Index No. | | | | | | | |

NAN HUA PRIMARY SCHOOL
PRELIMINARY ASSESSMENT – 2017
PRIMARY 6

SCIENCE

BOOKLET A

28 Multiple Choice Questions (56 marks)

Total Time for Booklets A and B : 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers in the Optical Answer Sheet (OAS) provided.

Marks Obtained

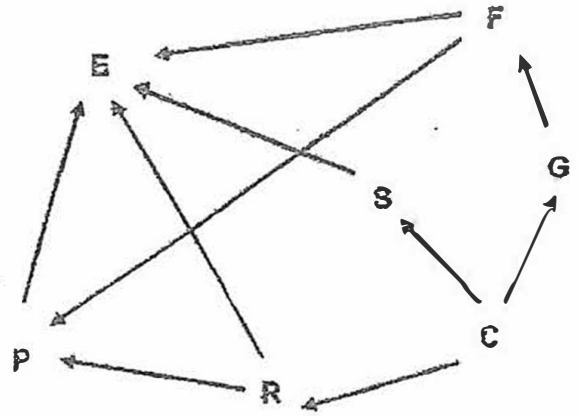
Booklet A		/ 56
Booklet B		/ 44
Total		/ 100

Name: _____ ( ) Class: P 6 _____

Date : 25 August 2017 Parent's Signature: _____

Section A: (28 x 2 marks = 56 marks)
For each question from 1 to 28, 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 below shows a food web.



Which one of the following shows a correct food chain from the above food web?

(1) C → S → E
(2) R → P → E
(3) E → P → R → C
(4) G → F → P → E

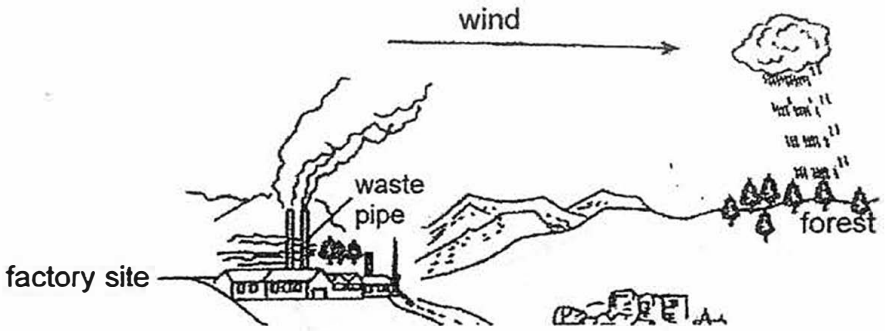
2. The statements below describe some adaptations of an earthworm.

A An earthworm has a streamlined body shape to help it move easily through the soil.
B An earthworm can twist its body around wildly in an attempt to free itself from its predator.
C An earthworm releases mucus to help it slide through the soil quickly when it is being threatened.
D An earthworm camouflages well with the soil owing to the colour of its body and that prevents it from being spotted easily by its predators.

Which statement(s) above show(s) the behavioural adaptation(s) of the earthworm that can enhance its survival?

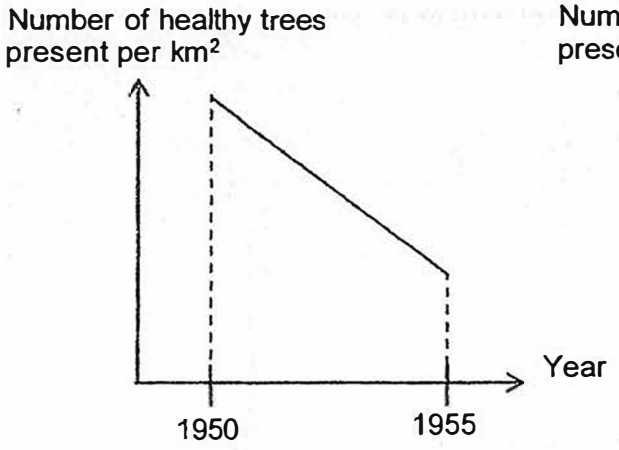
(1) B only
(2) A and D only
(3) B and C only
(4) A, B, C and D

3. A large volume of acidic waste gases has been released from the waste pipes from the factory site into the air as shown in the diagram below since 1950. The arrow shows the constant direction of the wind.

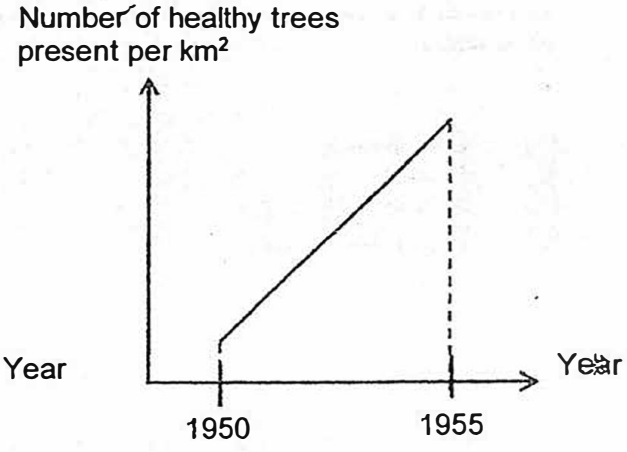


Which one of the following graphs best represents the effect of the acidic waste gases on the forest for the next five years?

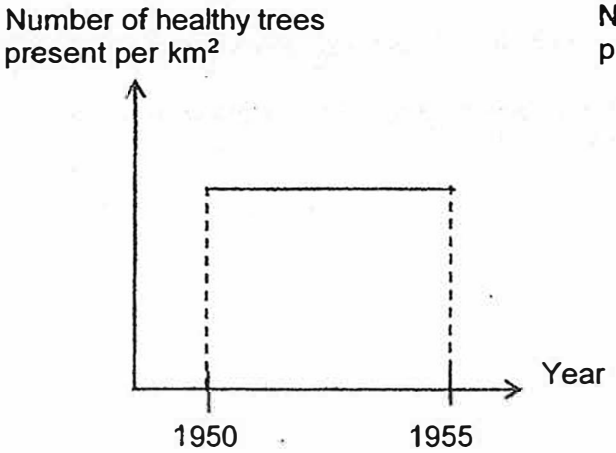
(1)



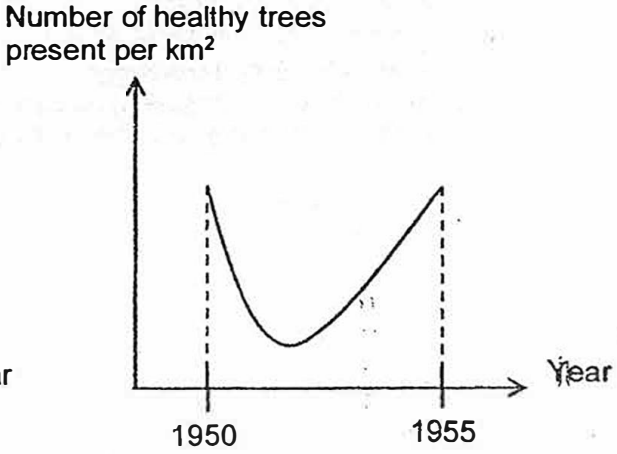
(2)



(3)



(4)

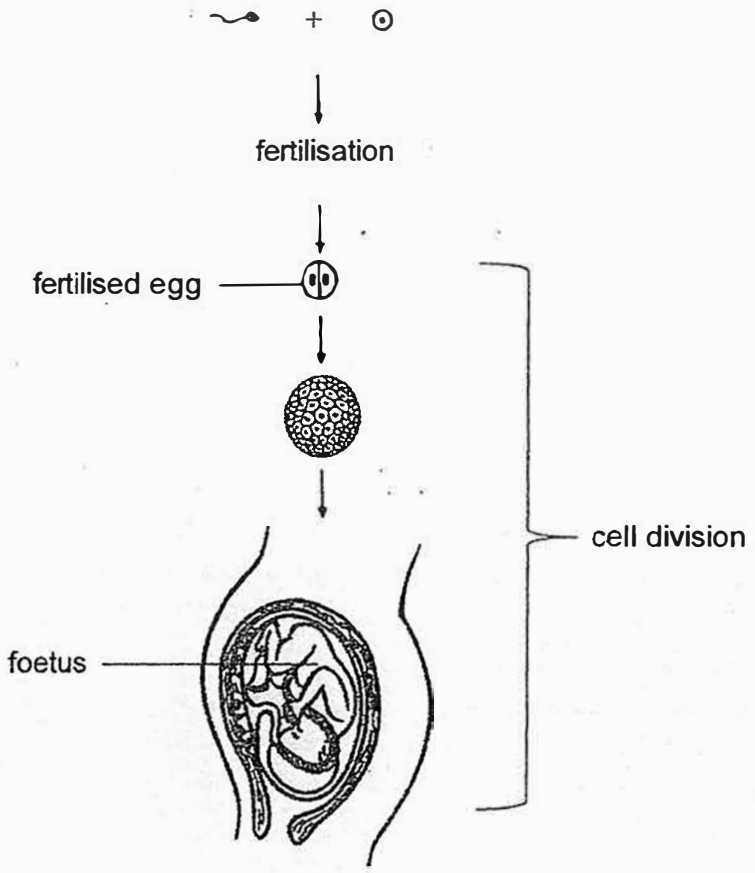


4. Which of the following statements correctly describe how fungi and green plant obtain food?

A Green plants can photosynthesize.
B Fungi get food by decomposing dead matter.
C Green plants cannot move freely from place to place to look for food.

(1) A and B only
(2) B and C only
(3) A, B and C
(4) None of the above

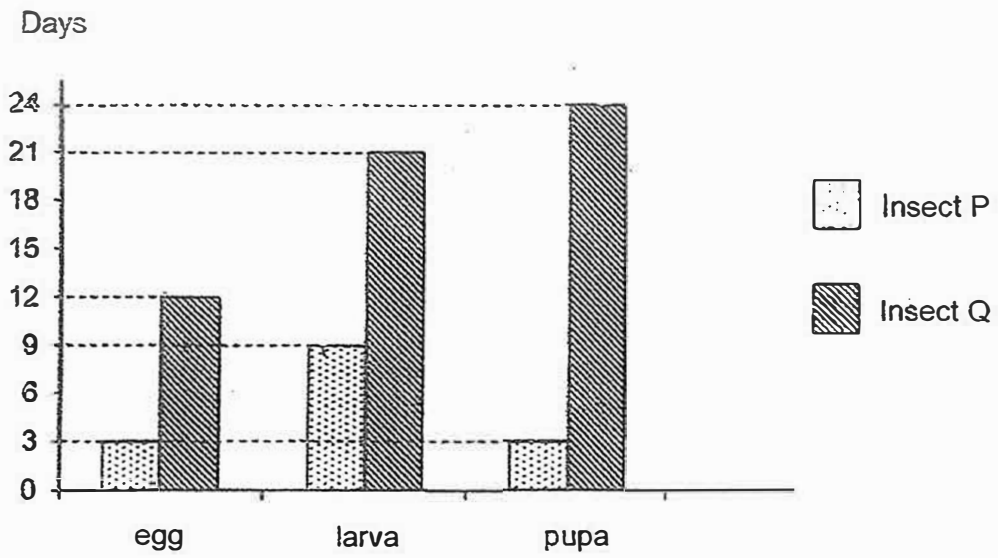
5. The diagram below shows the reproduction process in human beings.



Which one of the following statements is **false**?

(1) The fertilised egg develops into a foetus in the mother's womb.
(2) All the eggs produced by the ovaries will eventually develop into young organisms.
(3) The fertilised egg divides to form many cells and they form the different parts of the developing baby.
(4) Generally, only one sperm will fuse with the egg while the remaining sperm will eventually die.

6. The graph below shows the number of days taken for various stages in the life cycles of insects P and Q.

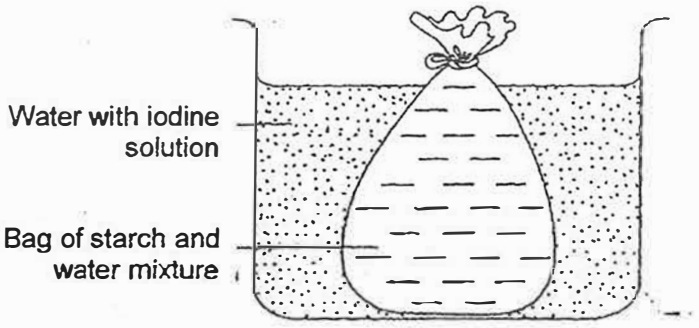


Stages of life cycles of insects P and Q

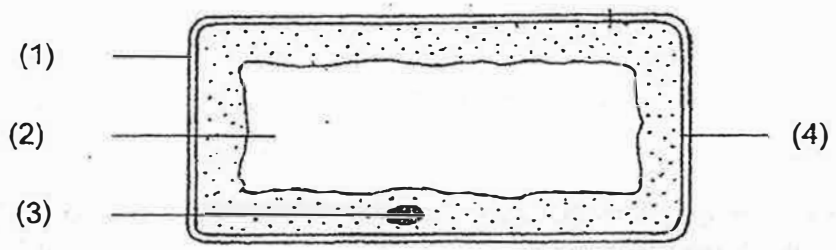
At which stage of the life cycle would insects P and Q be on the 17th day after the eggs were laid?

	Stages of life cycles	
	Insect P	**Insect Q**
(1)	Adult	Larva
(2)	Adult	Pupa
(3)	Pupa	Larva
(4)	Pupa	Pupa

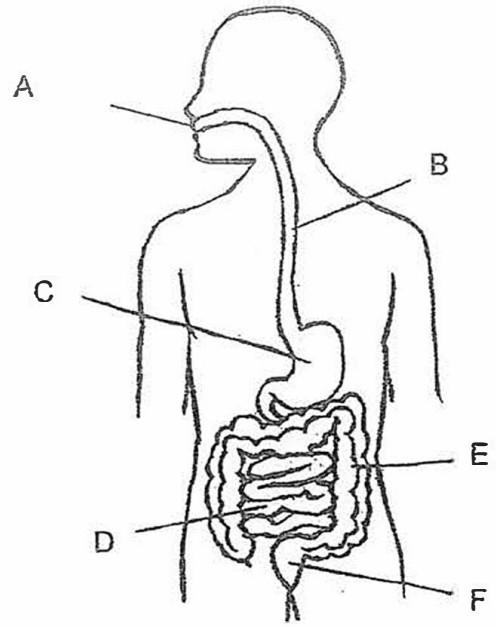
7. The diagram below shows a bag which holds a mixture of starch and water. It is placed into a beaker containing water with iodine solution.



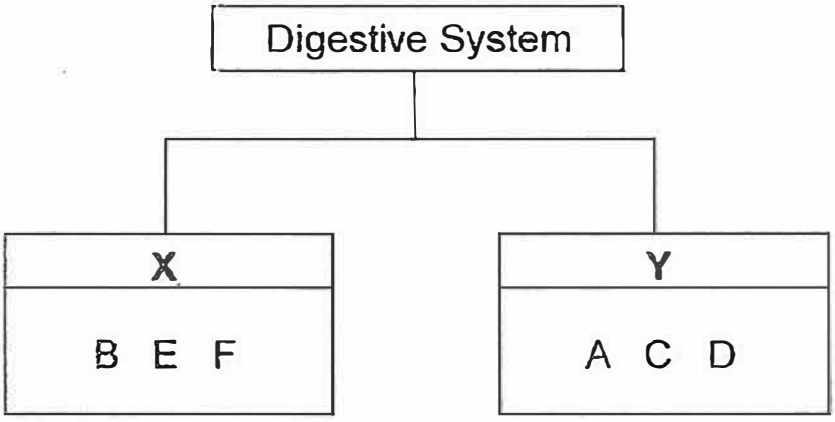
After 3 hours, patches of dark blue were seen only in the starch and water mixture. Which part of the cell in the diagram below does the bag resemble?



8. The diagram below shows a human digestive system.



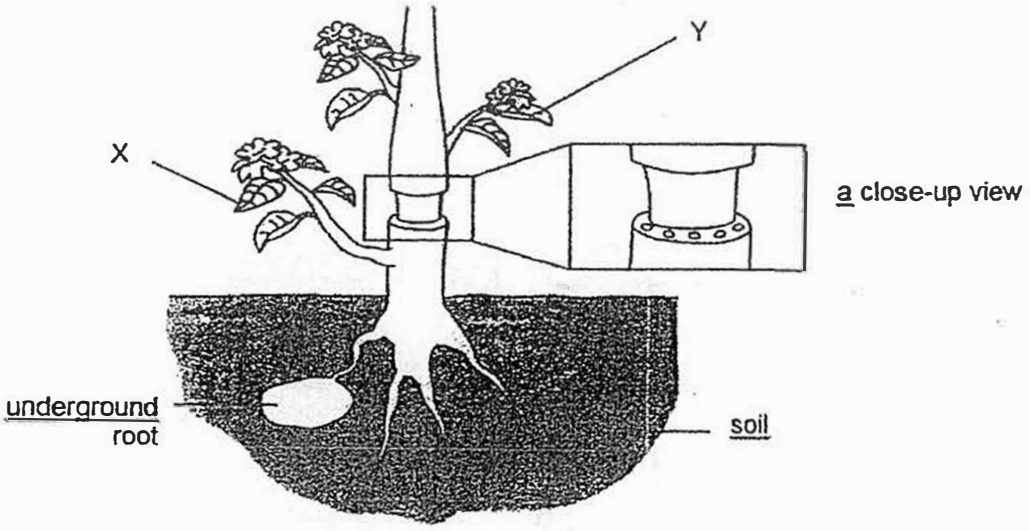
The chart below shows how the organs of the human digestive system are classified.



Based on the diagram and the classification chart above, which one of the following shows the correct heading for Y?

(1) Where digestion takes place.
(2) Where digestion is completed.
(3) Where absorption of water takes place.
(4) Where absorption of digested food takes place.

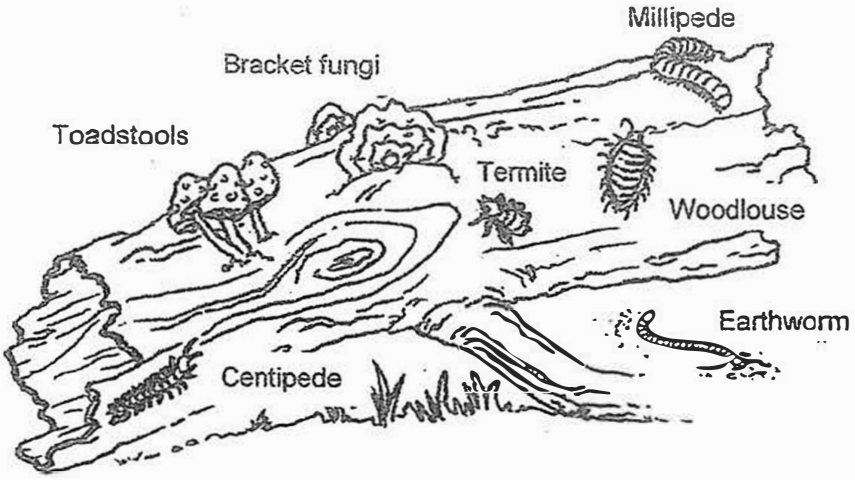
9. An outer ring of a stem from a plant was removed, as shown below. As a result, the food-carrying and water-carrying tubes were removed.

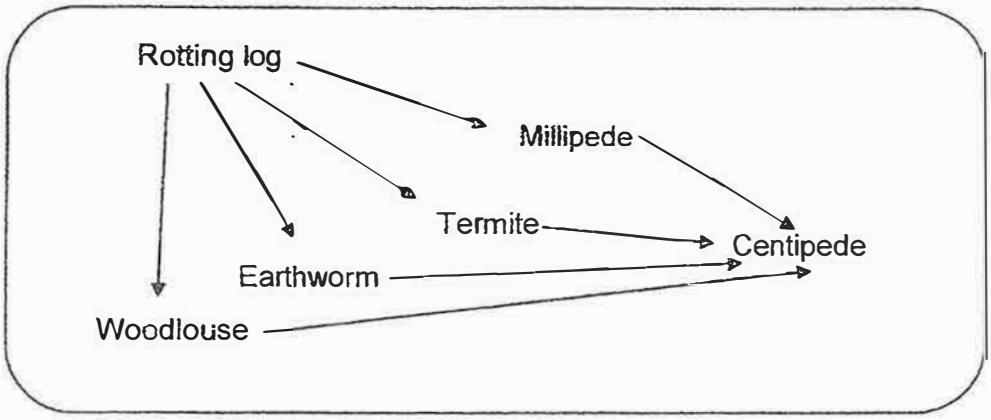


After two weeks, which one of the following correctly describes what would happen to Part X and Y?

	Part X	Part Y
(1)	Wilted	Remained green
(2)	Wilted	Wilted
(3)	Remained green	Remained green
(4)	Remained green	Wilted

10. The diagrams below show a rotting log community and a food web in the same community.





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

A The rotting log is a habitat.
B The termite and centipede are decomposers.
C There is only one carnivore in this community.
D The woodlouse and millipede help speed up decomposition.

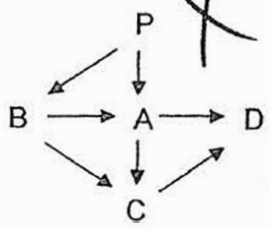
(1) D only
(2) B and C only
(3) A, C and D only
(4) A, B, C and D

11. A, B, C and D are four living organisms in a community. The table below shows the food of these four organisms.

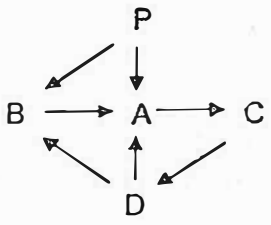
Food Consumer	Food
A	P
B	P and A
C	B and D
D	A and B

Which one of the following food webs is found in this community?

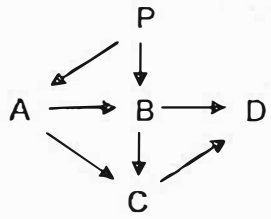
(1)



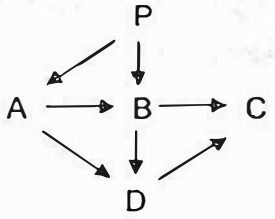
(2)



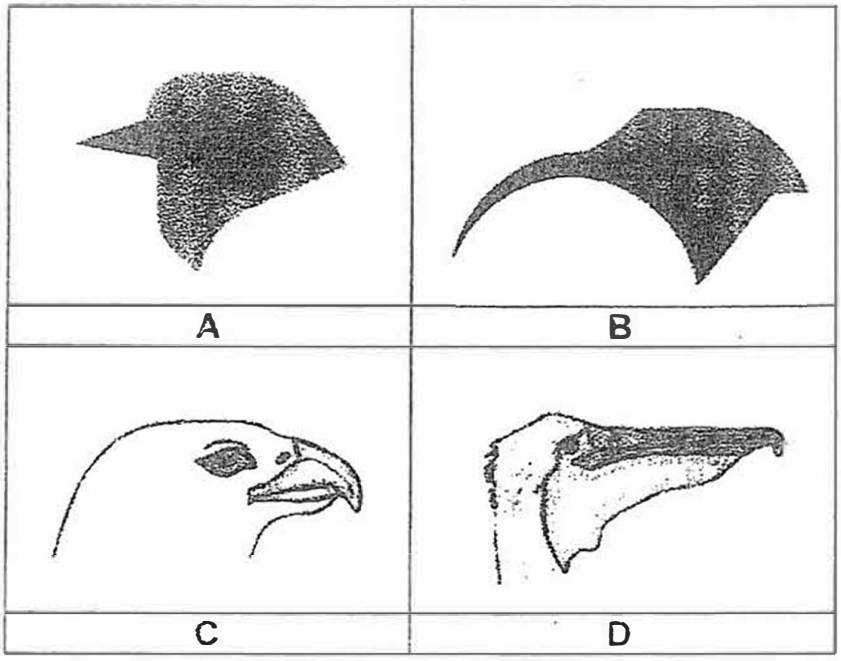
(3)



(4)



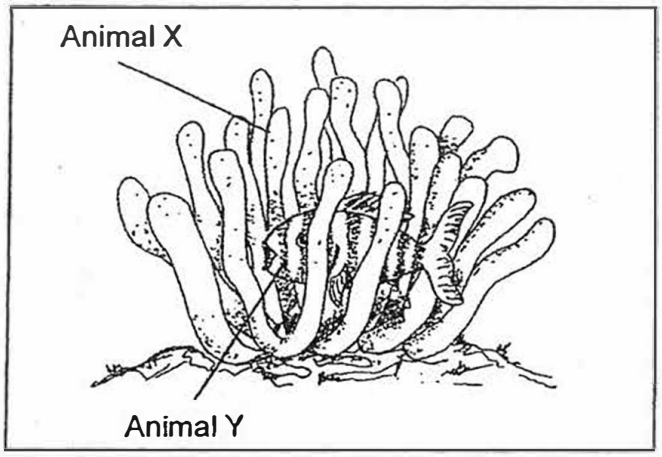
12. The diagrams below show the beaks of four different birds, A, B, C and D. The beaks are different in structures and are adapted to different methods of feeding.



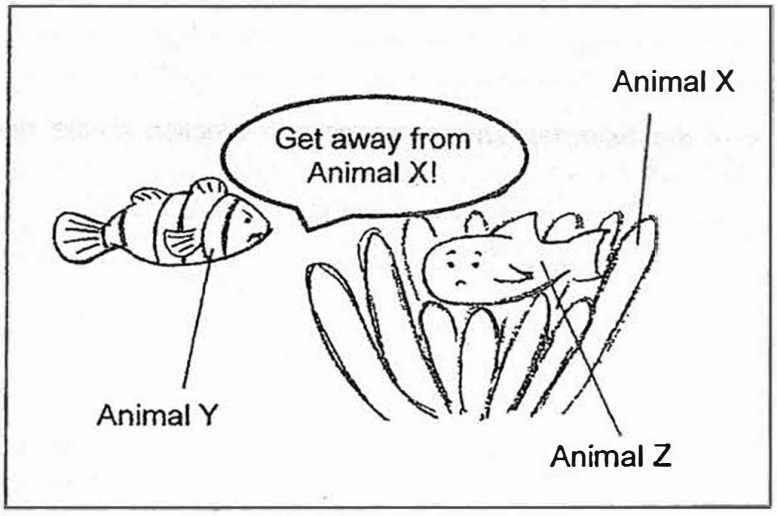
Which one of the following shows the correct function of the beak for birds A, B, C and D?

	A	B	C	D
(1)	Sipping nectar	Tearing flesh	Holding fish caught underwater	Catching insect
(2)	Catching insect	Sipping nectar	Tearing flesh	Holding fish caught underwater
(3)	Sipping nectar	Catching insect	Holding fish caught underwater	Tearing flesh
(4)	Tearing flesh	Sipping nectar	Catching insect	Holding fish caught underwater

13. In the ocean, Animal Y is protected from its predator by the stinging tentacles of Animal X.



Animal Z feeds on Animal X. Animal Y will chase away Animal Z to prevent it from eating Animal X as shown in the diagram below.

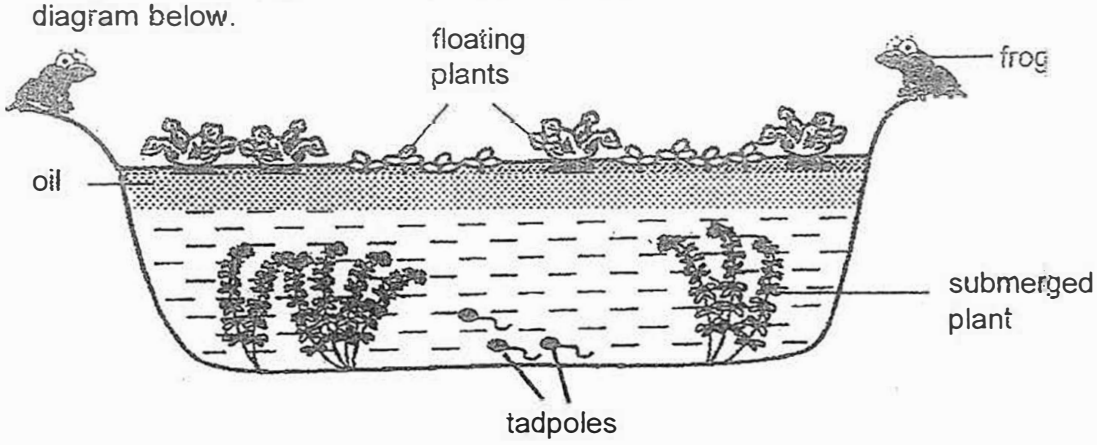


Which of the following statements correctly describe the relationship among Animal X, Animal Y and Animal Z?

A Animal Z feeds on Animal X.
B Animal X protects Animal Y from predators.
C Animal Y helps protect Animal Z from Animal X.
D Animal X and Y help each other to survive in the ocean.

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

14. A layer of cooking oil was poured into the pond as shown in the diagram below.



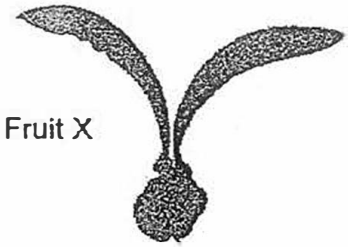
Some frogs were found in the pond community and they lay eggs amongst submerged plants. Their young spend the whole time in the water, while the adults move in and out of the water every day. The adult frogs feed on insects above the water.

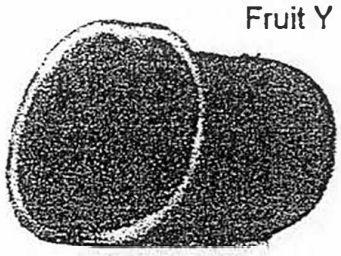
Which of the following statement(s) is/are true?

A There are 5 populations in this community.
B The floating plants will die after some time as they were not able to absorb water through their roots.
C The tadpoles will swim to the surface and breathe in oxygen from the air as there was not enough oxygen in the water.

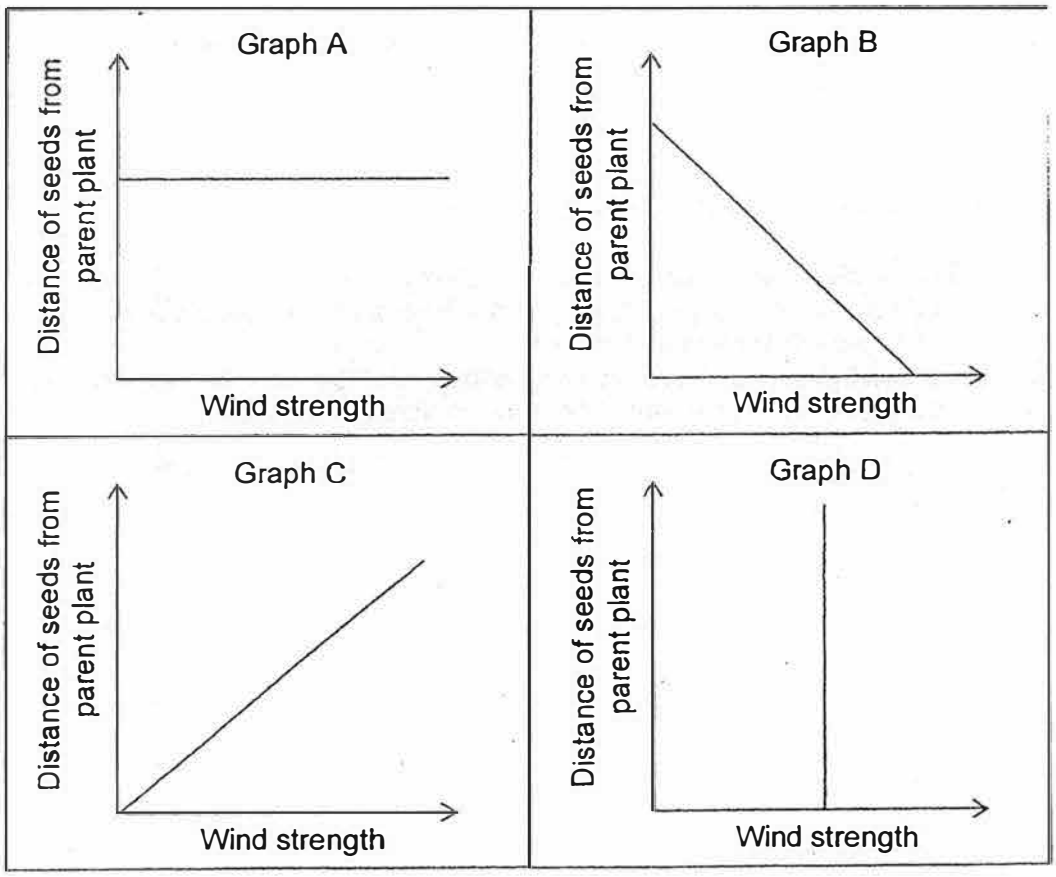
(1) A only
(2) B only
(3) B and C only
(4) A, B and C

15. The diagrams below show Fruit X and Fruit Y.





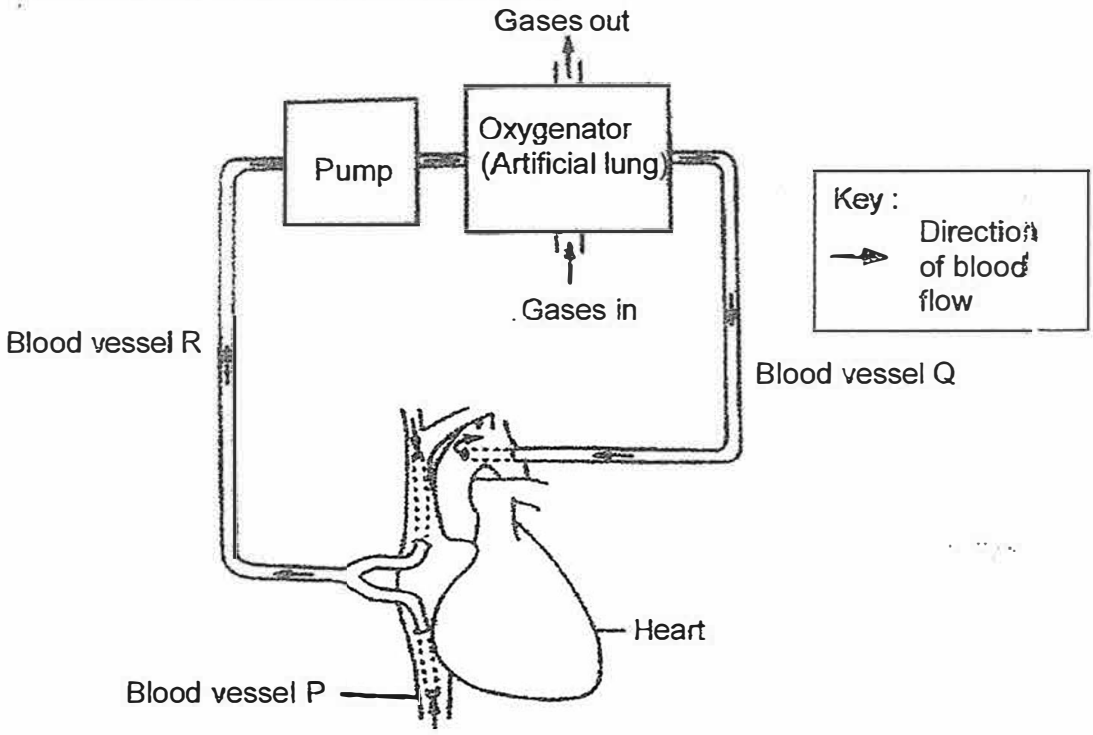
Which of the following graphs best shows how wind strength affects the distance the seeds of Fruit X and Fruit Y are dispersed from their parent plants?



	Fruit X	Fruit Y
(1)	A	B
(2)	A	C
(3)	C	A
(4)	C	D

16. The heart is stopped during an open heart surgery. The heart is also emptied of blood. A heart-lung machine, which mainly consists of a pump and an oxygenator, which is made up of tubes, is used during surgery. Blood is channelled from a certain blood vessel P into the pump and then to the oxygenator, bypassing the heart and lungs of the patient. After passing through the machine, the blood is then returned into blood vessel Q and to all parts of the body.

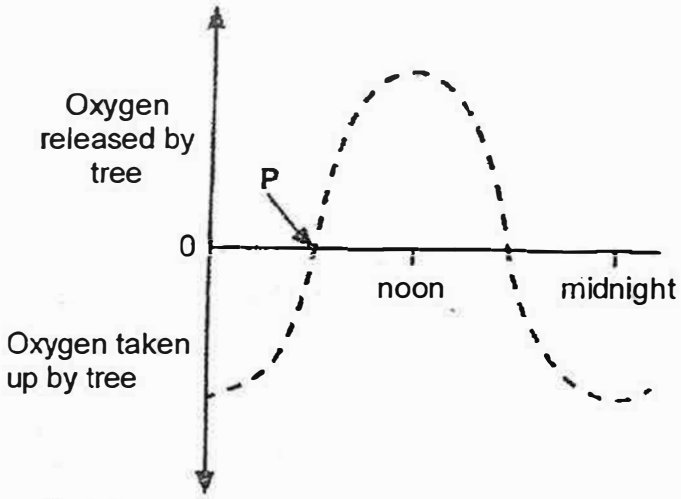
Below is a simplified diagram, which shows the layout of the heart-lung machine and its connection to the heart.



Below is the description of the blood vessels, R and Q. Which one of the following options shows the correct descriptions of the blood vessels in the diagram above?

Option	Description of blood vessel R	Description of blood vessel Q
(1)	Contains lower amount of oxygen than in Q	Contains higher amount of carbon dioxide than in R
(2)	Contains higher amount of carbon dioxide than in Q	Contains higher amount of oxygen than in R
(3)	Contains lower amount of carbon dioxide than in Q	Contains lower amount of oxygen than in R
(4)	Contains the same amount of oxygen as Q	Contains the same amount of carbon dioxide as R

17. The graph below shows the amount of oxygen released and taken up by a tree during a 24-hour period.

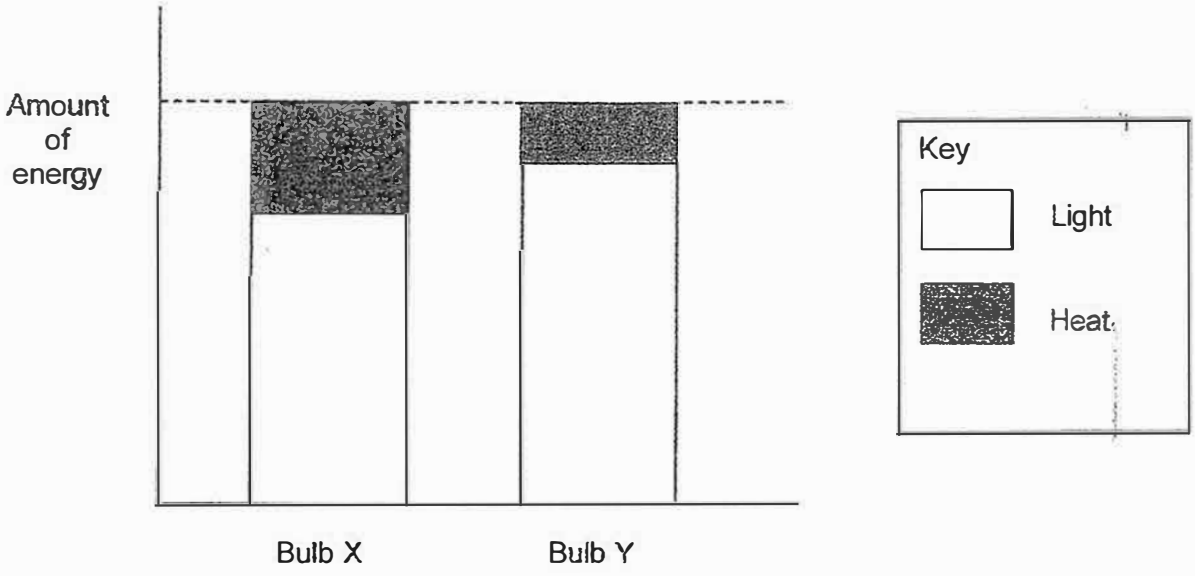


Which one of the following statements best describes the situation at point P?

(1) Respiration begins.
(2) Photosynthesis stops.
(3) The amount of oxygen taken in for respiration is equal to the amount of oxygen produced during photosynthesis.
(4) The amount of oxygen taken in for respiration is greater than the amount of oxygen given out during photosynthesis.

18. A group of pupils conducted an investigation with two identical light bulbs, X and Y. A heat sensor and a light sensor were used to measure the amount of heat and light given out by the two light bulbs.

The graph below shows the amount of heat and light given out by the two light bulbs.

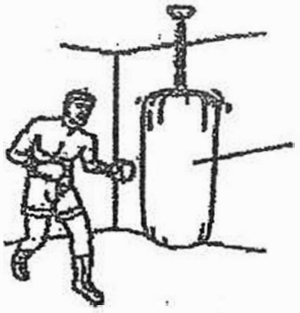


Based on the graph above, which of the following statements are definitely true about light bulbs X and Y?

A Bulb Y will last longer than Bulb X.
B Bulb Y is more energy efficient than Bulb X.
C Electrical energy is converted to more unwanted energy in Bulb X than Bulb Y.
D Bulb X will be hotter than Bulb Y when the same amount of electricity is supplied.

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

19. A punching bag is a sturdy bag designed to be repeatedly punched.



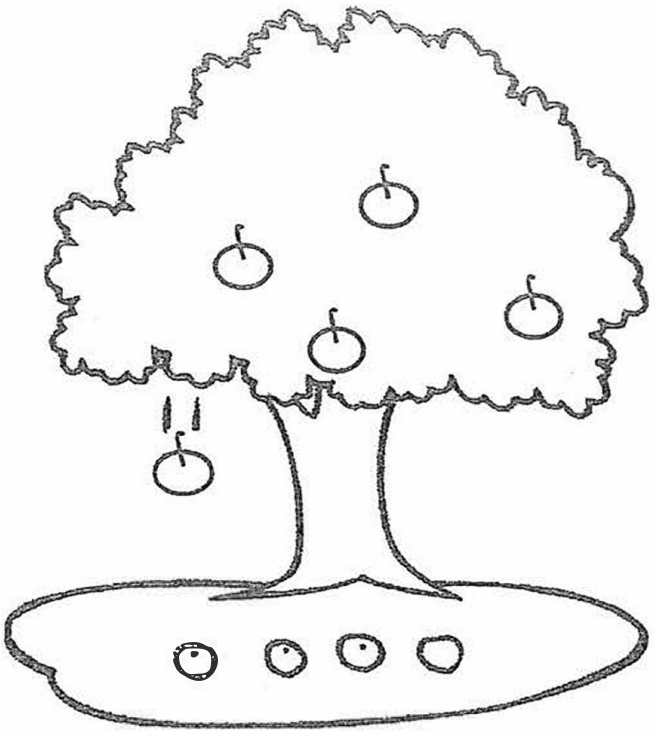
The table below shows properties of four materials, W, X, Y and Z. A tick (✓) shows that the material has the property.

Property	**Material**			
	W	X	Y	Z
Strong	✓		✓	
Flexible	✓	✓		
Transparent		✓		✓
Ability to float			✓	

Which material is most suitable for making the punching bag?

(1) W
(2) X
(3) Y
(4) Z

20. Fruit will sometimes fall from the tree when it ripens.

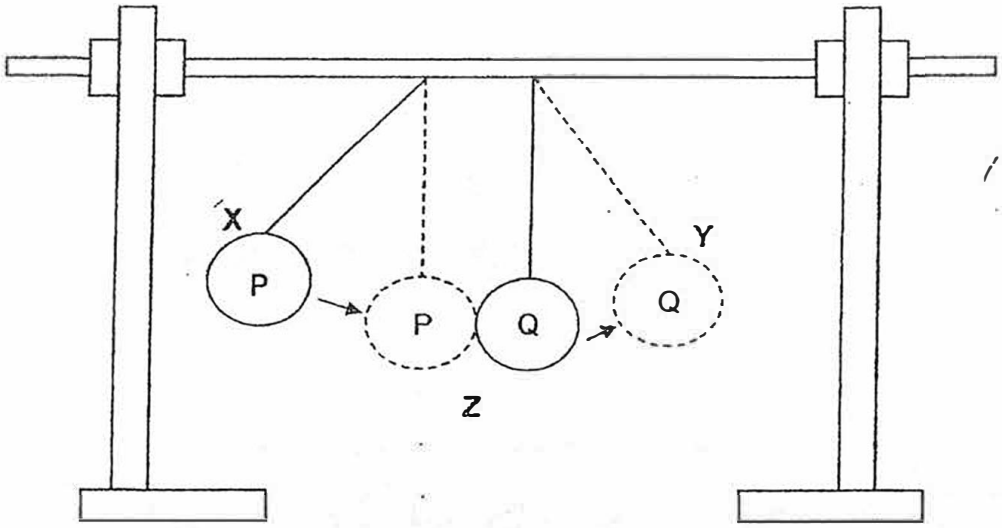


Which forces acted on the fruit as it fell from the tree?

A pushing force
B air resistance
C gravitational force
D elastic spring force

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

21. Wendy made an observation of two identical metallic spheres, P and Q, each hung by a string from a retort stand. Sphere P was moved to position X and released. When Sphere P hit Sphere Q, Sphere Q swung up to position Y.

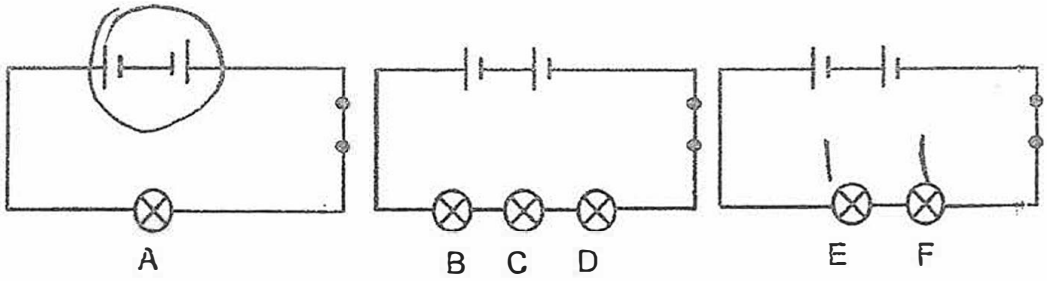


Which of the following statement(s) about the spheres at their different positions is/are correct?

A Sphere P transferred its energy to Sphere Q when it struck Sphere Q at position Z.
B The gravitational force acting on Sphere Q increased as it moved from position Z to position Y.
C The amount of kinetic energy possessed by Sphere Q decreased as it moved from position Z towards position Y.
D The amount of gravitational potential energy possessed by Sphere P decreased as it moved from position X towards position Z.

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

22. Identical switches, bulbs and dry cells are used in the circuits below.



One of the circuit will not light up. Below are some statements about the bulbs?

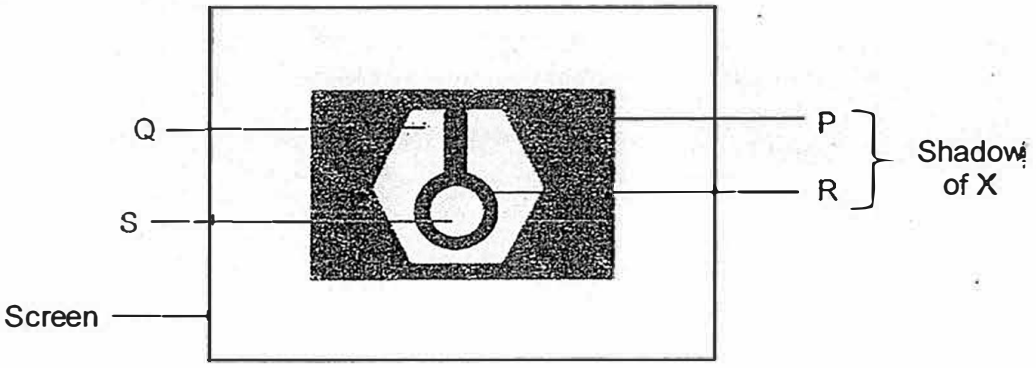
A Bulb A is the brightest.
B Bulb E is brighter than Bulb C.
C Bulbs E and F have the same brightness.
D Bulbs B, C and D have the same brightness.

Which of the above statement(s) is/are true?

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

23. The set-up below shows light shining on object X.

The shadow cast on the screen is shown below.

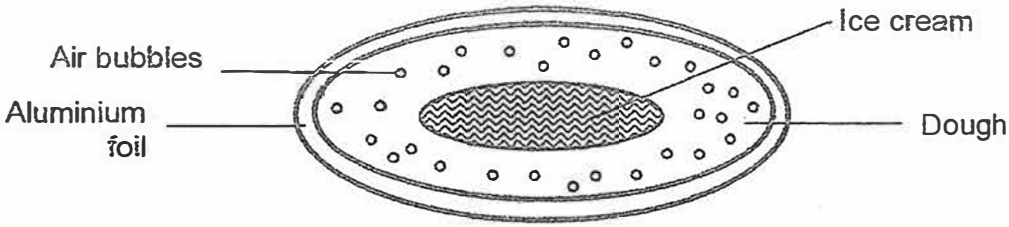


What conclusions could you draw from the observation?

A Object X is made of different types of materials.
B Part R blocked the path of light from the torch.
C Part S allowed more light to pass through than part P.
D Part P allowed more light to pass through than Q.

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

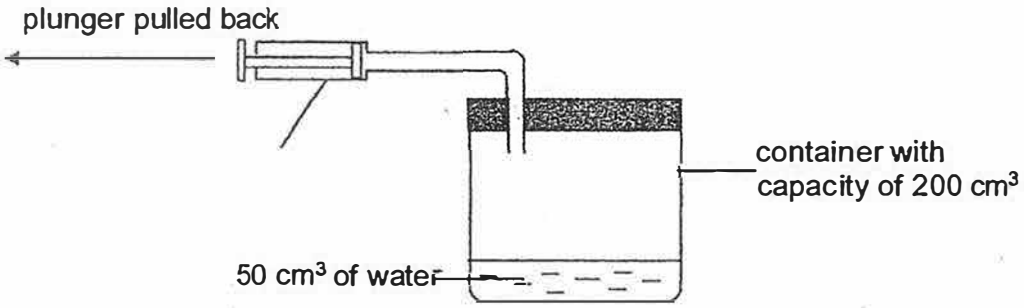
24. Fried ice cream is made by wrapping ice cream with a layer of bread dough. It is then wrapped with a layer of aluminium foil and fried in hot oil till the outer layer of dough is golden brown.



Why does the ice cream not melt?

(1) Air is a good conductor of heat and conducts the heat away from the ice cream quickly.
(2) Air is a poor conductor of heat and slows down the heat gained by the ice cream.
(3) The aluminium foil is a good conductor of heat and conducts the heat away from the ice cream quickly.
(4) The aluminium foil is a poor conductor of heat and slows down the heat gained by the ice cream.

25 The diagram below shows a pump which was fitted to a container with a capacity of 200 cm^3.

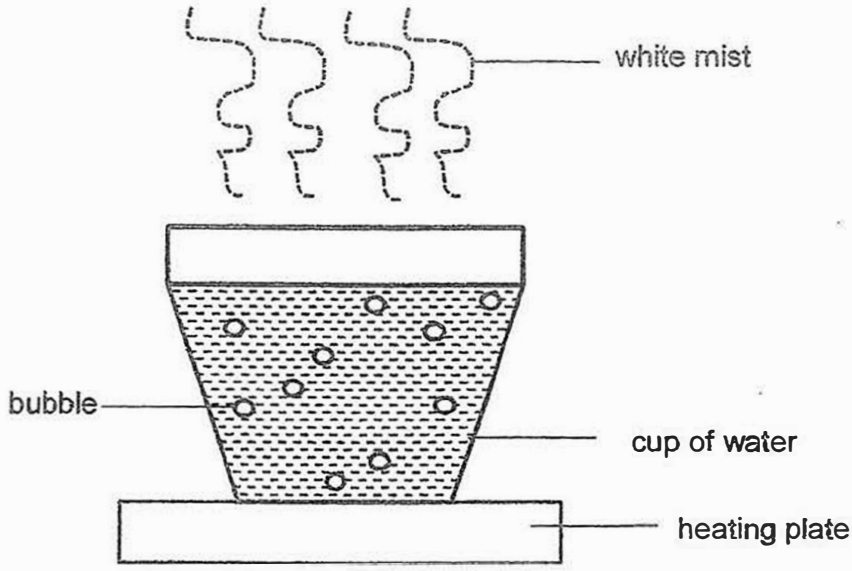


Each time the plunger of the pump is pulled back completely, 20 cm^3 of air would be drawn out of the container.

Which one of the following shows the correct volume of air and water in the container after the plunger is pulled back completely once?

	Volume of air (cm^3)	**Volume of water (cm^3)**
(1)	130	70
(2)	130	50
(3)	150	50
(4)	170	30

26. A group of pupils were heating a cup of water over a heating plate as shown in the diagram below.



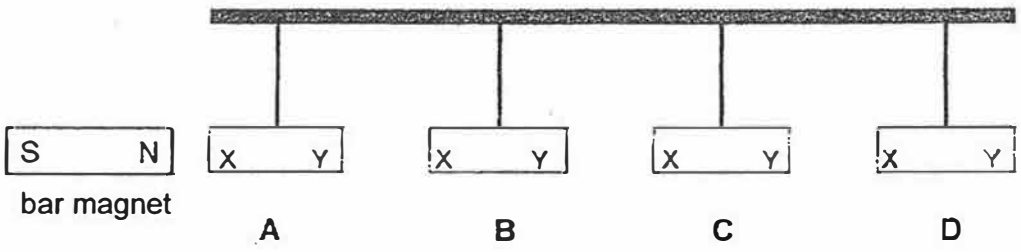
Some of the pupils made the following statements:

Tom	The white mist is steam.
Ali	There is a decrease in volume of water as the water vapour has evaporated.
Jane	When water boils and bubbles are observed in the water, the bubbles contain only oxygen.

Which of the above statement(s) made by the pupils is/are **correct**?

(1) Tom only
(2) Jane and Tom only
(3) Tom, Ali and Jane only
(4) None of the above

27. Four metal bars, A, B, C and D, were hung from a rod as shown in the diagram below. The two ends of each metal bar were marked X and Y. The north pole of a bar magnet was brought near X and then Y of each metal bar respectively.



The table shows the observations made during the experiment.

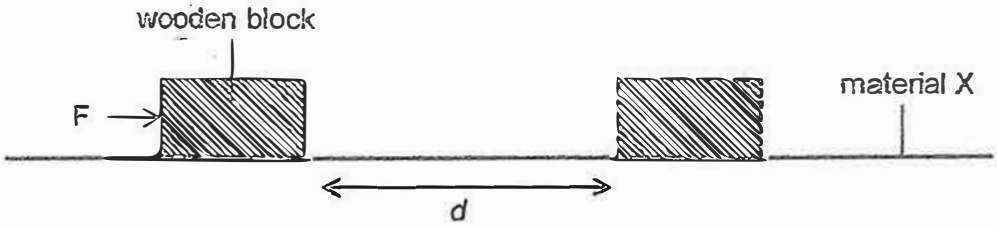
Metal Bar	Observation	
	North Pole and X	North Pole and Y
A	Repelled	Attracted
B	Attracted	Attracted
C	Neither attracted nor repelled	Neither attracted nor repelled
D	Attracted	Repelled

Which of the following statement(s) is/are **incorrect**?

A Bar B is a magnet.
B Bar C is the weakest magnet.
C Two of the metal bars are magnets.
D All the metal bars are made of magnetic materials.

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

28. Susan conducted an experiment. She placed a wooden block on a flat surface made of material X. She then applied a force, F, to give the wooden block a push. The block moved forward and stopped at a distance *d* as shown.



Susan repeated the experiment by adding item A and item B respectively onto material X. The same force, F, was used to push the wooden block. She recorded her results in the table below.

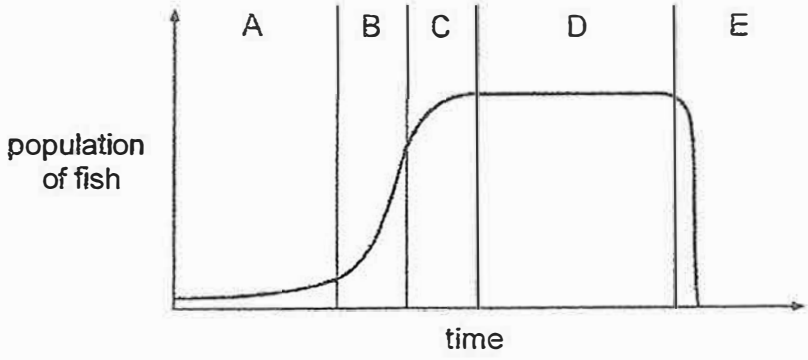
Item added to the surface of material X	Distance *d* / cm
None	10
A	5
B	15

Based on her results, what could item A and item B be?

	Item A	Item B
(1)	oil	sand grains
(2)	sandpaper	oil
(3)	water	oil
(4)	sand grains	sandpaper

Section B: (44 marks)
Write your answers to questions 29 to 41.
The number of marks available is shown in brackets [ ] at the end of each question or part question.

29. The graph below shows how a population of fish in a lake changed over a period of time.



(a) In which time interval, A, B, C, D or E, did the population of fish increase the most quickly? [1]

(b) What does part D of the graph show about the birth rate and death rate of the fish? [1]

(c) Part E of the graph shows a drastic drop in the population of the fish? Give two reasons for the decrease in population. [2]

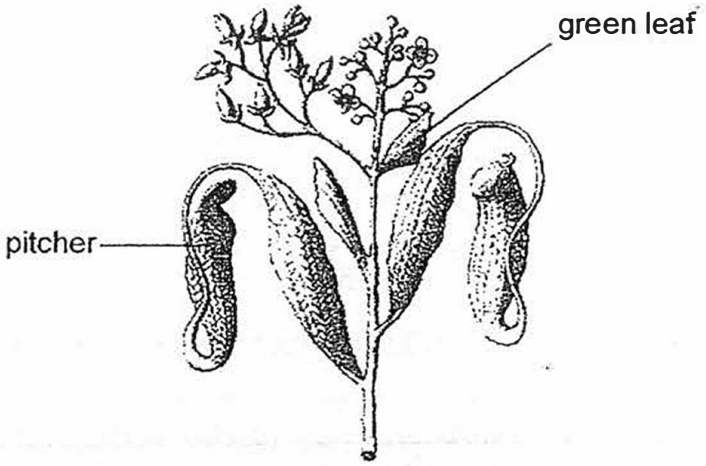
Score	4

30. Plants need nutrients for healthy growth.

(a) Name the plant part that absorbs nutrients from the soil. [1]

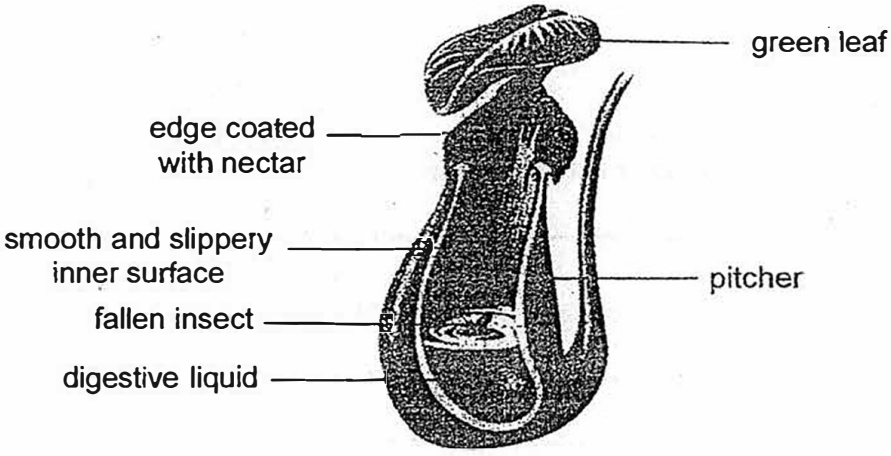
_____

The picture below shows a pitcher plant.



Pitcher plants have two types of leaves, green leaves and pitchers.
Pitcher plants get nutrients from insects. They use the digestive liquid stored in their pitchers to 'digest' insects.

The picture below shows the cross-section of a pitcher.



The plant produces nectar at the edge of the pitcher.
The inner surface of the pitcher is very smooth and slippery.
At the bottom of the pitcher, digestive liquid can be found.

Score	1

(b) Apart from the digestive liquid, state 2 other adaptations of the pitcher plant based on the given information and explain how the adaptations help it to get nutrients. [2]

Adaptation 1:

Explanation:

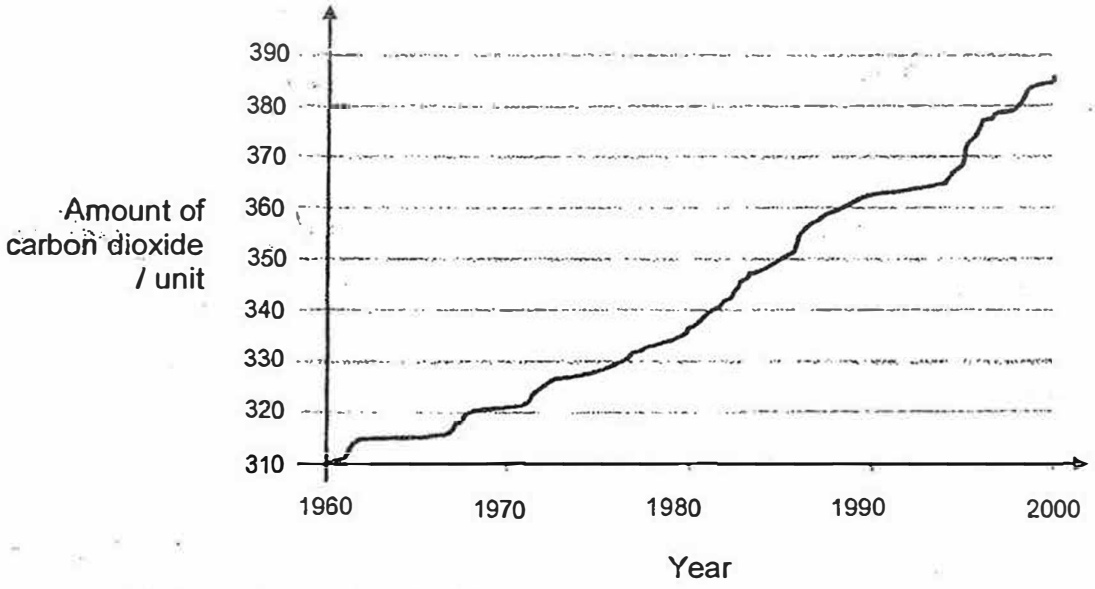
Adaptation 2:

Explanation:

(c) The pitcher plant has green leaves too. Explain how the green leaves help the plant to survive? [1]

Score	
	3

31. The graph below shows how the amount of carbon dioxide in the air in City X has changed over the years from 1960 to 2000.



(a) Based on the graph above, state the relationship between the years and the amount of carbon dioxide present in the air. [1]

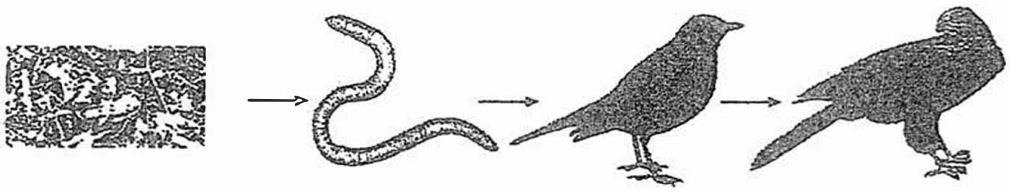
(b) Explain with the data provided how the change in the amount of carbon dioxide in the air contributes to global warming. [2]

(c) Suggest one way how man can help to reduce the amount of carbon dioxide released by cars in a city. [1]

Score	
	4

32. Mining activities from a copper mine can have a negative impact on the environment. It may release harmful substances such as copper into the soil. When earthworms eat this soil they change from brown to bright yellow colour.

Earthworms are part of the food chain shown below.



soil containing plant remains → earthworm → blackbird → sparrowhawk

(a) In the food chain above, sparrowhawks are found to have copper in their bodies. Explain how this happened. [1]

_____

_____

_____

(b) Blackbirds are more likely to catch bright yellow earthworms than brown earthworms. Explain why. [1]

_____

_____

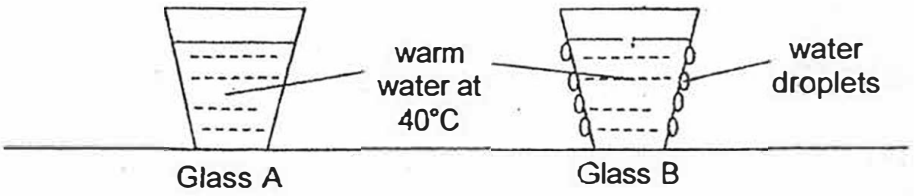
_____

Score	2

33. Sam conducted an experiment using the set-ups below. He placed two identical glasses, A and B, in a room with a temperature of 27°C.

He poured the same amount of warm water with a temperature of 40°C into the 2 glasses. He then sprayed some tap water onto the surface of glass B.

He measured the temperature of the water in the two glasses after 15 minutes.



(a) In which glass, A or B, would the temperature of the water be lower after 15 minutes? [1]

_____

(b) Explain your answer for part (a). [1]

_____

_____

(c) Koalas do not sweat but they lick themselves on hot days.

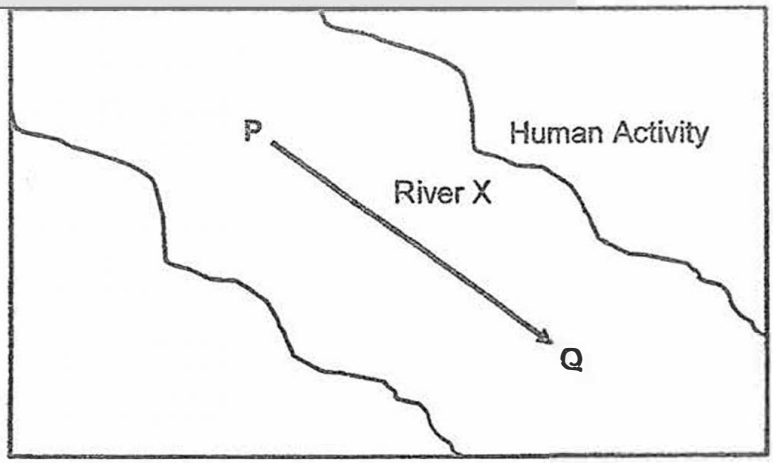
With reference to the experiment above, explain how the behavioural adaptation of licking itself help it to survive in hot weather. [2]

_____

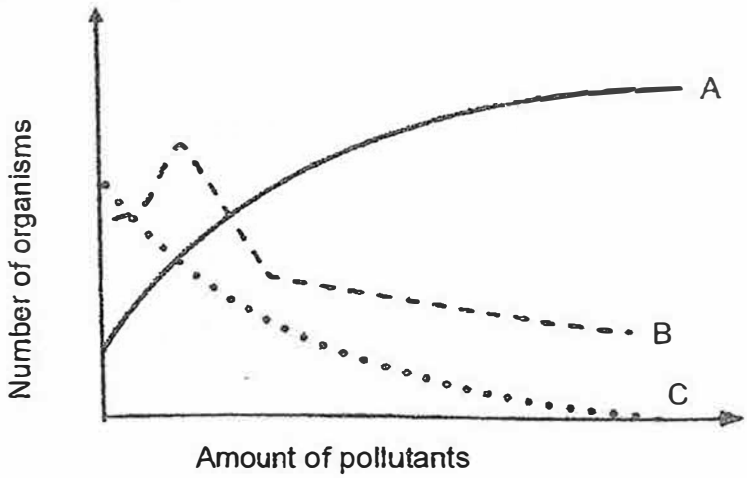
_____

Score	/ 4

34. Equal amount of water samples were collected from various points of River X between positions P and Q. The arrow in the diagram shows the direction that the river is flowing. The amount of pollutants and the number of organisms in the water samples were measured.



The graph below shows the relationship between the amount of pollutants and the number of organisms A, B and C.

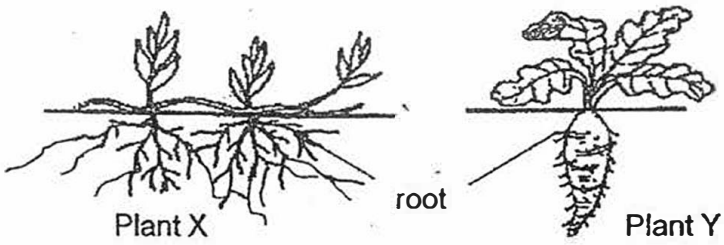


(a) Which organism, A, B or C, is most harmed by the amount of pollutants in River X? Give a reason. [1]

(b) Describe a human activity that could have caused the increase in the level of pollutants in River X. [1]

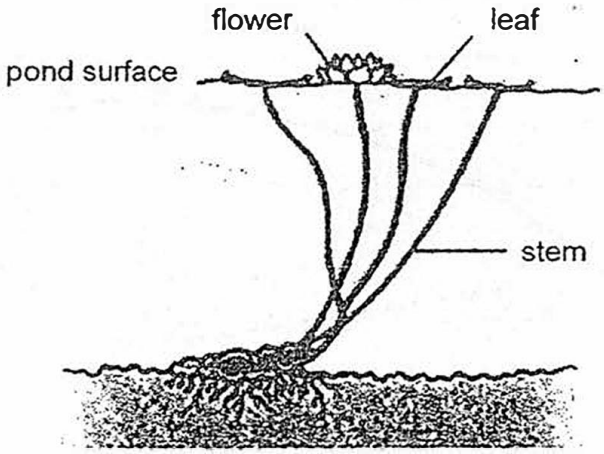
Score 2

35. The diagram below shows two plants with different types of roots.



(a) A farmer chose to grow Plant X on the slope near his plantation to prevent landslides during heavy storms. Give a reason for his choice. [1]

The diagram below shows a water lily plant.

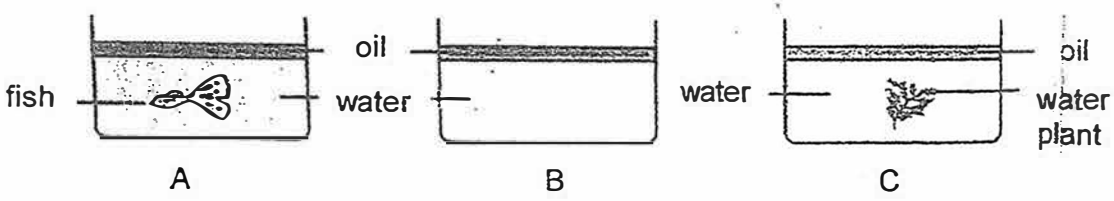


(b) Water lilies do not grow well in fast moving water. Suggest a reason for this. [1]

(c) Water lilies produce large yellow flowers. The flowers float on the surface of the pond. Suggest one way these brightly-coloured floating flowers help the water lily to reproduce. [1]

Score	3

36. 3 identical beakers, A, B and C, containing an equal volume of water were set up as shown below. A small fish was placed in beaker A and a water plant in beaker C. The water surface of the three beakers was covered with a layer of oil. The beakers were kept in a dark room for three hours.

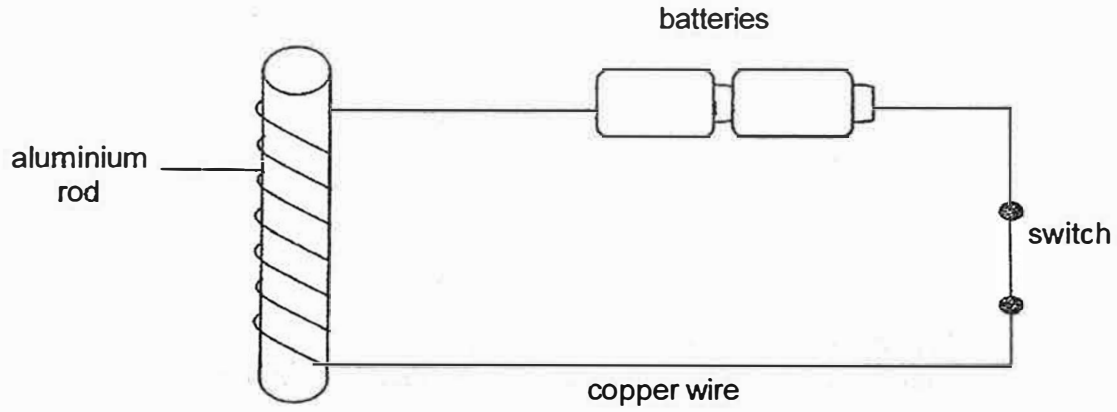


(a) What is the change in the volume of oxygen in set-ups A and C before and after it was kept in the dark room for 3 hours? Explain your answer [2]

(b) Explain the purpose of set-up B? [1]

Score	3

37. Xiao Lan wanted to make an electromagnet from an aluminium roc, batteries, copper wire and a switch. She set up a circuit as shown in the diagram below.



After closing the switch, she brought some steel paper clips near the aluminium rod. The paper clips were not attracted to the rod.

(a) Explain why the paper clips were not attracted to the aluminium rod. [1]

(b) Her father told her that she had made a mistake in her set-up. What should Xiao Lan do to her set-up to make it work? [1]

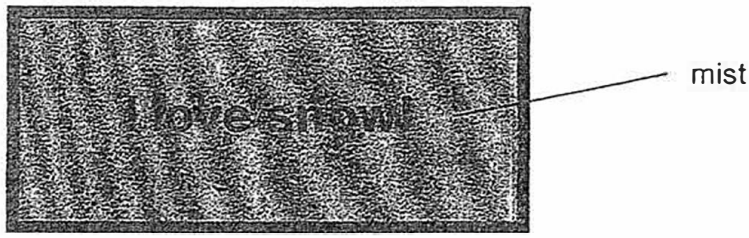
(c) In scrap yards, electromagnets are used to lift heavy metals. State the advantage of using electromagnet over permanent magnet for this job. [1]

Score	
	3

38. Lily went to Japan for a winter holiday with her family. She felt cold as she queued to go up the coach at the open air carpark. Fortunately, there was a heater installed in the coach. While she was travelling in a coach from one town to another, she observed that mist was formed on the inner surface of the window in the coach.

(a) Explain how the mist was formed on the inner surface of the window. [2]

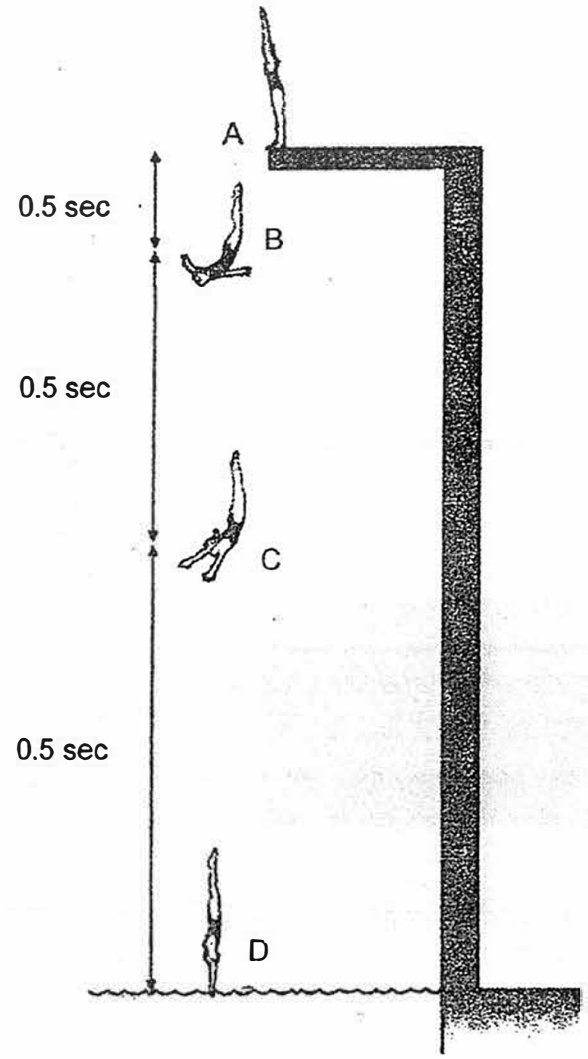
Lily drew the following words "I love snow!" on the wet window with her index finger and fell asleep.



(b) After a while, Lily realized that the words were missing though nobody wiped it away. Explain how it happened. [1]

Score	3

39. The diagram below shows Kate diving into a swimming pool.



(a) Why does Kate have no kinetic energy at A? [1]

_____

_____

Score	1

(b) Kate took 0.5 second to fall from A to B and from B to C and from C to D as shown in the diagram. With the given information, how can you tell that her speed was the fastest when she was falling from C to D? [1]

(c) State the force that causes Kate to speed up as she falls. [1]

(d) Explain, in terms of energy conversion, why Kate's speed increases when she falls. [1]

(e) When Kate enters the water, she slows down. Explain, in terms of energy conversion, why she slows down. [1]

Score	/4

40. Peter placed a paper cup and a metal cup of identical size on the kitchen table for an hour. The room temperature was 29 °C.

Sally came in and held the two cups in her hands and felt that the metal cup was colder than the paper cup.

(a) What is the likely temperature of the paper cup and metal cup when she first held the cups in her hands? [1]

(i) Temperature of the metal cup: _____

(ii) Temperature of the paper cup : _____

(b) Why does the metal cup feel colder than the paper cup? [2]

_____

_____

_____

(c) Why must the cups be of identical size to ensure a fair-test? [1]

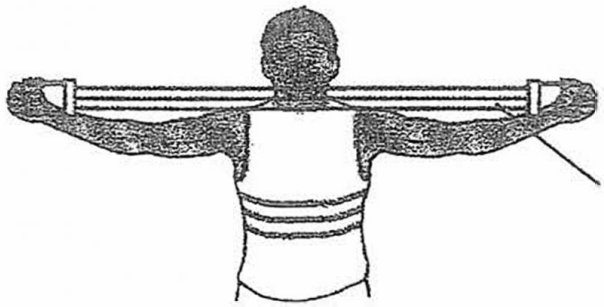
_____

_____

_____

Score	4

41. Five boys decided to have a competition to find out who was the strongest. They had three types of chest expander namely, 'Mr Universe', 'Muscle Man' and 'Champion'. They took turns to see how much they could expand each of the chest expanders.



Their results are shown below.

Name	Chest expander /cm		
	Mr Universe	Muscle Man	Champion
Darian	26	64	32
Julian	36	72	42
Ahmad	36	72	40
Hafiz	26	64	33
Peter	20	57	26

(a) State the force that is needed to increase the length of the chest expander? [1]

_____

(b) Using the data provided in the table, arrange the strength of the five boys in descending order. [1]

_____

_____

(c) Which chest expander is the most suitable in differentiating their strength? Why? [1]

_____

_____

_____

- END OF PAPER -

Score	
	3

YEAR : 2017
LEVEL : PRIMARY 6
SCHOOL : NAN HUA PRIMARY
SUBJECT : SCIENCE
TERM : PRELIMINARY EXAMINATION

Booklet A

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

Prelim 2017 P6 Discussions

Name :_____ Class:P6_____

29a	B.	
29b	The birth rate of the fish is equal to the death rate of the fish.	-Both the birth rate and death rate remain the same(X) Remain the same old mean dn change since part C. means birth rate more than death rate.
29c	There are new predators in the lake The lake dried up There is no more food for the fish There is disease-causing organisms which killed the fish	-Natural disaster/ Flooding /Fire Tsunami [X] Too general. Flooding is more water how it affect? Tsunami -Conditions/habitat became unfavourable [X] Did not _____
30a	Roots / root hairs	
30b	Adaptation 1 : Nectar Explanation : To attract insects Adaptation 2 : Smooth and slippery inner surface of the pitcher Explanation : To prevent insects from crawling out because insects will slip and fall into the digestive liquid	-To prevent insects from escaping easily [X] Does _____ too general

30c	The chlorophyll in the green leaves trap light to make food for the plant.	-The green leaves trap light to make food for the plant when there are no insects. misconception: Pupils thought that the nutrients from the digested insects is food for the plant. [X]
31a.	As the years increases/passes, the amount of carbon dioxide increases.	
31b.	An increase in carbon dioxide will trap more heat on earth. With more heat trapped on Earth, the temperature increased, also known as global warming	- Carbon dioxide will trap more heat on Earth. [X] More carbon dioxide ....more heat....temperature increase (comparative all the way). Take note of buddy Misconception: -When the amount of carbon dioxide in the air increases, it thins the ozone layer which causes the temperature to rise [X] Ozone layer thinning is cause by _____ (chlorofluro carbon) eg from hairsprays.
31c	Carpooling / taking public transport / riding a bicycle instead of driving a car / electric car instead of driving cars that uses petrol and diesel fuel/ take buses	- Buses /bicycles [X] Not clear

32a	The earthworms feed on the plant remains and get copper in their bodies. The blackbirds feed on the earthworms and copper is transfer to the blackbirds bodies. The copper is then passed on from the blackbirds to the sparrowhawks when sparrowhawks feed on the blackbirds.	Short sentences. Ea name Don't use pronouns. Not clear since so many animals in the qn. -The earthworm eats the soil, it will have copper in their body. This will pass down to the blackbird then to the sparrowhawk. [X] (Dn mention that copper is passed on when sparrowhawk eats blackbird) -After the earthworm eat the soil with copper, the blackbird will eat the earthworm. The sparrowhawk will then eat the Blackbird. Thus the copper is found in the sparrowhawk. [X] (Dn show the transfer of copper to blackbird and sparrowhawk)
32b	The yellow earthworms are more easily spotted as it is not able to blend in/camouflage with its surroundings, unlike the brown earthworms.	- The brown earthworm are less easily spotted as it is able to camouflage with the brown soil. This answer is _____ -The brown earthworm is the same colour as the soil. [X] (Not clear _____
33a	Glass B	

Nam Hwa prelim

33b	The water droplets gained heat from the warm water in Glass B to evaporate. Other acceptable answers: The water droplets take the heat away from the warm water	-Many dn know that there is heat transfer during the process of evaporation. - The water droplets use heat from the warm water [X]
33c	When it licks itself, saliva will gain heat from the koala's body and evaporate, thereby koala lose heat and cool down on hot days. Do not penalize if pupils mentioned water from the koala instead of saliva. Award Marking Point 2 only when Marking Point 1 is present. Other acceptable answers: Saliva takes away/ draws heat from the koala's body and evaporate. Evaporating water will gain heat from the koala's body Moist/spit to replace saliva Prevents them from overheating	-The saliva gained heat from the surrounding air and evaporated -Many missing heat is used for evaporation. Missing evaporation. -Missing cool down.
34a	Organism C as it has the lowest number of organism present as the amount of pollutant increase.	-To include _____and _____variables
34b	Farmers use fertilizers and pesticides in farms, these fertilisers and pesticides flow into the river and cause pollution Or Human dump wastes into the river.	- Fertilisers are used in the farm. Must mention into river. Farm is still _____, which is asked in qn

35a	The roots of Plant X are **more** widespread to **bind/hold the soil together better** to prevent soil erosion / to anchor the plant in the soil.	-Must have **comparison.** Because in qn "A farmer chose….. -wider roots….[X]
35b.	**The roots could be pulled out, thereby damaging the plant.** **OR** **The plant will be uprooted.**	
35c.	**They will be more easily seen** by bees/ insects/ animals and attract them to **help** pollinate the flowers . OR **Increase chances of pollinators** pollinating the flowers.	-More …to pollinate **plant**….. [X]
36a.	There will be a decrease in the amount of oxygen in both set-up A and C as both the fish and water plant take in oxygen to respire.	Able to identify the appropriate process that is occurring using the data provided
36b.	**It act as a control to compare and confirm that oxygen is taken in by living things.** OR	

	It acts as a control to compare and confirm that the decrease in the volume of oxygen in the set-ups is due to the living things taking in the oxygen .	
37a.	Aluminum rod is a non-magnetic material therefore it cannot be made into an electromagnet.	
37b.	She should change the rod to a steel or iron.	- She should change the rod to a magnetic material. Write exactly _____ - Change to a metal rod. [X] Metal can be aluminum rod.
37c.	The electromagnet can lose its magnetism/demagnetise more easily than permanent magnet to drop the metals OR The strength of the electromagnet can be controlled unlike the permanent magnet. OR It is easier for electromagnet to drop heavy metals by switching the circuit off compared to a permanent magnet.	- Using electromagnets, you can drop the heavy metals by turning off the switch [X] No comparison with permanent magnet.

38a	Warmer water vapour in the surrounding air in the coach touches the cooler surface of the window. The water vapour lost heat to the window and condenses to form water droplets.	
38b	The water droplets/mist gain heat from the surroundings and evaporated.	
39a.	She was not moving / stationary	- She has not (started) diving / has not jumped Unclear
39b	For the same amount of time, Kate travelled the longest distance from C to D.	
39c	Gravity / Weight / Gravitational force	
39d	More of her gravitational potential energy was converted to kinetic energy.	- GPE converted to more KE [X] -Use conversion arrows
39e	Some of her kinetic energy is converted to heat and sound energy when she enters the water.	

Nan Hua prelim.

40a	(i) 29°C (iii) 29°C		Both must be room temperature. Why?
40b	Metal is a better conductor of heat than paper. Metal will conduct heat faster from the hand to surrounding air. Thus, the hand will feel colder.		
40c	To ensure that the amount of heat conducted away from the hand is only due to the type of material and not the size of the cups. OR So that the size of the cups will not affect the amount of heat conducted away from the hand		
41a	Pulling force.		Elastic force / elastic spring force[X]
41b.	Julian, Ahmad, Hafiz, Darian, Peter		
41c.	Champion. As it is able to show a difference in the length stretched by Julian and Ahmad as compared to the other two chest expander which shows the same values. OR The length the boys can pull for Champion is all different.		

Notes :

30. Pitcher plant found in areas where the soil is deficient in nitrogen. So to overcome the nitrogen deficiency they trap insects because insects act as nitrogen source for the plants.
They still make food like any other plants whether there is insects or not.

9

END