



NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 2 2010
PRIMARY FIVE
SCIENCE

Name : _____ ()

Class : Primary 5/ _____

Date : 26 August 2010

Duration : 1 hr 30 min

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

Parent's Signature : _____

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

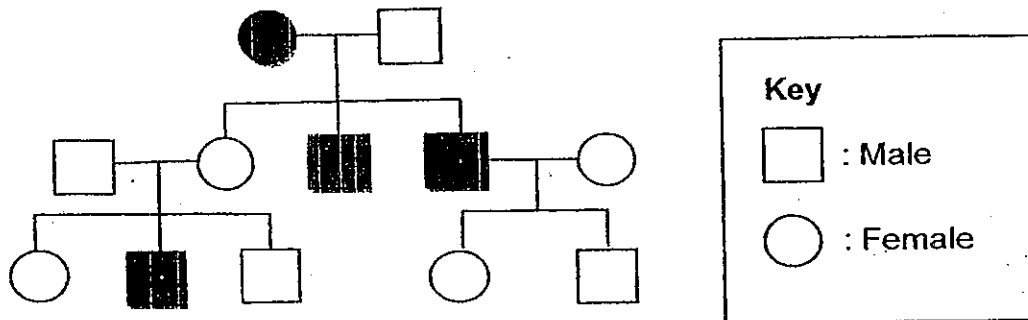
For each question from 1 to 20, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Which of the following conditions must be present for the water cycle to occur continuously?

A: heat
B: wind
C: light
D: sea

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

2. The diagram below shows the Tan family tree. A shaded symbol indicates colour blindness.



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

- A: Colour blindness is not hereditary.
- B: Colour blindness can be inherited from grandparents.
- C: A colour blind male is unlikely to have a color blind offspring.
- D: Males are more likely to inherit colour blindness than females.

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

3. The following table shows the comparison between the sexual reproduction in flowering plants and humans.

	Flowering Plants	Humans
Female reproductive cell	Egg	Ovum
Male reproductive cell	A	B
After fertilization	C	A baby is formed

Which of the following best represents A, B and C respectively?

	A	B	C
(1)	pollen grains	testis	seeds are formed
(2)	anther	sperm	fruits are formed
(3)	filament	testis	fruits are formed
(4)	pollen grains	sperm	seeds are formed

4. Which of the following statement(s) is/are true?
A: When we breathe in, only oxygen goes into our lungs.
B: The air we breathe out contains only carbon dioxide.
C: Gaseous exchange takes place in the lungs only.
D: Water vapour is a by-product of respiration.

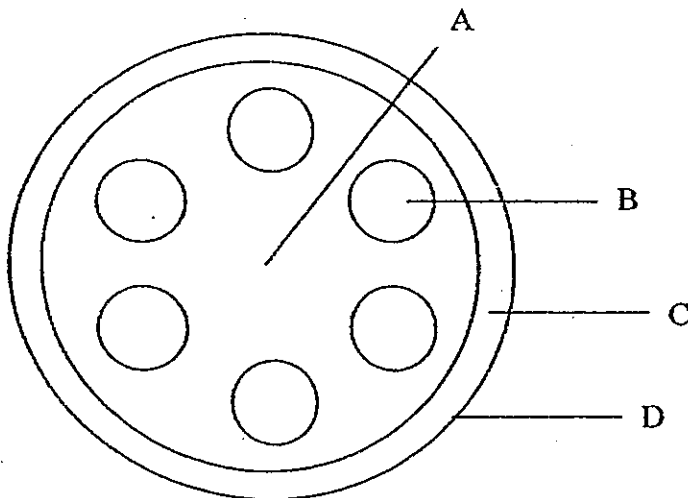
- (1) A only
(2) C only
(3) A and B only
(4) C and D only

5. Which of the following statements about our body systems are true?

- A: The digestive system breaks down food.
B: The circulatory system transports nutrients around our body.
C: The rib, gullet and lungs are part of the respiratory system.
D: The respiratory system transports oxygen from the lungs to all parts of the body.

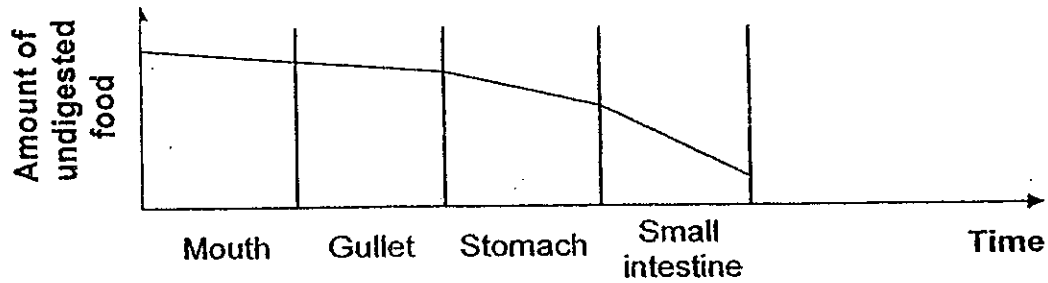
- (1) A and B only
(2) C and D only
(3) A, B and C only
(4) A, B and D only

6. The diagram below shows the cross-section of the stem of a plant. Which part of the stem has the function of transporting food and water in the plant?

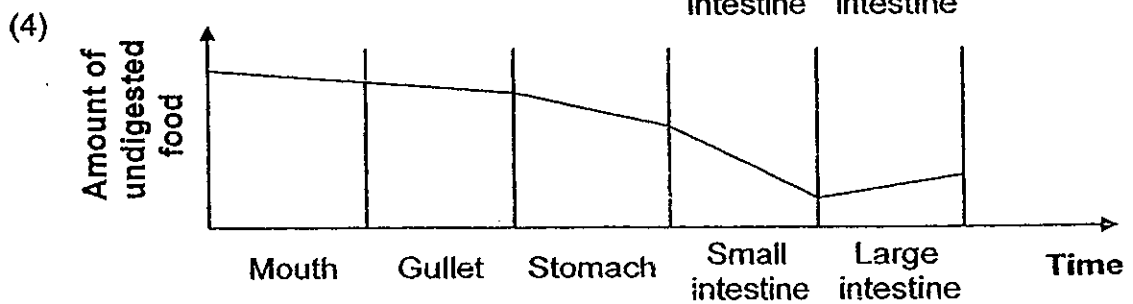
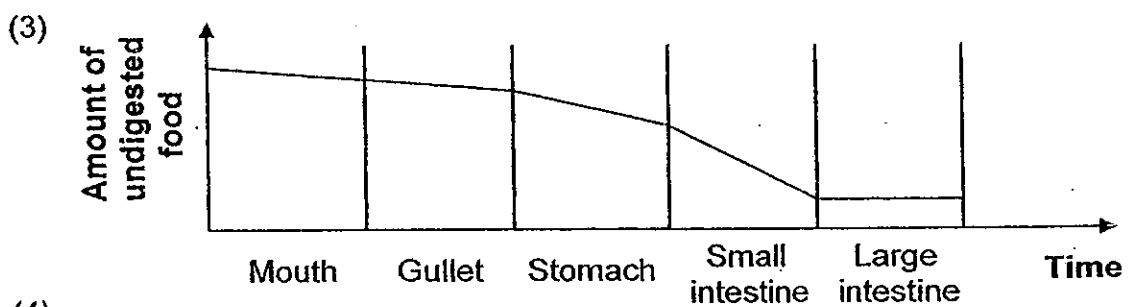
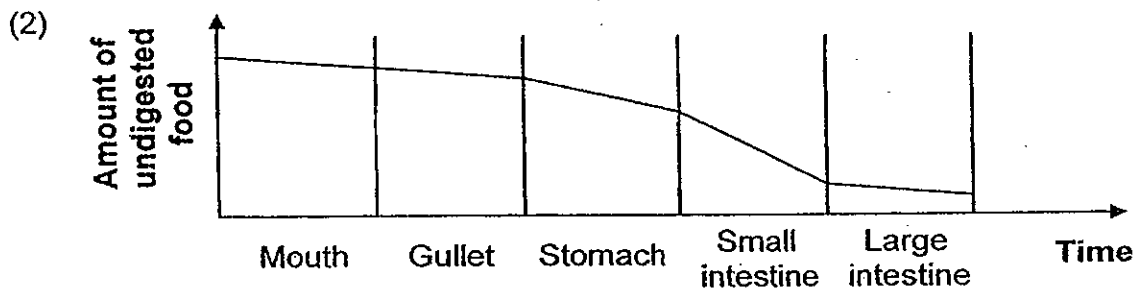
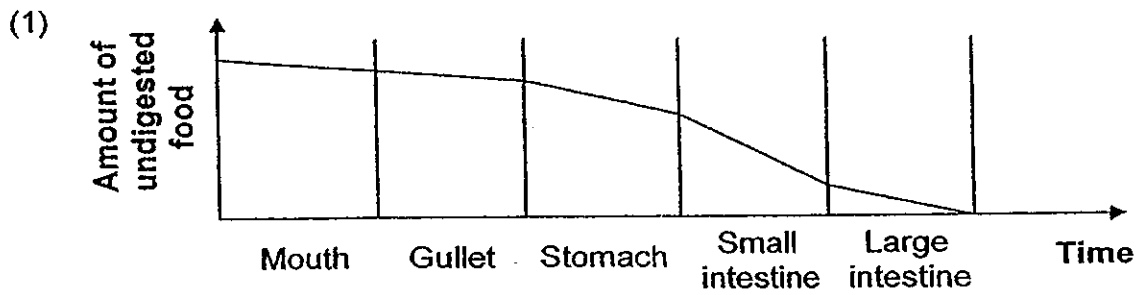


- (1) A
(2) B
(3) C
(4) D

7. Mrs Ong had dinner a few hours ago. The graph below shows the change in the amount of undigested food through her digestive system to the small intestine.



Which of the following shows the change in the amount of undigested food in the large intestine?



8. Which of the following will **not** help in conserving water?

- (1) Installing automatic taps in toilets.
- (2) Collecting rainwater for domestic use.
- (3) Using ice in place of water to cool machines in factories.
- (4) Collecting water from rinsing vegetable and fruits to water houseplants.

9. The diagram below shows a picture of a fruit.



stiff hairs

Which one of the following statements best describes how the fruit is dispersed?

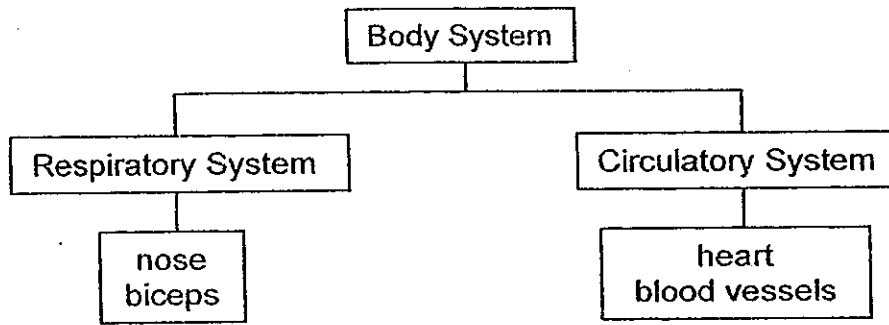
- (1) It is carried away by wind.
- (2) It floats on the water and gets drifted away.
- (3) It sticks on animals' fur and is carried away by the animals.
- (4) Animals feed on it and the undigested seeds are passed out in their droppings onto the soil.

10. Which of the following statements about reproduction in human beings is/are correct?

- A: The womb produces eggs.
- B: Male is not needed for human sexual reproduction
- C: A foetus develops in the mother's stomach before it is born.
- D: Usually one egg is released from either one of the ovaries every month.

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

11. The classification table below shows the parts of two systems in a human body.



Which part is classified wrongly?

- (1) nose
 - (2) heart
 - (3) biceps
 - (4) blood vessels
12. Wind instruments like the recorder produces sound when air is blown into it. Which one of the following describes correctly what happens to the rib cage, diaphragm and chest when we blow into the recorder?

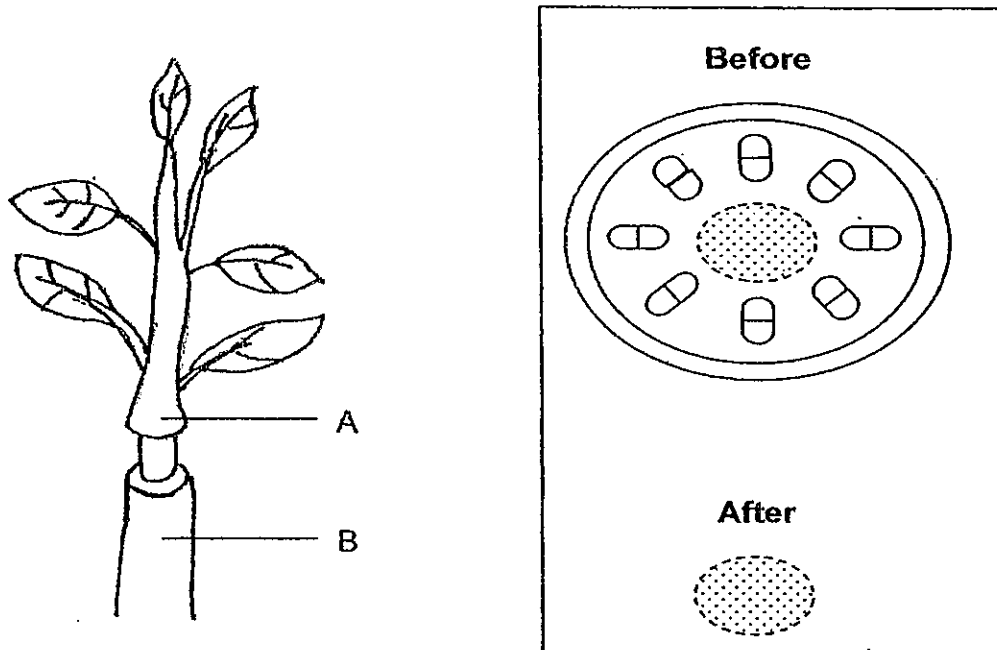
	Rib cage	Diaphragm	Chest
(1)	Move in and downwards	Move downwards	Becomes bigger
(2)	Move in and downwards	Move upwards	Becomes smaller
(3)	Move out and upwards	Move downwards	Becomes bigger
(4)	Move out and upwards	Move upwards	Becomes smaller

13. A stroke is a medical condition when the blood is blocked from flowing to the brain. This causes a lack of oxygen and glucose flowing to the brain and can lead to death of brain cells and brain damage. Which of the following is most likely to cause a stroke to occur?

- (1) A blocked vein.
- (2) A clogged artery.
- (3) Tightly bandaged thigh.
- (4) Profuse bleeding from a cut wrist.

14. Nathan went to the cinema to watch a horror movie. He found that both his heart rate and breathing rate increased during the movie. Which of the following explains his observation?
- (1) The heart and the diaphragm contracts and relaxes at the same time.
 - (2) The blood vessels and air tubes become narrower during stressful times.
 - (3) The digestive and respiratory systems work together to provide the body with energy.
 - (4) The circulatory and respiratory systems work together to provide the body with energy.
15. Which of the following statement(s) is/are true of both the plant transport system and the human circulatory system?
- A: Both systems transport only food and water.
 - B: Both systems use tubes to transport substances.
 - C: Both systems have muscles to transport substances.
 - D: Both systems transport substances throughout the organism.
- (1) A only
 - (2) A and B only
 - (3) B and D only
 - (4) C and D only

16. Jacob removed the outer ring of the stem between Position A and B of a plant as shown in the diagram below. The box below shows the cross-section of the stem of the plant before and after the outer ring is removed respectively.



Which of the following is most likely to be the observation made two weeks after the outer ring of the stem is removed?

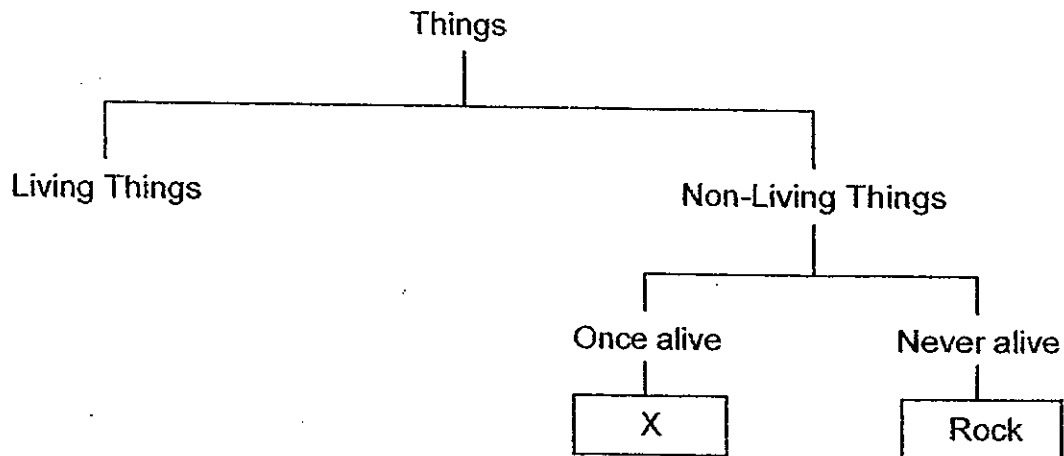
- (1) The plant will die from lack of food and water.
 - (2) The plant will grow taller and start to bear fruits.
 - (3) The plant will not be able to stand upright and fall.
 - (4) The removed outer ring of the stem will start to develop again.
17. The Singapore MRT system can be used to model the human circulatory system. The MRT system is made up of trains, tracks, station control and passengers. Which of the following shows their equivalent in the human circulatory system?

	Trains	Tracks	Station Control	Passengers
(1)	Heart	Oxygen	Blood	Blood Vessels
(2)	Blood Vessels	Heart	Oxygen	Blood
(3)	Blood	Blood Vessels	Heart	Oxygen
(4)	Oxygen	Blood	Blood Vessels	Heart

18. Which of the following statements is true about the cells in the human body?

- (1) The human body is made up only of living cells.
- (2) All cells in the human body perform the same function.
- (3) Cells in our body are continually dying and being replaced.
- (4) All cells in the human body have a cell membrane, cytoplasm and nucleus.

19.

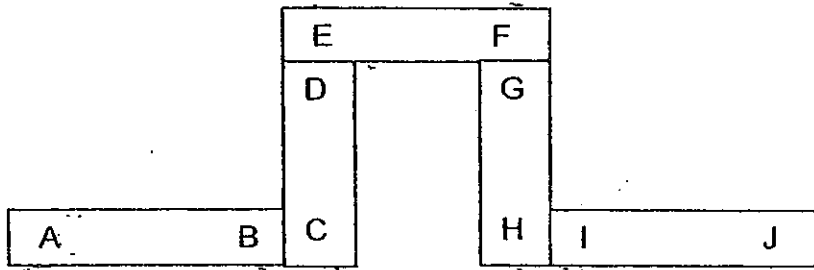


Which of the following objects can you put in the box marked 'X'?

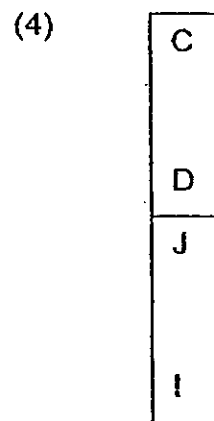
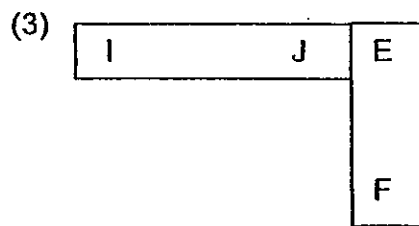
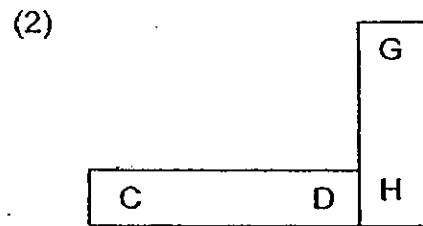
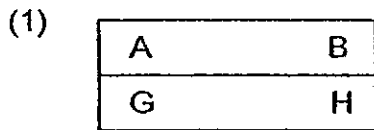
- A: Leather Jacket
- B: Plastic raincoat
- C: Woolen sweater
- D: Silken pajamas

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

20. 5 bar magnets are put together such that they attract the other magnet at their poles. Their poles are marked as shown in the diagram below.



Which one of the following diagrams shows a correct arrangement when 2 of the magnets are placed together?





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

MARKS	
	40

Name : _____ ()

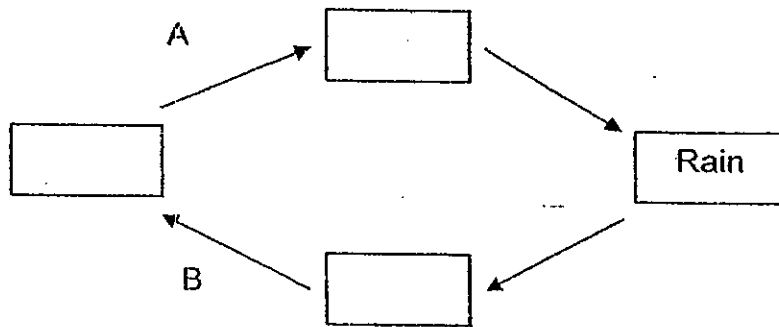
Class : Primary 5 / _____

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 diagram below shows the water cycle.



(a) Identify the processes A and B.

[2]

A: _____

B: _____

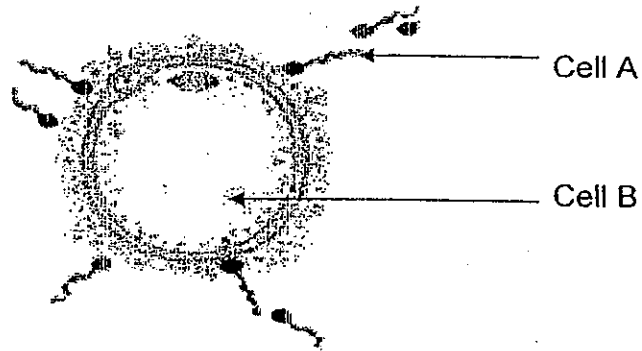
(b) In the table below, put a tick (✓) in the appropriate box to indicate if there is heat gain or heat loss in the water when it goes through Processes A and B respectively.

[1]

Process	Heat gain	Heat loss
A		
B		

Score	3
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22. The diagram below shows what happens during fertilization in human.



(a) Identify Cell A and Cell B.

[1]

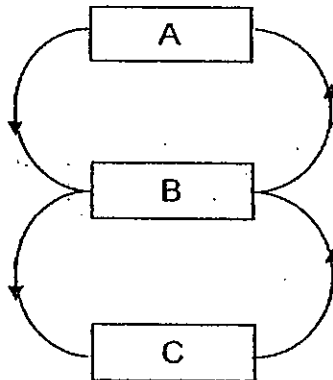
Cell A: _____

Cell B: _____

(b) Name the reproductive organ that produces Cell A.

[1]

23. The diagram below shows a representation of the human circulatory system.



(a) Name the organs represented by A, B and C in the diagram above.

[2]

A: _____

B: _____

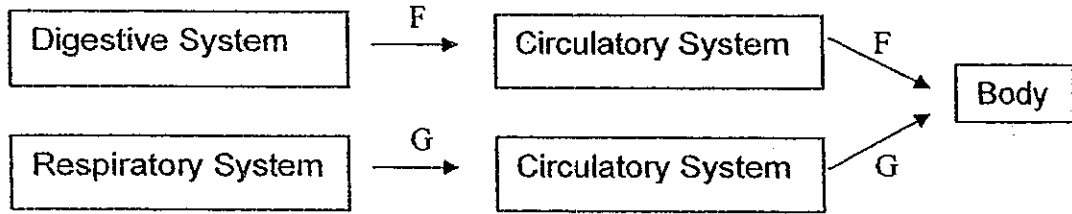
C: _____

(b) The blood entering C has more of this substance than the blood leaving C.
What is this substance?

[1]

Score	5
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24. The diagram below shows how the digestive, respiratory and circulatory systems work together to provide the body with Substances F and G. Substances F and G are used by the body to produce energy.



(a) Name the Substances F and G respectively.

[2]

Substance F: _____

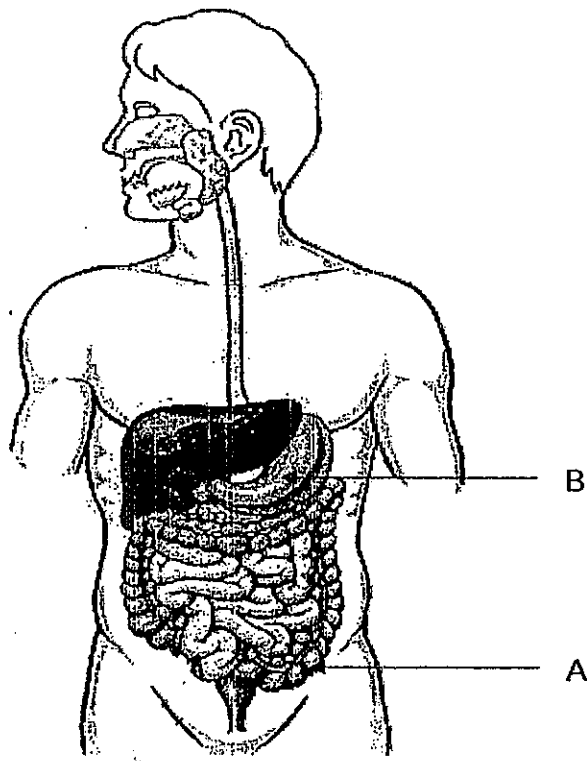
Substance G: _____

(b) Name the gas, a waste product, produced during the energy production process shown in the diagram above.

[1]

Score	3
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25. The diagram below shows parts of the digestive system of a man.



Based on the diagram above, answer the following questions:

(a) Name the organs, A and B respectively [1]

A: _____

B: _____

(b) **Mark and label with "X" and "Y" on the diagram the part(s) of the system where the following processes take place:** [2]

- (i) "X" : where digestion starts
- (ii) "Y" : where digestion ends

Score	3
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26. Bees and butterflies are agents of pollination.
 Bees have a good sense of smell but cannot recognise the colour red.
 Butterflies, on the other hand, have a poor sense of smell and have no problem recognising the colour red.

Luke went into his garden and made the following observations:

Plant	Observations
A	Flowers are bright red. Many bees are seen flying around the flowers.
B	Flowers have huge, red petals. Many butterflies are seen flying around the flowers.
C	Flowers are red and tiny. Many bees and butterflies are seen flying around the flowers.

Based on Luke's observations above, put a tick (✓) in the appropriate boxes below to indicate whether each of the flowers is sweet-smelling, odourless or not possible to tell.

[3]

	Sweet-smelling	Odourless	Not possible to tell
Flowers of Plant A			
Flowers of Plant B			
Flowers of Plant C			

Score	3
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27. The diagram A below shows a cross-section of a flower.

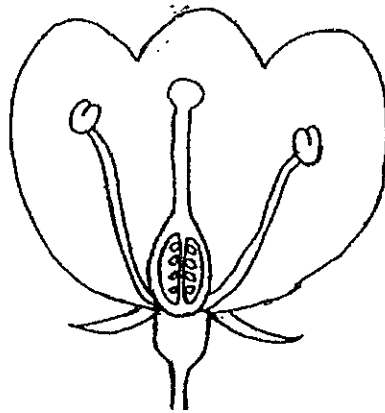


Diagram A

(a) In the diagram above, mark and label clearly the part of the flowers that produces the:

- male sex cells with "X" and
- female sex cells with "Y"

[1]

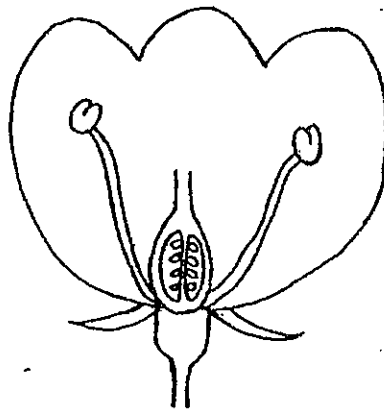


Diagram B

(b) A part of the flower is removed as shown in diagram B above. Can this flower be developed into a fruit? Give a reason for your answer.

[2]

Score	3
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28. Andy bought a watch which is also a heart-rate monitor. He used his watch to measure Jack's heart rate while he was carrying out different activities and recorded the data in the table below.

Activity	Heart Rate (beats per minute)
Sleeping	62
Walking to school	107
Running up a flight of stairs	143

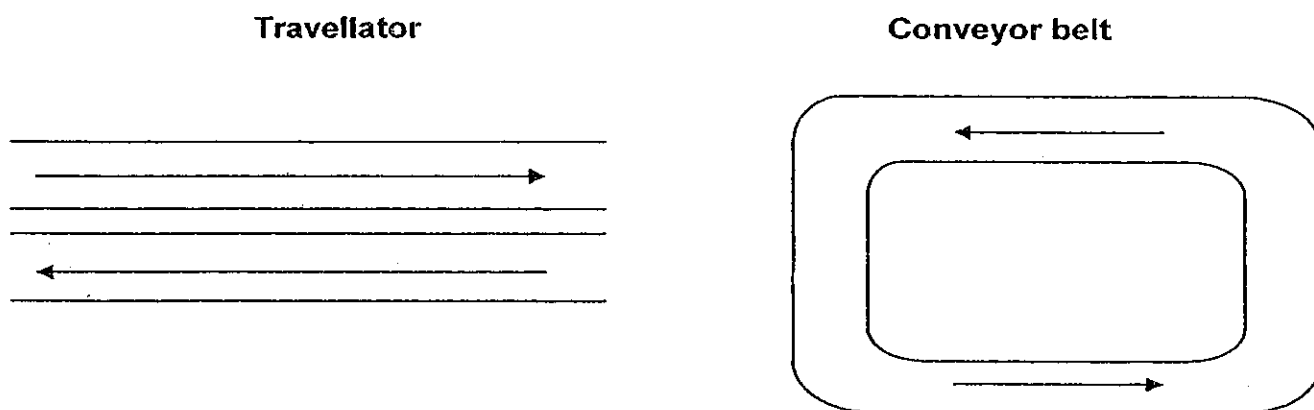
- (a) Based on the above table, what is the relationship between the intensity of the activity and Jack's heart rate? [2]

- (b) Andy then measured Jack's heart rate while he was reading newspaper. Based on the data above, estimate his heart rate when he was engaged in watching movie: reading newspaper. [1]

Score	3
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29. Mr. Stevens is a businessman who loves to link his surroundings to Science. Once he returned from USA, he used the traveller at Changi Airport to make his way to Customs counter before collecting his luggage from a conveyor belt. He realised that each of these systems resembles the transport systems in living things.

Study the diagrams below carefully. The arrows in the diagram shows the direction of the traffic flow

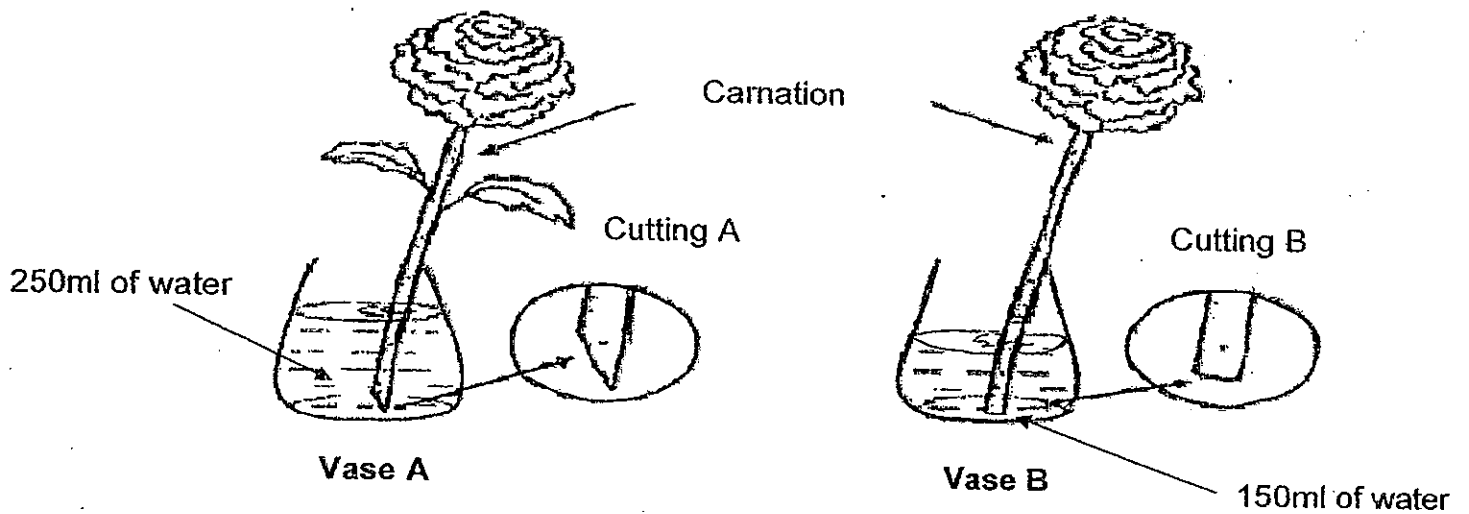


(a) Which system (Travellator or Conveyor belt) closely resembles the plant transport system? Give a reason for your answer. [1]

(b) The conveyor belt has a motor that keeps the belt moving. State an organ in the transport systems of living things that performs similar function to the motor. [1]

Score	2
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30. Mary wanted to find out if the different ways she cut the stalks of Carnation would affect the amount of water taken by them. She filled two similar vases, A and B, with water and placed a stalk of white carnation in each vase. The two different ways each stalk was cut are shown below.



(a) How would she determine that which stalk of Carnation had taken in more water? [1]

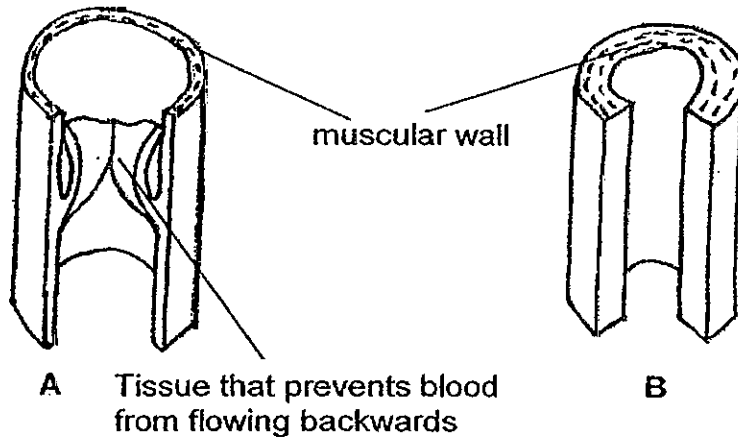
(b) Her teacher told her that the experiment is not a fair one. Suggest two changes that she should make to set-up B to ensure a fair test. [2]

(i) _____

(ii) _____

Score	3
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31. The diagram below shows two kinds of blood vessels found in the human body.



(a) List 2 differences between the blood vessels A and B observed in the diagram above. [2]

Difference 1: _____

Difference 2 : _____

(b) The artery carries blood away from the heart. It has to withstand very high pressures from the fast flowing blood to be pumped from the heart without bursting. Which blood vessel (A or B) above is an artery? Give a reason for your answer. [2]

Score	4
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32. Study the picture below carefully.



The tower model in the diagram above is made up of 465,000 units of lego bricks.

(a) The tower model can be used to explain and represent the basic nature of all life. State what the tower model and each unit of lego bricks represent respectively in human. [2]

- (i) Tower model : _____
- (ii) Lego brick : _____

33. Study the table below carefully:

Animals	
X	Y
Whale	Guppy
Elephant	Tadpole
Eagle	Dragonfly Nymph

(a) The above animals are classified into Group X and Group Y. Write a suitable heading for X and Y. [2]

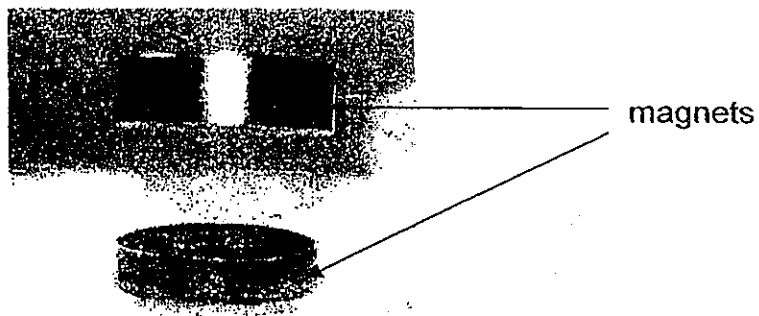
X : _____

Y : _____

(b) Which group of animal (X or Y) does a penguin belong to? [1]

Score	5
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34. The diagram below shows a magnet floating over another magnet.

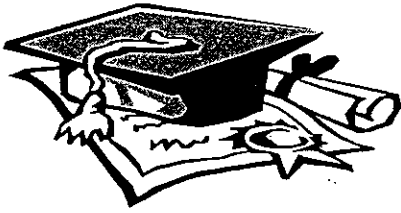


(a) Explain how the above observation is possible. [1]

(b) A Maglev (magnetic levitation) train operates on the same principle as shown above. A Maglev train only floats over its track during operation. During shutdown it rests on the track. How do engineers make this happen? [2]

END OF PAPER

Score	3
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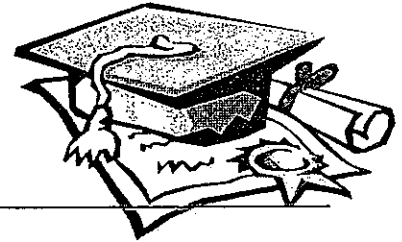


ANSWER SHEET

EXAM PAPER 2010

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

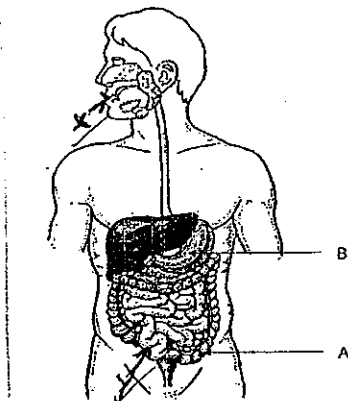
TERM : CA2



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

Q18	Q19	Q20
3	3	3

- 21)a)A: condensation B: evaporation b)A: Heat loss B: Heat gain
- 22)a)A: sperm B: ovum b)The testes.
- 23)a)A: lungs B: heart C: body b)Oxygen
- 24)a)F: Nutrients/Digested food/Glucose b)Carbon dioxide.
- 25)a)A: large intestine B: stomach
b)i,ii)



- 26)A: Sweet-smelling B: Odourless C: Sweet-smelling

27)a)

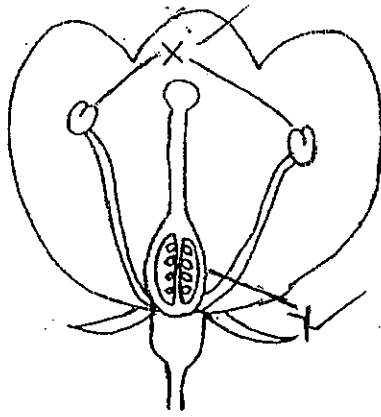


Diagram A

b)Yes. The stigma is not needed anymore for the flower to develop into a fruit once it is already fertilized.

28)a)The more energy needed for the activity, the faster the heart rate.

b)80 beats per minute.

29)a)The Travellator. The substances in the plant transport system travels in two direction while the substance in the human transport resembles the conveyor belt as it travels in one direction around the body.

b)The heart.

30)a)The vase with the lower water level shows the Carnation had taken in more water.

b)i)Add more water to vase B so that it is similar to that in A.

ii)Replace the carnation in vase B with one that is identical to the one in vase A with similar number of leaves.

31)a)1: The muscular wall in B is thicker than in A.

2: A has tissues that prevents blood from flowing backwards but B does not have.

b)B. B has thicker walls than A so it can withstand very high pressure without bursting.

32)a)i)body ii)cells

33)a)X: Breathe through lungs.

Y: Breathe through gills.

b)Group X.

34)a)The two poles of the two magnets that are facing each other are like poles, therefore, when two like poles are brought together, the two magnets will repel.

b)Engineers make use of electromagnets. When the train is in operation, the electromagnets are turned on levitating the train. During shutdown, the electromagnets are switched off, enabling the train to rest on the track.