



NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 2 2011
PRIMARY FIVE
SCIENCE

Name : _____ ()

Class : Primary 5/

Date : 25 August 2011

Duration : 1 hr 30 min

MARKS	
Sect A:	/ 40
Sect B:	/ 40
Total :	/ 80

Parent's Signature : _____

Section A: (20 x 2marks = 40marks)

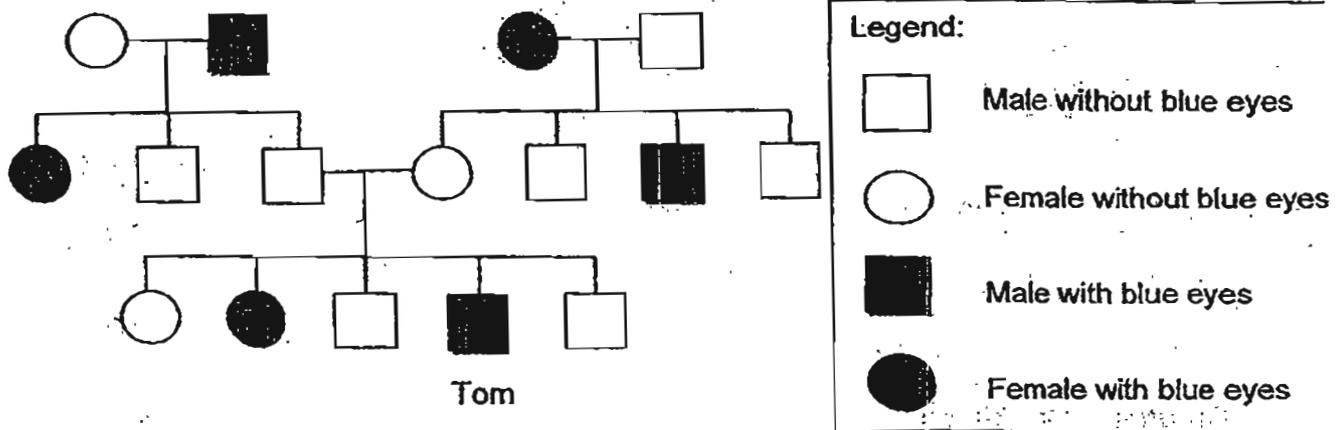
For each question from 1 to 20, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Which of the following statement(s) about the water cycle is/are true?

- A The water cycle can occur in the absence of ~~presence of~~ heat.
- B The water cycle ensures a continuous supply of freshwater for living things.
- C The water cycle involves the processes of evaporation and condensation.

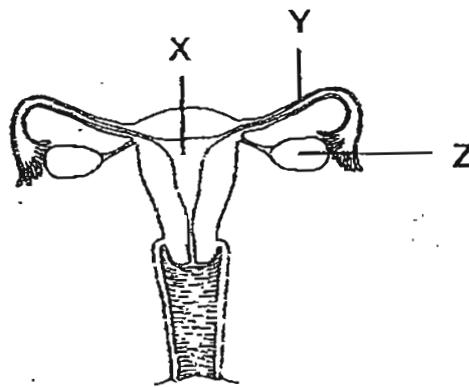
- A only
- B only
- B and C only
- A, B and C

2. The family tree below shows the inheritance of blue eyes in Tom's family.



Based on the family tree above, which one of the following statements is likely to be true?

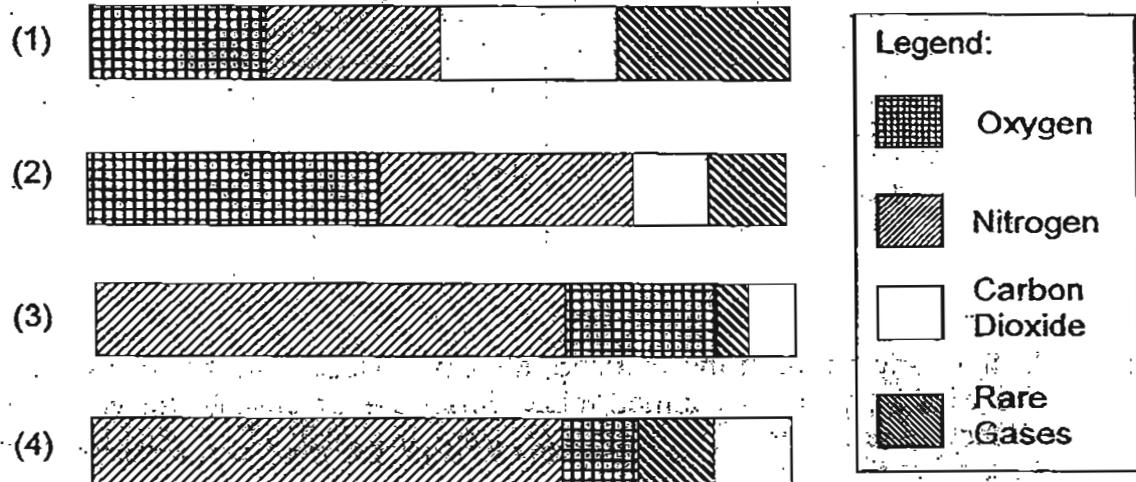
- (1) There are 2 families in each generation.
 - (2) Females are more likely to have blue eyes.
 - (3) Tom inherited his blue eyes from his grandparents through his parents.
 - (4) At least one parent must have blue eyes for the child to inherit blue eyes.
3. The diagram below shows parts of the female human reproductive system labelled, X, Y and Z.



Which one of the following statements is true of the system shown above?

- (1) The egg travels from Y to Z.
- (2) A fertilized egg is released from Z every month.
- (3) The sperm fuses with the egg at X during fertilization.
- (4) The foetus develops at X after the sperm fuses with the egg.

4. Air is a mixture of oxygen, nitrogen, carbon dioxide and rare gases. Which of the following best represents the approximate proportion of these gases in the air?



5. Which of the following system(s) is/are responsible for breaking down food into the simplest forms and transporting it to all parts of the body?

- A Digestive system
- B Circulatory system
- C Respiratory system
- D Reproductive system

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

6. Which of the following are transported in both the plant transport system as well as the human circulatory system?

- A Food
- B Water
- C Oxygen
- D Carbon dioxide

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

7. Which of the following statement(s) about saliva is/are true?

- A Saliva helps to digest food.
- B Saliva causes food to be rolled into a ball.
- C Saliva breaks down food into smaller pieces.
- D Saliva moistens the food to make swallowing easier.

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

8. In the early hours in the morning, Mr Lim noticed that the exterior surface of the window of his car turned misty when the air conditioner was turned on. Without winding down the window to wipe the mist, what could he possibly do to remove the mist?

- A Turn off the air conditioner.
- B Slow down the speed of the car.
- C Reduce the temperature of the air conditioner.
- D Wind down the window of the car partially leaving a small gap.

- A and B only
- A and D only
- B and C only
- C and D only

9. Cassandra planted 4 pots of different types of plants, P, Q, R and S, in her garden. She counted the number of male and female flowers on each plant and recorded the information in the table below.

Plants	Number of male flowers	Number of female flowers
P	0	9
Q	3	3
R	5	0
S	4	1

Assuming no cross-pollination has taken place, which of the above plants are most likely to bear fruit?

- Plants P and R only
- Plants Q and S only
- Plants Q, R and S only
- Plants P, Q and S only

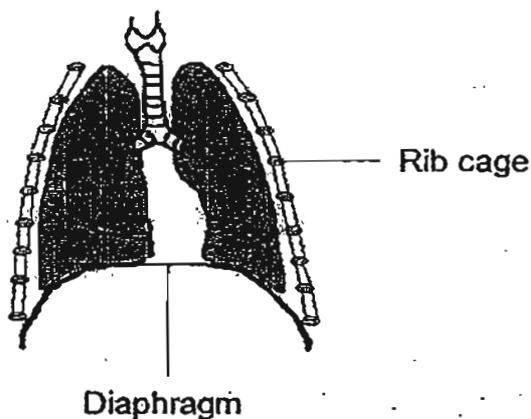
10. John recorded some similarities in the sexual reproduction of flowering plants and animals as shown below.

- A Pollination takes place before fertilization.
- B The female eggs are produced by the ovary.
- C The male reproductive cells are called sperms.
- D Reproduction requires both male and female sex cells.

Which of the above statements are most likely to be true?

- A and B only
- B and C only
- B and D only
- A, C and D only

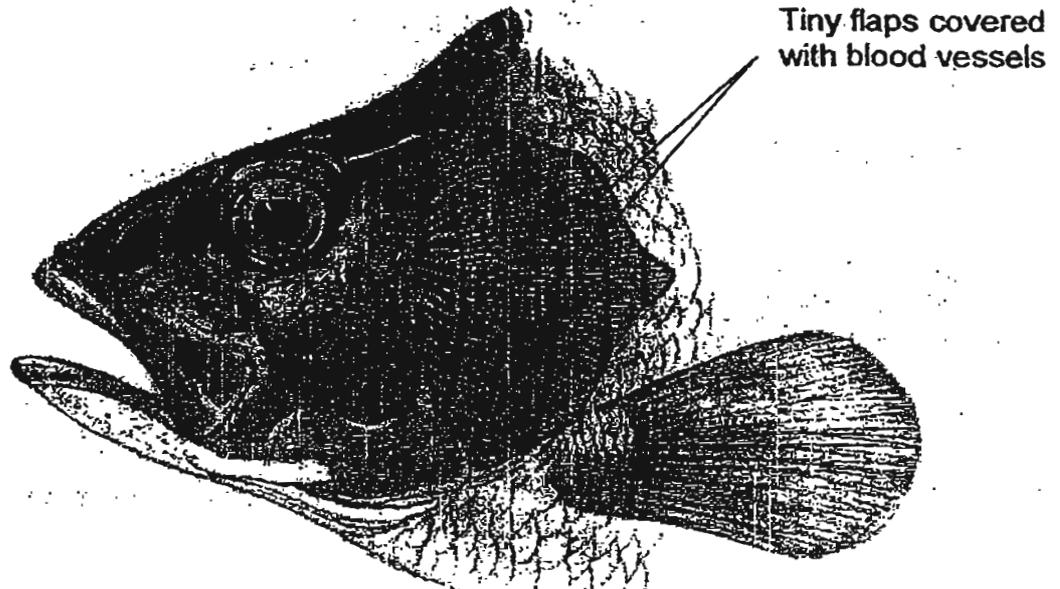
11. The diagram below shows parts of the human respiratory system.



Which one of the following shows the correct movement of the diaphragm and rib cage during inhalation and exhalation respectively?

	Diaphragm		Rib cage	
	Inhalation	Exhalation	Inhalation	Exhalation
<input checked="" type="checkbox"/> (1)	Moves upwards	Moves downwards	Move in and downwards	Move out and upwards
<input checked="" type="checkbox"/> (2)	Moves upwards	Moves downwards	Move out and upwards	Move in and downwards
<input checked="" type="checkbox"/> (3)	Moves downwards	Moves upwards	Move in and downwards	Move out and upwards
<input checked="" type="checkbox"/> (4)	Moves downwards	Moves upwards	Move out and upwards	Move in and downwards

12. The diagram below shows the tiny flaps covered with blood vessels on the gills of a fish

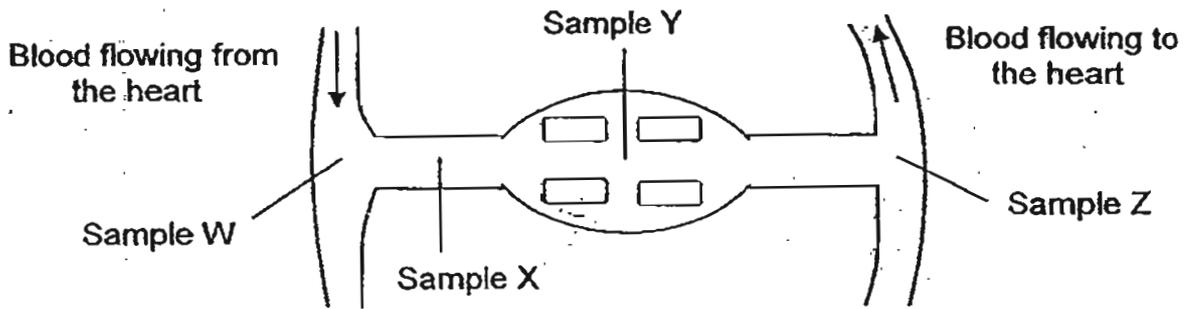


The gills of a fish have the same function as the lungs in humans. The gills have many tiny flaps to _____

- A increase the surface area for the absorption of oxygen
- B enable gaseous exchange to take place at a faster rate
- C enables gaseous exchange to take place at a slower rate
- D increase the surface area for the absorption of carbon dioxide

- A only
- A and B only
- C and D only
- A, B and D only

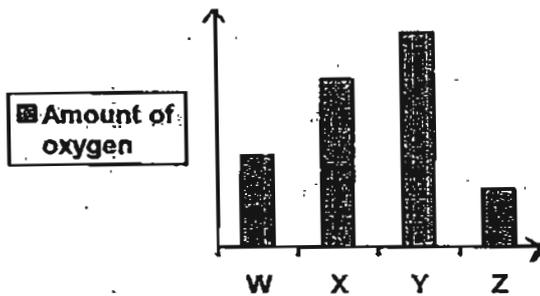
13. The diagram below shows the blood vessels in the human circulatory system.



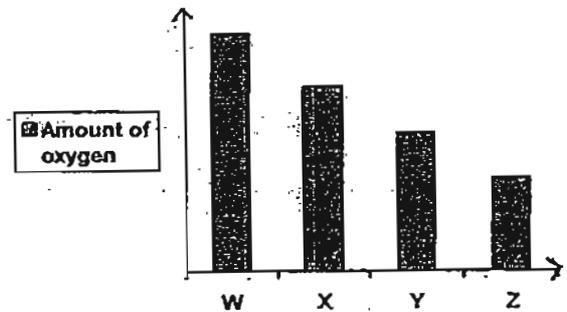
Blood samples, W, X, Y and Z, were taken from different blood vessels in the body. Which one of the following bar graphs is mostly likely to show the correct amount of oxygen in the blood samples, W, X, Y and Z, respectively?

Z

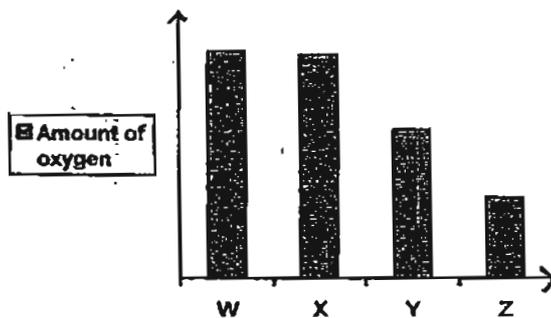
(1)



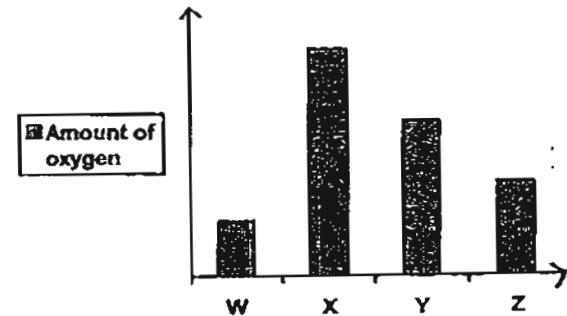
(2)



(3)



(4)



14. Mara goes to the Fitness Centre every day to run on the treadmill for 30 minutes before heading for work. Which of the following systems work together to enable her to run?

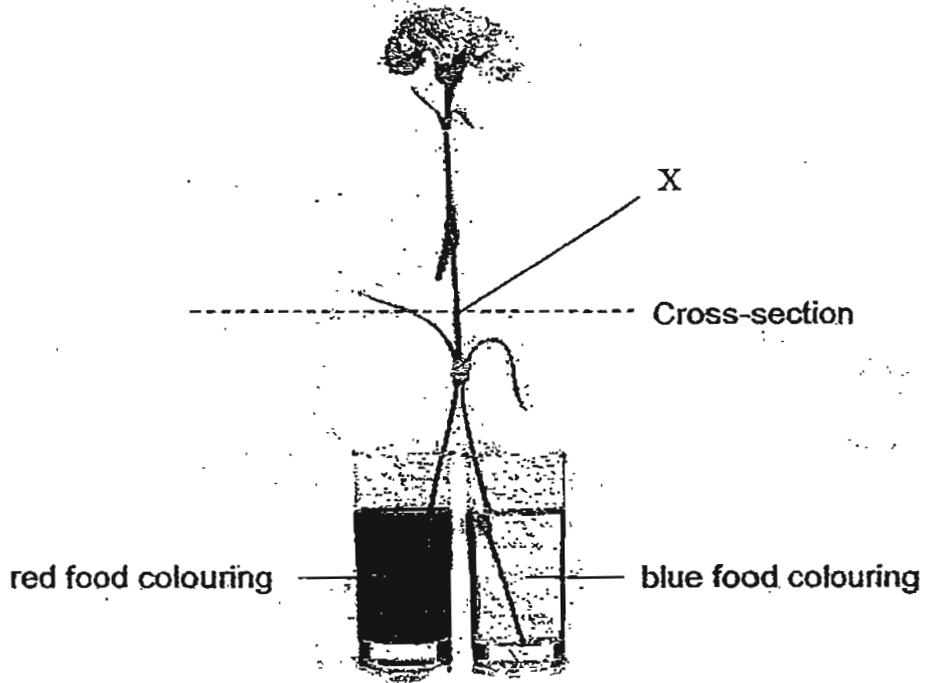
- A Skeletal system
- ~~B~~ Muscular system
- C Circulatory system
- ~~D~~ Respiratory system

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

15. Which one of the following shows the difference between the human and plant transport system correctly?

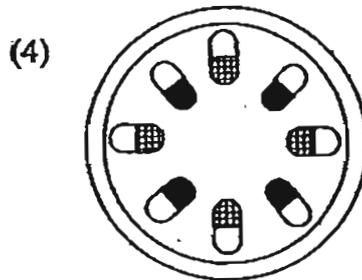
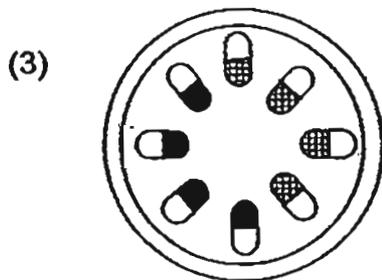
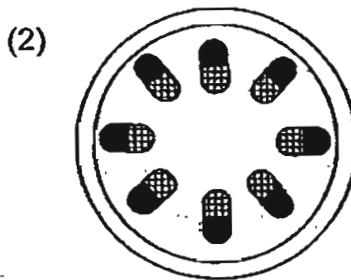
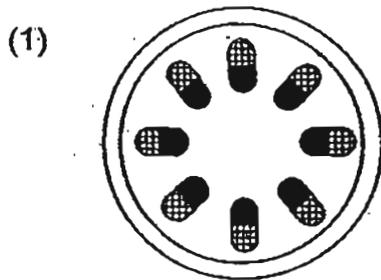
	Human transport system	Plant transport system
(1)	Does not involve a network of tubes	Involves a network of tubes
(2)	Involves the heart	No heart-like organ
(3)	Does not circulate continuously	Circulates continuously
(4)	Does not carry food and water	Carries food and water

16. John split the stem of a white carnation and put each side of the stem in 2 glasses of water with red and blue food colouring respectively as shown in the diagram below.



One day later, he observed that half of the flower became blue and the other half became red. He cut the stem at X and observed the cross-section of the stem.

Which of the following shows the cross-section of the carnation stem correctly?



Legend :

-  Red
-  Blue

17. Which of the following substance(s) is/are transported by the blood?

- A Water
- B Oxygen
- C Mineral salts
- D Carbon dioxide

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

18. Adam, Betty and Catherine each wrote down a sentence about cells as shown below.

Adam: All organisms are made up of cells.

Betty: All organisms consist of one or more cells.

Catherine: All cells contain nucleus.

Which of the following made a correct statement on cells?

- (1) Adam only
- (2) Catherine only
- (3) Adam and Betty only
- (4) Adam, Betty and Catherine

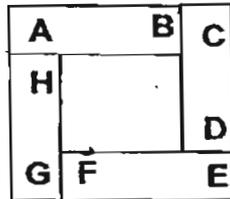
19. Some animals have been classified into three groups as shown below.

Group A	Group B	Group C
Crab	Snake	Bat
Prawn	Guppy	Platypus
Tortoise	Chameleon	Bear

Which of the following are suitable headings for the three groups?

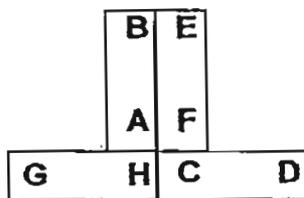
	Group A	Group B	Group C
(1)	Covered with shell	Covered with scales	Covered with hair
(2)	Live in water	Live on land	Live on land and water
(3)	Lays eggs with shell	Lays eggs without shell	Gives birth
(4)	Covered with skin	Covered with hair	Covered with feathers

20. Sally arranged four magnets with poles labelled A to H as in the diagram below.

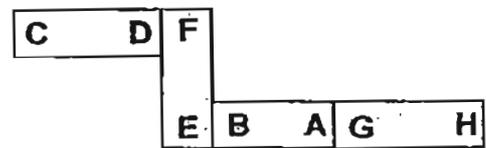


Based on the above observation, which one of the following is another possible arrangement of the magnets?

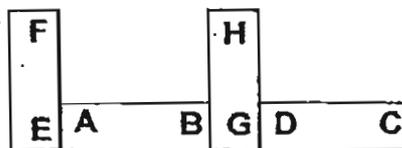
(1)



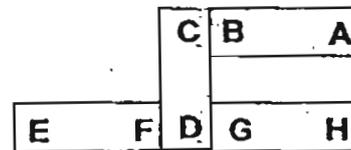
(2)



(3)



(4)





**NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 2 2010
PRIMARY FIVE
SCIENCE**

MARKS	
40	

Name : _____ ()

Class : Primary 5 / _____

Section B: (40marks)

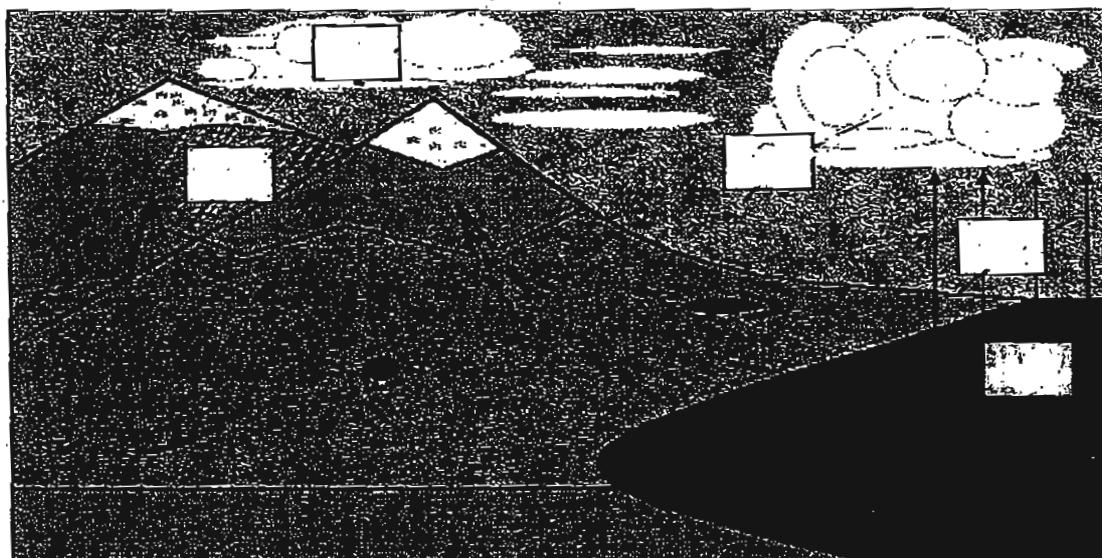
Write your answers to question 21 to 34.

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

21. The following are 5 statements which explain what happens in a water cycle in nature.

- | |
|---|
| <p>A Rain falls.
 B Water vapour rises to the sky.
 C Water droplets gather to form X.
 D Y condensed into water droplets.
 E Z evaporates from water bodies and living things.</p> |
|---|

(a) Write the letters (A, B, C, D and E) in the correct boxes to complete the diagram below. [2]



(b) Identify X, Y and Z in the statements given in the box above. [1]

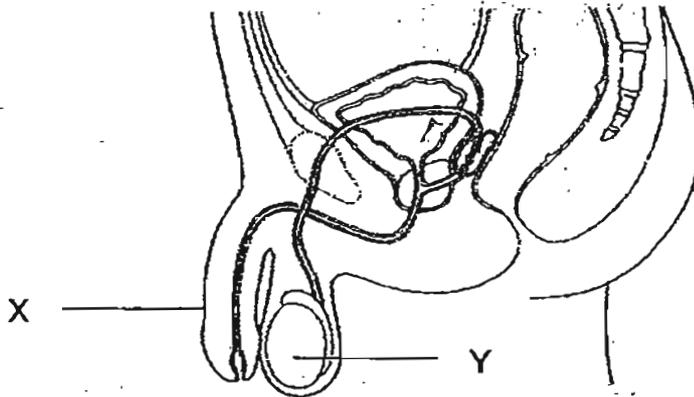
X: _____

Y: _____

Z: _____

Score	3
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22. The diagram below shows the male reproductive system.



(a) Name the parts labelled X and Y respectively. [1]

X: _____

Y: _____

(b) Which part of a flowering plant has a similar function as Y? [1]

23. The table below shows the average pulse rate of the first 3 years of the life of a human being including the time spent in the mother's womb.

Stage	Average pulse rate (beats per minute)
In mother's womb	145
In the newborn	135
During 1 st year	122
During 2 nd year	107
During 3 rd year	97

(a) Based on the information in the table above, what is the relationship between age and pulse rate for a human baby? [1]

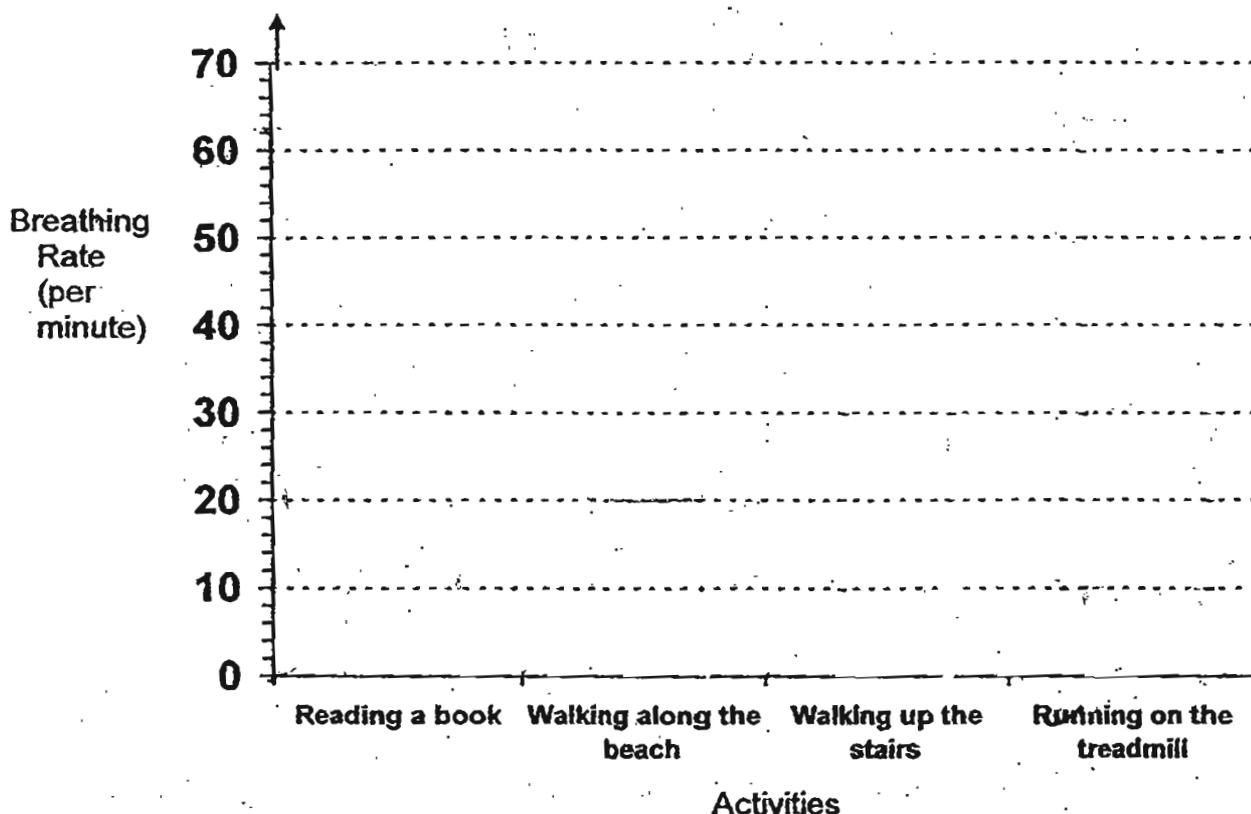
(b) Based on the information in the table above, what could possibly be the average pulse rate of a 4-year old toddler? [1]

Score	4
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24. Jason carried out 4 different activities for the same duration. He then measured his breathing rate and pulse rate for each activity. The results are shown in the table below.

Activity	Breathing rate (per minute)	Pulse rate (per minute)
Reading a book	12	61
Walking along the beach	20	108
Walking up the stairs	32	135
Running on the treadmill	64	173

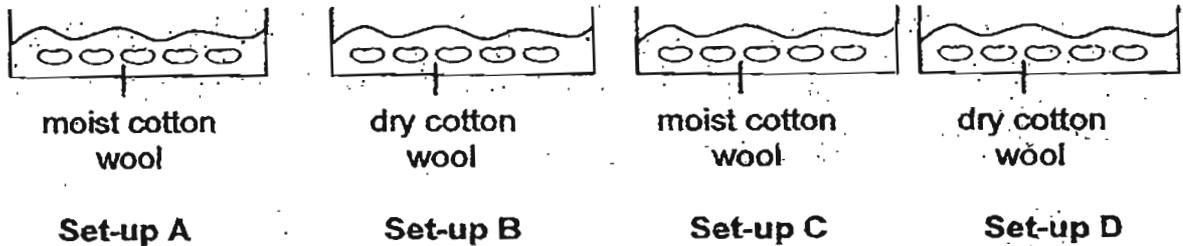
(a) Draw a bar graph to show how the breathing rate varies with the different activities using the data in the result table above. [2]



(b) From the table, Jason noticed that when his breathing rate increases, his pulse rate also increases. Why is this so? [3]

Score	5
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26. Steve wants to investigate the factors that affect the germination of green bean seeds. He put 5 green bean seeds into each of the petri dishes in the following set-ups.



He then placed Set-ups A and B in a cupboard and Set-ups C and D in a refrigerator. He waited a week before checking on his Set-ups.

(a) Identify the 2 independent variables for the experiment above. [1]

(i) _____

(ii) _____

(b) He found out that only the seeds in Set-up A germinated. What can he conclude based on the results of his investigation? [1]

Steve repeated the investigation but he changed the locations of Set-ups C and D. He placed Set-ups A and B in a cupboard and Set-ups C and D on a table next to the window. He checked on his Set-ups a week later.

(c) State the 2 independent variables in the above described experiment. [1]

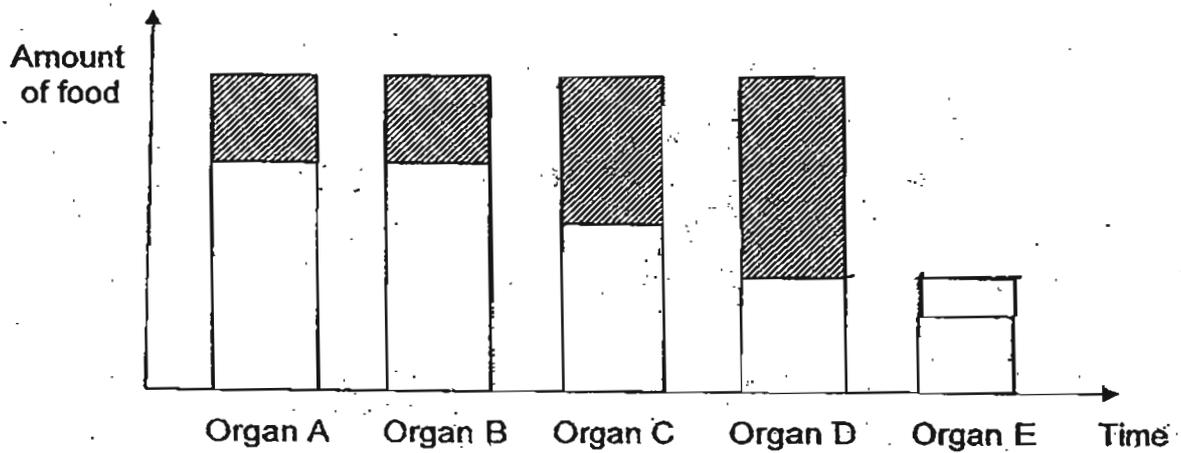
(i) _____

(ii) _____

(d) He found out that only the seeds in Set-ups A and C germinated. What can he conclude based on the results of his investigation? [1]

Score	4
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25. Peter just ate a bowl of noodles. The bar graph below shows the amount of digested and undigested noodles in 5 organs, A, B, C, D and E of the digestive system over 3 hours.



Legend:
 Digested food
 Undigested food

(a) What is organ E most likely to be?

[1]

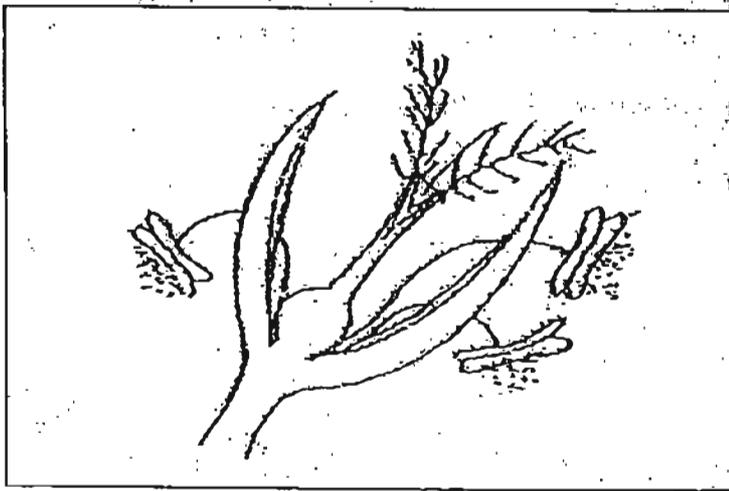
(b) Give a reason for your answer in part (a).

[1]

Score	2
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27 (a) What role does pollination play in helping the flowering plant to continue its own kind? [1]

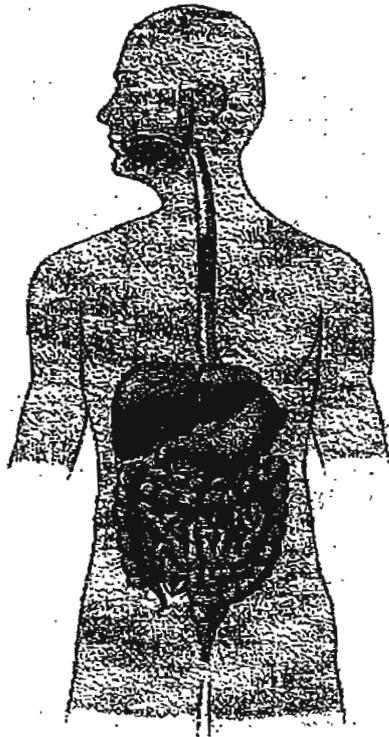
(b) Study the diagram of the flower below carefully.



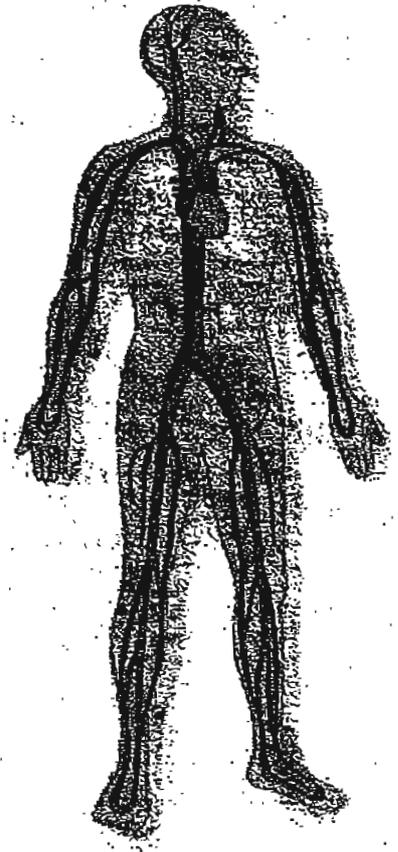
Based on the diagram above, how do you think the flower is pollinated? Give a reason for your answer. [1]

Score	2
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28. The diagram shows 2 important systems in the human body.



System A



System B

(a) Name the organ in System A that is responsible for absorbing water from the undigested food. [1]

(b) Name the muscular organ in System B. [1]

(c) How do System A and System B work together? [2]

Score	
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29. Kenny was waiting for a MRT train at the Jurong East Interchange when it suddenly dawned on him that the Singapore MRT system can be used to model the human circulatory system. If he imagined the Interchange as the lungs then the passengers would be oxygen and carbon dioxide.

(a) Based on his imagination, what would the trains represent in the human circulatory system? Give a reason for your answer. [1]

(b) Still based on his imagination, what would the railway represent in the human circulatory system? Give a reason for your answer. [1]

30. Paul removed a ring of the bark from a woody stem of a plant as shown in Figure A. After a few days, he discovered a swelling just above the ring as shown in Figure B.

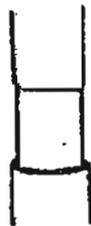


Figure A



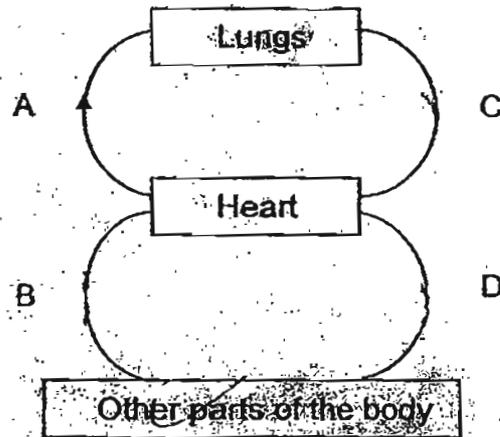
Figure B

Swelling

(a) Explain clearly why there was a swelling just above the ring in the stem as shown in the Figure B. [2]

Score	4
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31. The diagram below shows how blood flows from one part of the body to another in a human being.

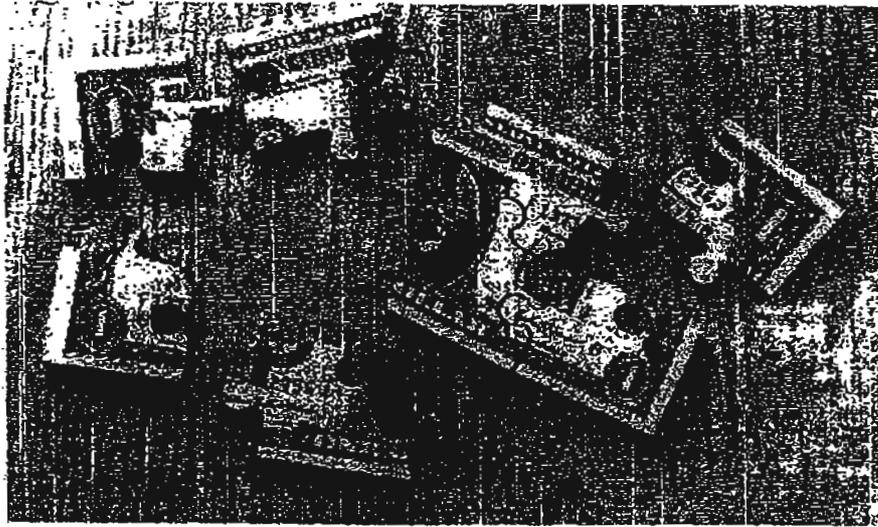


(a) The amount of oxygen in the blood at B and C is higher than that at D.
 Draw arrowheads (→) along the paths of B, C and D to show the direction of blood flow. (Arrowhead on A has been done for you.) [1]

(b) Explain why the amount of oxygen in the blood at C is higher than that at D. [2]

Score	3
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32. The picture below shows the various pieces of a jigsaw puzzle.

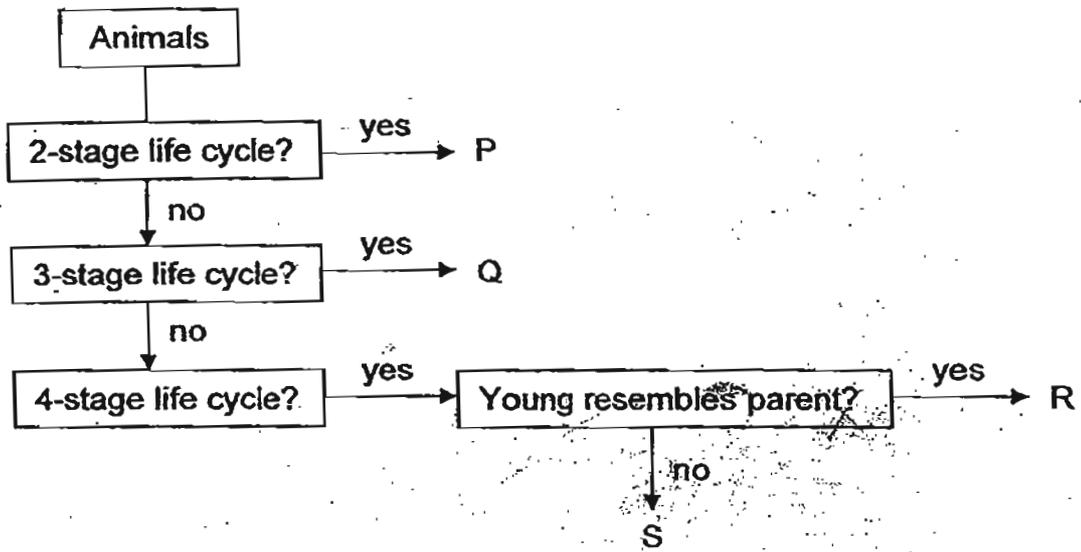


(a) If one piece of the jigsaw puzzle shown represents a cell, what does the whole jigsaw puzzle represent? [1]

(b) What represents the idea that the various jigsaw puzzle pieces combine to form one picture? [1]

Score	
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33. Study the classification chart below carefully.



(a) Write the letters P, Q, R and S in the table below.

[2]

Lays egg	Gives birth

(b) Give an example of Animal R and Animal S.

[2]

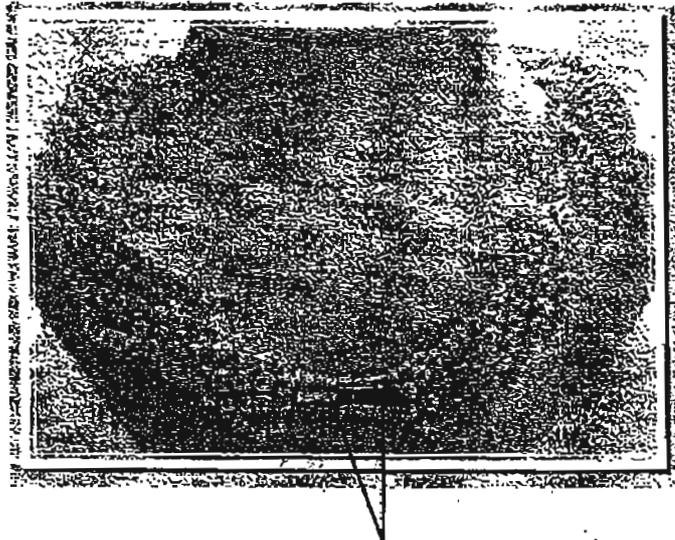
Animal R: _____

Animal S: _____

Score	/
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3

34. Jana owns a pearl necklace as shown. When she brings 2 ends of the clasp close to each other they fasten by themselves.



clasps

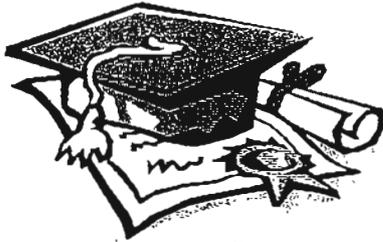
- (a) Explain how the clasp can fasten by themselves when brought near to each other. [2]

- (b) One day, one of the clasps fell off from the necklace and Jana hastily fixed it by put it back. To her dismay, the clasps were not able to fasten by themselves. Instead, they kept moving away from each other. Explain clearly why that happened. [1]

Score	3
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End of Paper



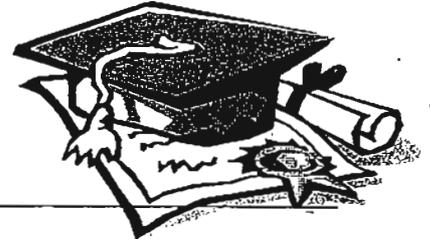


ANSWER SHEET

EXAM PAPER 2011

**SCHOOL : NAN HUA
SUBJECT : PRIMARY 5 SCIENCE**

TERM : CA2



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
3	3	4	3	2	1	2	2	2	3	4	2	3	4	2	3	4

Q18	Q19	Q20
3	1	1

21)a) A C D B E

b) X: clouds

Y: water vapour

Z: water

22)a) X: penis

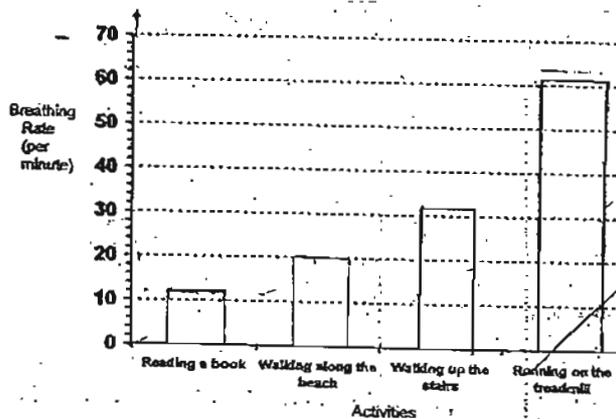
Y: testes

b) The anther

23)a) The younger the baby, the faster its pulse rate will be.

b) 87 beats per minute.

24)a)



b) As the intensity of the exercise increases, the body requires more oxygen to produce more energy. More carbon dioxide is also produced as a result of this. The breathing rate has to increase to bring in more oxygen as well as to remove the increased amount of carbon dioxide produced. Pulse rate increases during exercise in order to circulate more blood rich in oxygen to other parts of the body as well as to increase the rate of getting rid of carbon dioxide produced during respiration.

25)a) Large intestine.

b) Because digestion completes at the small intestine and in the large intestine, water is taken from the undigested food and into the blood streams. So no digestion has taken place at the large intestine.

26)a)i) Amount of water

ii) Presence of light warmth

b) Preserve of warmth and moisture is required for germination to take place.

c)i) Amount of water

ii) Presence of light

d) Presence of light is not required for germinated to take place.

27)a) During pollination the pollen grains on the stigma. It goes down the style through a tube leading to the ovules. When the pollen grains fuses with the ovules, it becomes a seed and the ovary turns in to a fruit. Then the seed id dispersed to many different places.

b) It is pollinated by wind. The flower has long pistil and stamen hanging out of the petals to maximize the exposure of the air of pollen producing anther and pollen collecting stigma.

28)a) large.

b) Heart.

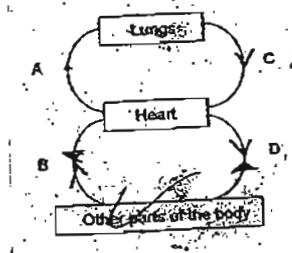
c) System A breads down food into simple substance which is absorb into the blood stream. System B transport the blood that contain the digested food from System A to all parts of the body.

29)a) Blood cells. It carries oxygen like the train carrying people.

b) Blood vessles. It enables the blood to flow through the human body like the railway enabling train to move on it.

30)a) Because when food carrying tube is removed, the plant cannot transport food to all parts of the plant therefore the food cannot be pass causing a swell at Figure B.

31)a)



b) The blood at C is oxygen rich as it has obtained a fresh supply of oxygen from the lungs that goes to the heart to be pumped to the rest of the body. However, the oxygen in blood at D is lower than that at C as the oxygen in the blood had been used up by other parts of the body and is now containing more carbon dioxide which is to be removed as the blood flow towards the heart then the lungs.

32)a)Human body.

b)An organism is made up by different kinds of cells.

33)a)Lays egg: Q, S, R

Gives birth: P

b)S: Butterfly.

34)a)The clasps are made of magnets. They are arranged such that their unlike poles face each other when the clasps are near each other they can fasten the necklace by attract to each other.

b)When the clasps fall, one of the magnet may have switch poles, therefore like poles repel, causing them to keep moving away from each other.