, which rod, Q or R, is more suitable for making chopsticks? Explain your answer. [1]

SCORE	

32. Jerry set up a light source and a light sensor to count the number of rubber balls going through a hole as shown.



Jerry threw a few identical balls one at a time, and recorded the following results.



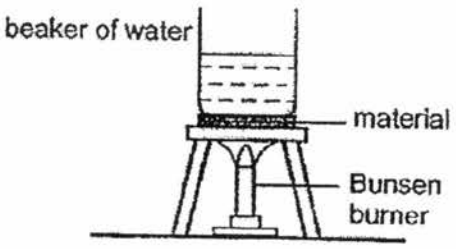
a) Explain how Jerry could count the number of balls going through the hole using the set-up. [2]

b) Based on the above results, how many balls went through the hole? [1]

c) Based on the above results, did all the balls go through the hole at the same speed? Explain your answer. [1]

SCORE	

33. Matthew conducted an experiment using the set-up shown below.



He recorded the time taken for the water to boil when different materials, X, Y and Z, were placed below the beaker of water in the table below. The pieces of materials are of the same thickness and size. Beakers P, Q and R are identical beakers and the materials were heated with identical heat sources from below.

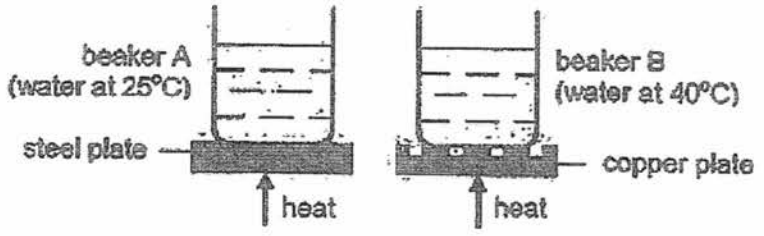
Material	Beaker	Amount of water in the beaker (ml)	Time taken for the water to start boiling (min)
X	P	100	12
Y	Q	200	18
Z	R	300	10

a) Based on his results, can you conclude which material, X, Y or Z, is the poorest conductor of heat? Explain why. [2]

SCORE

b) Matthew wanted to conduct another experiment to find out if the area of contact between the metal plate and the beaker would affect the amount of heat conducted to the water. He heated identical beakers with the same amount of water of different temperatures with identical heat sources.

The diagram below shows the set-ups at the start of the experiment.



His experiment was not a fair test.
Suggest two changes to his set-up so that his experiment would be a fair one. [2]

Suggestion (1): _____

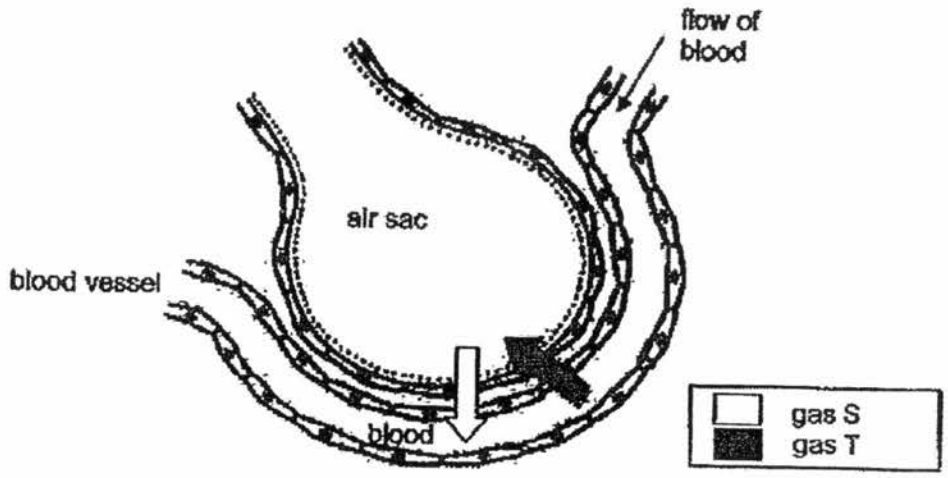
_____

Suggestion (2): _____

_____

SCORE	

34. The diagram below shows part of an air sac and a blood vessel in a lung. The arrows indicate the direction of movement of gases S and T to and from the air sac.

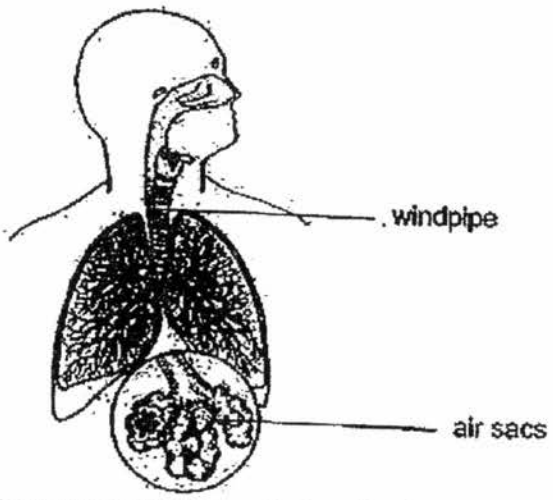


a) What could gases S and T be? [2]

S: _____

T: _____

The diagram below shows a human respiratory system.



In the lungs, the air tubes branch into tiny tubes that end in air sacs with lots of blood vessels.

b) Explain how having so many of these blood vessels help more gas S to be absorbed into the blood. [1]

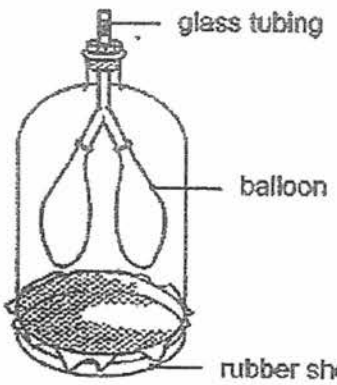
_____

_____

_____

SCORE

c) John made a lung model as shown below.



What change would you observe in the balloons when the rubber sheet is pulled downwards gently? Explain your observation. [2]

35. The table below shows the pulse rate and breathing rate of Ali when he was at rest and when he was running.

Activities	Pulse Rate (heartbeats per min)	Breathing Rate (breaths per min)
resting	70	12
running	150	32

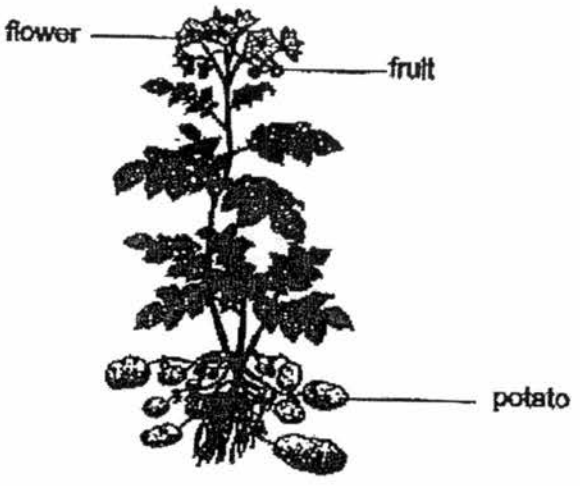
a) Give a reason why Ali's breathing rate was higher when he was running quickly. [1]

b) Based on the data above, explain why an increased pulse rate in Ali would result in more energy produced when he is running quickly. [1]

c) Would Ali's pulse rate be higher or lower when he was walking as compared to when he was running quickly? Give a reason for your answer. [1]

SCORE	

36. Meifen conducted an experiment with two similar potato plants. She removed the fruits and flowers on one of the plants.

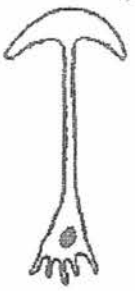


Meifen observed that potatoes on the plant with fruits and flowers removed were bigger compared to the other plant.

Explain why bigger potatoes were produced. [2]

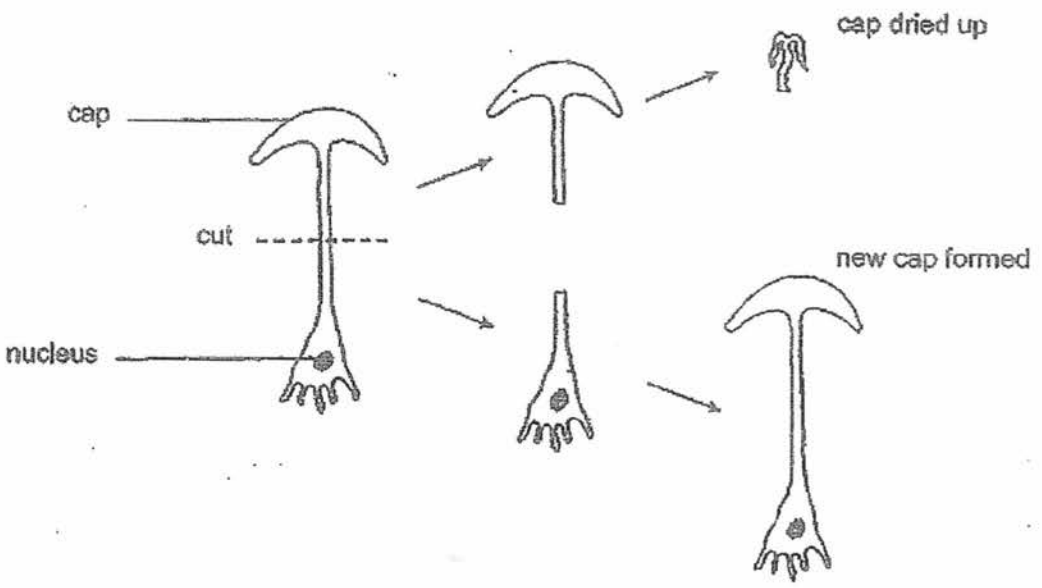
SCORE	

37. The diagram below shows a single-celled organism X.



a) Organism X is able to make food. Name the part of the plant cell that enables organism X to do so. [1]

Organism X has a cap and a nucleus at its base. A scientist wanted to find out the function of the nucleus in organism X. He cut organism X into two halves as shown.



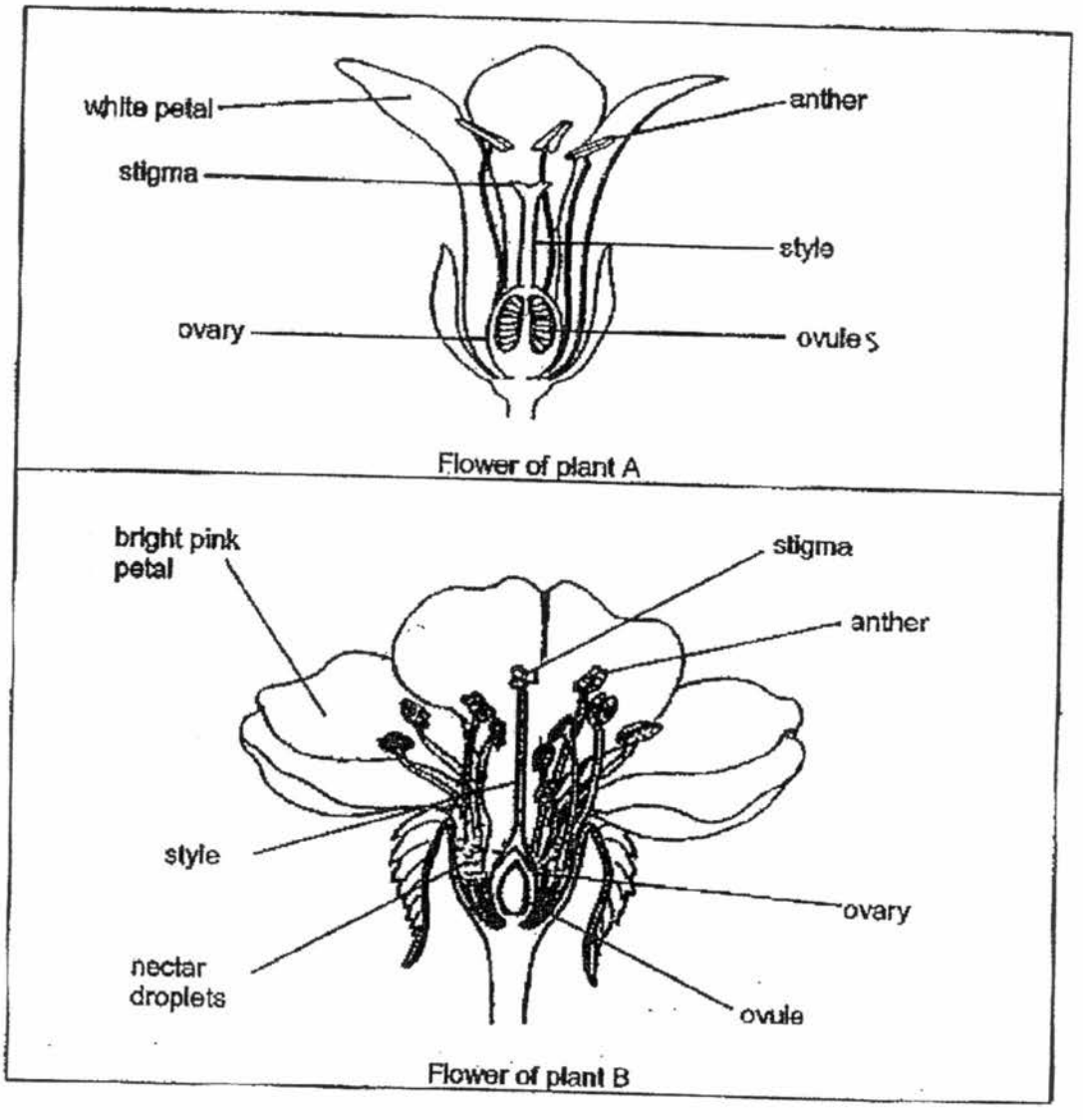
After a few days, the upper half of the organism with the cap dried up. The lower half continued to grow to form a new cap.

b) Based on this observation, what can the scientist conclude about the function of the nucleus? [1]

c) Besides replacing damaged and dead cells, give one other reason why our body needs to produce new cells. [1]

SCORE	

38. The diagrams below show two flowers from different plants, A and B.



a) Which of the flowers is more likely to be pollinated by insects?
Give two reasons for your answer. [2]

The flower of plant _____ is more likely to be pollinated by insects.

Reason 1: _____

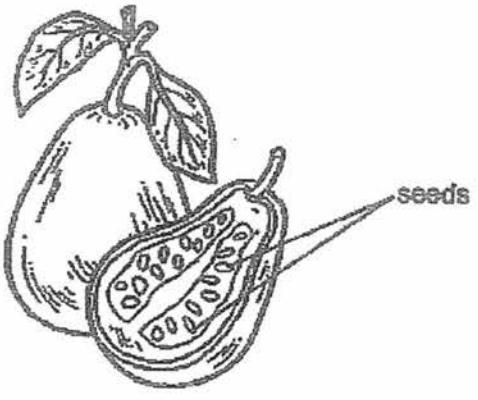
_____

Reason 2: _____

_____

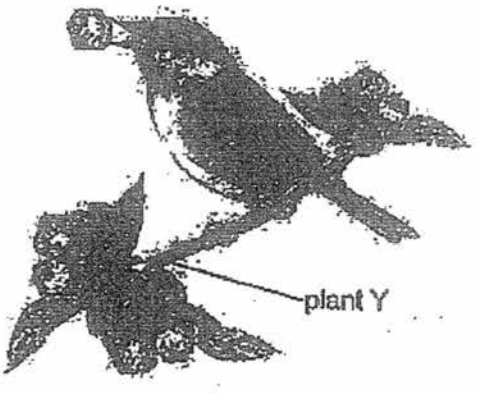
SCORE	

b) The diagram below shows a fruit.



Which plant, A or B, does this fruit belong to? Explain your answer. [1]

c) The diagram below shows a bird on another plant, Y. The bird eats the fruits of plant Y and passes out the undigested seeds in its droppings.



Other than dispersing the seeds far away from the parent plant, state another advantage of this method of seed dispersal for plant Y. [1]

SCORE	

39. Labeena tied her wet hair in a bun as shown in diagram 1 below. Her mother told her to let her hair down as shown in diagram 2.

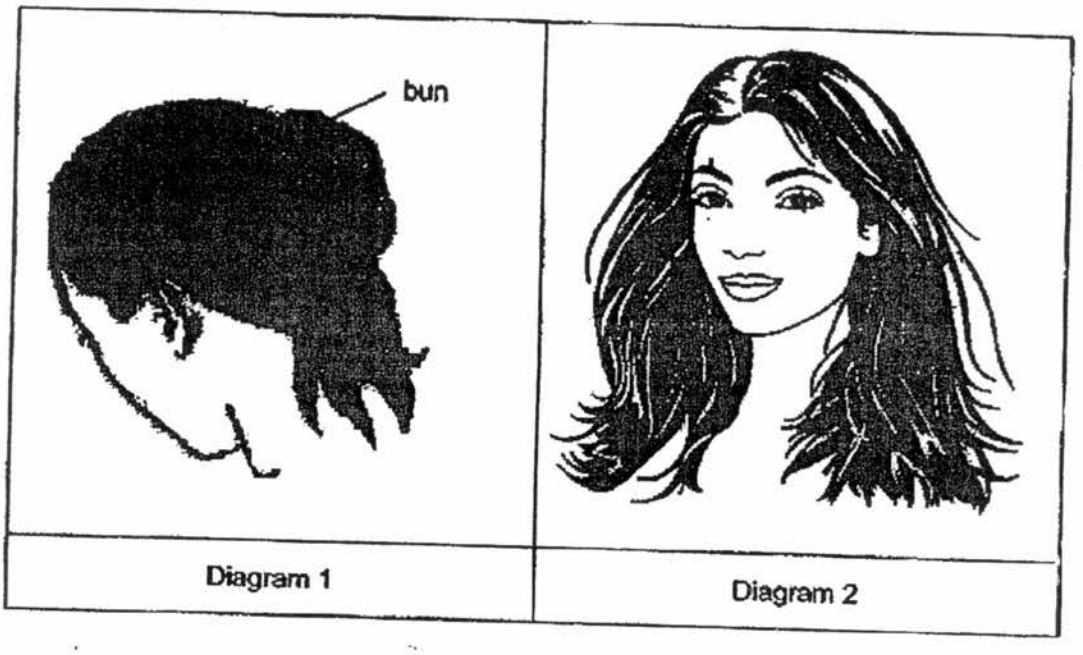


Diagram 1 | Diagram 2

a) Her mother told her that her hair would dry faster if she lets it down. Why is this so? Explain your answer clearly. [1]

_____

_____

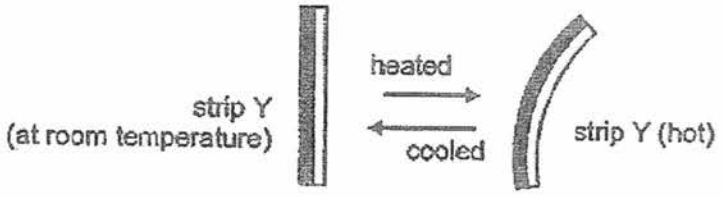
b) Labeena noticed that her hair dried even faster when she sat under a spinning fan. Explain why this is so. [1]

_____

_____

SCORE	

40. Bala had a bimetallic strip, Y, made from two different metals. When heated, strip Y bent in the direction shown below. When the heated strip was cooled to room temperature, it straightened and returned to its original shape.



Bala used strip Y to make the lamp shown in Figure 1. Pin P is an iron pin attached to the lamp filament. It is in contact with strip Y and is fixed. He connected the lamp to a circuit as shown in Figure 2.

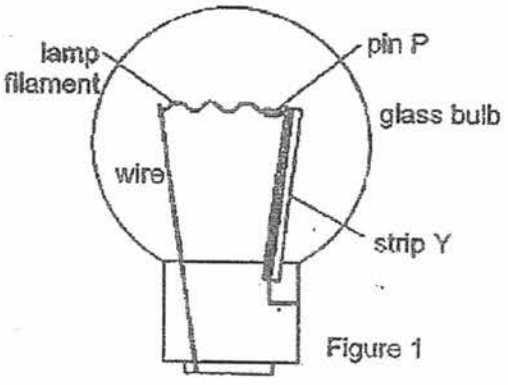


Figure 1

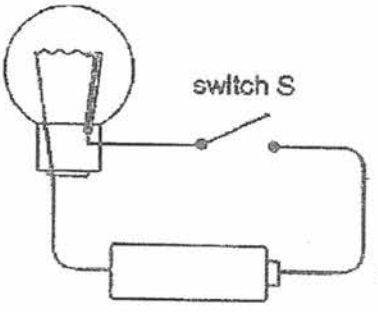
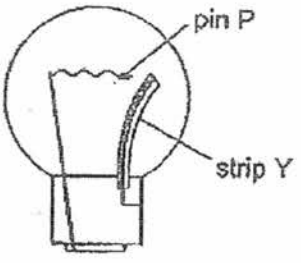


Figure 2

When Bala closed switch S, he observed that the lamp filament started to glow.

After a few seconds, strip Y became hot and the lamp turned off even though switch S was closed. The diagram below shows the lamp when it did not light up.

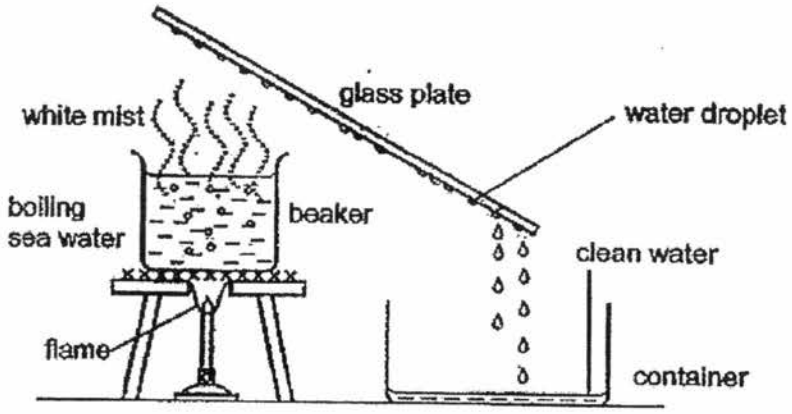


a) Explain why the lamp did not light up when strip Y became hot. [1]

b) A few seconds later, Bala observed that the lamp turned on again. Explain why the lamp lit up again. [2]

SCORE	

41. Brenda placed a beaker of sea water on top of a burner and prepared the set-up as shown below.



Brenda observed some white mist formed above the boiling water and water droplets formed on the glass plate.

a) What is the state of matter of the white mist? [1]

_____

b) Explain how the water droplets on the underside of the glass plate were formed. [2]

_____

_____

_____

_____

c) Brenda replaced the glass plate with a metal plate and repeated her experiment.

She observed that more clean water was collected in the container when she heated the same amount of sea water for the same duration.
Explain her observation. [1]

_____

_____

End of Section B

Set by : Ms Parvin, Mrs Navin, Mrs Chiew
Vetted by: P5 Science teachers

SCORE	

EXAM PAPER 2017 (P5)

SCHOOL: PEI CHUN

SUBJECT : SCIENCE

TERM : CA2

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	4	2	4	4	2	2	2	3	4
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	3	2	4	4	4	4	4	4	3
Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28		
3	1	3	2	2	3	4	1		

Name:_____( ) Class: _____

P5 Science Continual Assessment Examination Answer Template – 2017

No.	Acceptable Answers
29 (a)	*Concept: Process of fertilization* *B*, *D*, *A*, *C*
(b)	*Concept: Female reproductive organs: ovary, womb and vagina. The ovaries produce eggs which are the female reproductive cells.* The sperm *could not meet reach* the egg.
30 (a)	*Concept: Magnetic force increases when the magnets are closer to the magnetic objects.* *Requirement of the question: Relationship between the magnetic attraction of a magnet and the distance from the pins.* As the distance between the magnet and the pins *increases*, the attraction of the magnet *decreases*.
(b)	*Concept: Pole of a ring magnet has the same magnetic strength* *Muthu*. Positions A, B and C are all on the *pole* (magnet) of the ring where the magnetic strength is the *same*.
(c)	*Concept: Like poles of magnets repel.* Magnet *Q* repels magnet *P* as the *like* poles of both magnets are *facing* each other. *Common mistake: Q and P are like poles. (Wrong).* *Explanation: A magnet cannot have only one pole. A magnet must have a North and a South pole.*
(d)	*Concept: Magnetic forces increases when the magnets are close to each other.* The *magnetic* force of repulsion *increased* as the magnets moved closer to each other ~~/ decreased.~~
(e)	*Concept: Like poles of magnets repel.* Magnet *S* repelled magnet *Q*, *pushing* magnet Q closer to magnet *P*.
31 (a)	*Concept: Graph reading skills* *Requirement of the question: For both lines, P & R, if they are lengthened, both lines meet at the point 0mm or 0g.* *0* cm / mm
(b)	*Concept: Test for flexibility of material*

	Rod P ___broke___.
(c)	*Concept: An inflexible object does not bend easily.* *Requirement of the question: **Comparison** between the properties of rod Q and R must be made using the data in the graph.* Rod ___Q___. It bent ___less___ than rod ___R___.
32 (a)	*Concept: Light is blocked by an opaque material.* First point: Light is ___blocked___ by the ball. / Light cannot pass through the ball. Second point: ___~~does~~___ / ___No___ light will be detected *by the light sensor*
(b)	*Concept: When the ball is going through the hole, the light ~~sensor~~ cannot detect the light. Look at the graph and count the number of intervals that shows a 0 amount of light detected by the sensor.* ___4___
(c)	*Concept: Graph reading skills based on data provided.* ___No___. The ball took ___different amount of time___ to go through the hole. / The ball blocked the light for different amount of time.
33 (a)	*Concept: A poor conductor of heat gains and loses heat slower.* *Requirement of the question: Pupils needs to state that X and Y might be the poorest conductor of heat and explain why. The more water we have in the beaker, the more time it'll take for the water in the beaker to boil.* ___No___. The amount of water in each of the beakers and the time taken for the water in each beaker to start boiling were ___defferent___. Thus, ___X___ and ___Y___ could be the ___poorest___ conductor of ___heat___. OR Yes. If the same amount of water was poured into the beakers placed on X and Y, the water in the beaker placed above X would take a longer time to boil. Thus, material X is the poorest conductor of heat.
(b)	*Concept: Fair Test* *Requirement of the question: The material must be mentioned for one of the suggestions.* He should use the ___same material___ for both metal plates. He should use ___**water of the same temperature**___ in both beakers.
34 (a)	*Concept: Identify gases entering and exiting the blood stream in a lung.*

	S: *oxygen* T: *carbon dioxide*
(b)	*Concept: Functions of tiny air sacs found in the air tubes.* *Requirement of the question: Pupils must state the origin of the exposed surface area.* It increases the surface area in contact between the *air sea* and *the blood vesse*. Thus, the amount of gas S absorbed into the blood is increased.
(c)	*Concept: Lung Machine* Requirement of the question: Pupils must state 1. Observation of the balloon from the diagram. 2. State the source of air. 3. Check if the air enter or leave the balloon. 4. Location where the air entered the balloon. The balloons are *inflated*. *Air* from the surrounding *entered* the balloons through the opening of the glass tubing.
35 (a)	*Concept: When we exercise, our breathing rate increases so that we can take in more oxygen.* *Requirement of the question: Pupils will need to compare the breathing rate when Ali is resting.* He needs to take in *more* oxygen to produce more energy when he was running quickly.
(b)	*Concept: Increased pulse rate results in more digested food and oxygen being transported in the blood to various parts of the body.* *Requirement of the question: Pupils will need to compare the pulse rate when Ali is resting.* *More* digested food and oxygen are transported to *other part of the body*.
(c)	*Concept: Our pulse rates are lower when we do less vigorous exercise and we need less energy, as compared to when we do vigorous exercise.* *Requirement of the question: Comparison must be made using Ali's pulse rate when he was walking compared to when he was running.* *hower*. The body would require *less* energy for the walk.

36	*Concept: Food made by the leaves is transported from leaves to the other parts of the plant.* *Requirement of the question: Comparison must be made to when the fruits and flowers on one of the plants are not removed.* Food made in the ___leaves___ will not be ___transport___ to the fruits and flowers, ___more___ food will then be ___transported___ to the potato instead. Thus, causing it to ___increase___ in size.
37 (a)	*Concept: Function of parts of the cell* ___chloroplast___
(b)	*Concept: Function of parts of the cell* The nucleus is able to ___repair___ the damaged cell.
(c)	*Concept: Purpose of producing new cells.* To enable us to ___grow___.
38 (a)	*Concept: Factors that affect pollinators* *Requirement of the question: Pupils must compare the colours of the flowers in terms of brightness and also state the purpose of nectar droplets.* The flower of plant ___B___ is more likely to be pollinated by insects. Reason 1: Its petals are ___more___ brightly-coloured / ___more___ attractively coloured / brighter. Reason 2: The flower of plant B has ___nectar___ droplets that will ___attract the insect___ to the flower.
(b)	*Concept: Flower to fruit* *Requirement of the question: Pupils must state the similarity between the seeds in the fruit and the ovules in the flower of plant A.* ___A___. This fruit has ___many seeds___ and the flower of plant A also has ___many ovules srranged in a similar way as the seeds___
(c)	*Concept: Nutrients are needed for young plants to grow well.* The bird's droppings will provide ___nutrents___ for the ___seedlings___. * *The seeds do not need nutrients from the droppings to germinate.*

39 (a)	*Concept: Rate of evaporation is affected by the exposed surface area of water* *Requirement of the question: Pupils need to compare the exposed surface area of the wet hair when the wet hair is tied up and when the wet hair is not tied.* The ___*exposed surface area of the wet hair*___ is greater and the water will ___*evaporate faster*___ / the rate of evaporation will be higher.
b)	*Concept: Rate of evaporation is affected by the presence of wind* The ___*wind*___ from the spinning fan ~~and~~ the water on her wet hair ~~would~~ ___*to evaporate*___.
40 (a)	*Concept: Open & closed circuit based on bimetallic strip.* *Requirement of the question: Pupils must state their observation from the diagram.* Strip ___*Y*___ bent away from pin P. Hence, the circuit was ___*opened straightened*___.
(b)	*Concept: Effects of materials which are good conductors of heat in an electrical circuit.* Strip ___*Y*___ cooled down to room temperature and ___*straightened*___. It touched ___*pin P*___ and the circuit was ___*closed*___.

41 (a)	*Concept: White mist is a cloud of water droplets formed in the air and the water droplets can be seen / observed.* *Water in gaseous state (steam or water vapour) cannot be seen.* ___*liquid*___ state
(b)	*Concept: Formation of water droplets through evaporation and condensation.* *Requirement of the question: 1. Source of the steam / water vapour* *2. Temperature difference* *3. Surface of contact* *4. Heat gain or loss* *5. Process of condensation.* *Common mistake: The warm water vapour from the surrounding air condensed.* *(Wrong source)* *The boiling seawater evaporated into white mist.* *(When the seawater is boiling, it does not evaporate.)* *The white mist lost heat and condensed.* *(Water droplets are already in liquid state.)* The sea water in the beaker __*gained heat, boiled*__ and became ___*steam*___. The ___*steam*___ touched the ___*cooler*___ surface of the glass plate, ___*lost*___ heat (½) and ___*condensed*___ into tiny water droplets. ** Water boils at its boiling point of 100°C and becomes steam.* *Water evaporates at any temperature below the boiling point and becomes water vapour.* *When water changes from liquid state to gaseous state at the boiling point, we do NOT say that the water has evaporated.*
(c)	*Concept: Conductors of heat* *Requirement of the question: Pupils have to compare whether metal or glass is a better conductor of heat. Then pupils will have to explain their choice* More water will be collected. As metal is a ___*better*___ conductor of heat, the steam to lose heat ___*faster*___ to the metal plate and more steam condensed on the metal plate. * The metal plate is of the same temperature as the glass plate. Both of them should be at room temperature at the start of the experiment. It would feel cooler as it is a better conductor of heat and it could conduct heat away from our skin more quickly. Being a better conductor of heat, it would gain heat more quickly from the steam and it'll be hotter than the glass plate after a while. However, the heat gained will also be lost quickly to the surrounding air, so more steam could condense on it.