南洋小學
NANYANG PRIMARY SCHOOL

PRIMARY THREE SCIENCE

SEMESTRAL ASSESSMENT 2

2009

BOOKLET A

Date : 27 October 2009

Duration : 1 h 45 min

Name : _____ ( )

Class: Primary _____ ( )

Marks Scored:

Booklet A:		60
Booklet B :		40
Total :		100

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Booklet A consists of 19 printed pages including this cover page.

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Section A (30 x 2 marks = 60 marks)

For each question from 1 to 30, 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 provided.

1. Which of the following statements about living things and non-living things are correct?

   A Both living and non-living things cannot move on their own.

   B Non-living things cannot respond to changes whereas living things can.

   C All living things can make their own food whereas non-living things cannot.

   D Non-living things do not need air, food and water whereas living things require air, food and water.

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

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2. In a particular wild area, the grass, zebras and lions found there are dependent on one another for food.



Grass



Zebra
(herbivore)

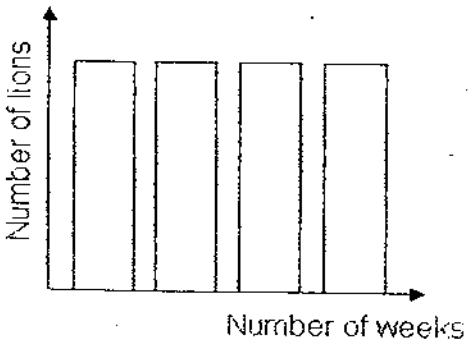


Lion
(carnivore)

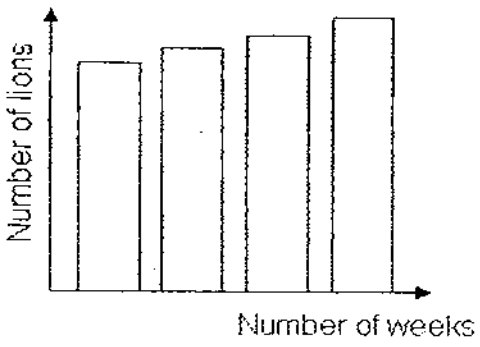
A disease broke out, causing the population of grass to decrease.

Which one of the following bar charts best represents the number of lions left in the population when the disease broke out?

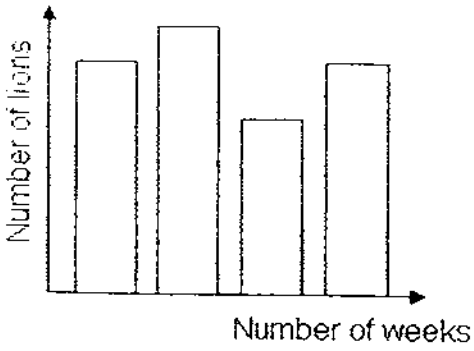
(1)



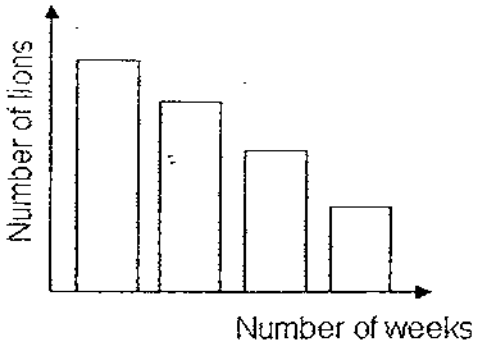
(2)



(3)



(4)



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3. Which of the following statements about bacteria and fungi is/are true?

A All bacteria are harmful to us.

B Both bacteria and fungi do not need food.

C Fungi and bacteria help to break down dead organisms into mine salts.

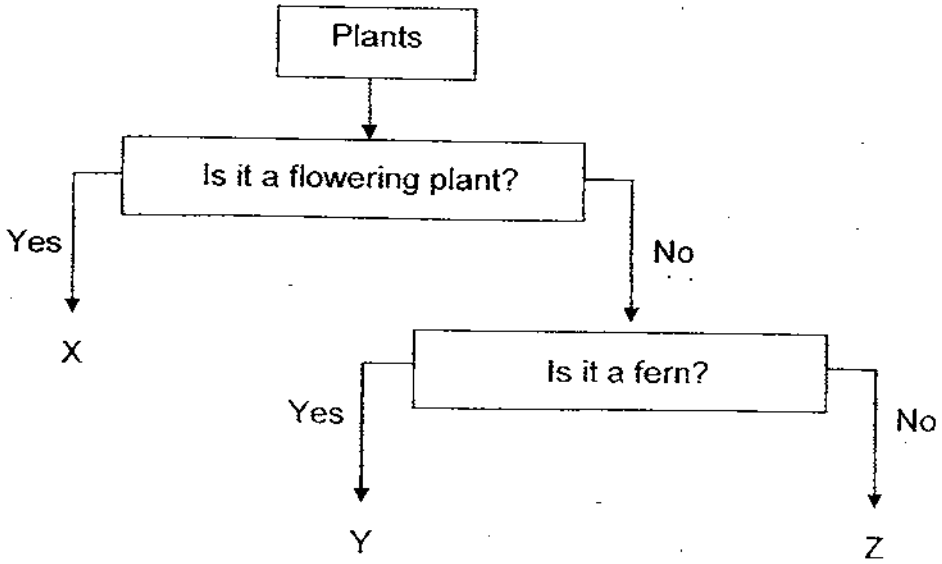
(1) C only

(2) A and B only

(3) B and C only

(4) A, B and C

4. Study the flowchart below.



Which of the following plants best represents 'X', 'Y' and 'Z'?

	X	Y	Z
(1)	Rose	Staghorn fern	Ladder fern
(2)	Frangipani	Maidenhair fern	Morning glory
(3)	Hibiscus	Bird's nest fern	Pine
(4)	Money plant	Ixora	Moss

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5. Which one of the following statements about ferns is true?

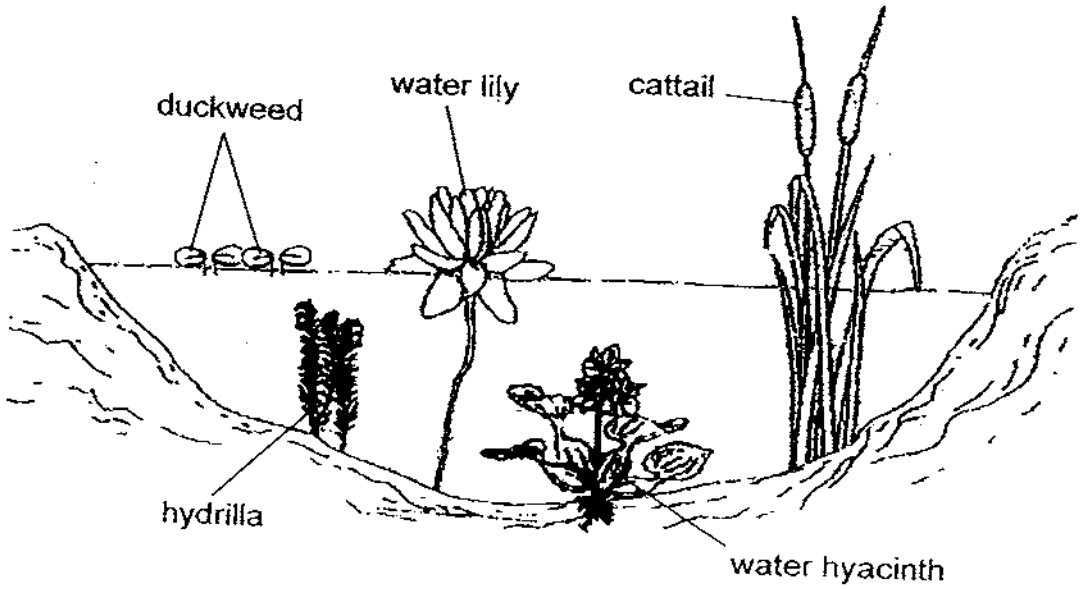
(1) Ferns cannot bear fruits.

(2) Ferns belong to the group of fungi.

(3) Ferns cannot make their own food.

(4) Ferns can survive for a long period of time without light.

6. The diagram below shows water plants growing in the different parts of a pond.



Which one of the following water plants is not normally found growing in the part of the pond shown above?

(1) Cattail

(2) Hydrilla

(3) Water lily

(4) Water hyacinth

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7. A group of scientists came across a new species. They each made a statement about the species.

Elisa: It can fly.

Frank: It is not covered with scales.

Gopal: It does not give birth to its young alive.

Which groups of animals could this new species belong to?

A Bird

B Fish

C Insect

D Mammal

(1) A or C only (2) B or C only

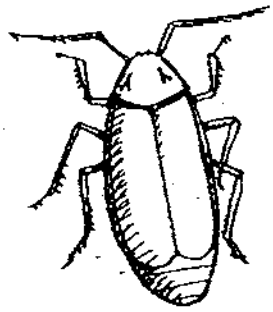
(3) B or D only (4) A, B, C or D

8. Which one of the following animals is not an insect?

(1)



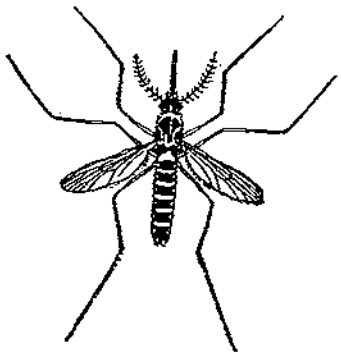
(2)



(3)



(4)



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9. The earthworm lives in the soil and comes out to feed on plant material on the surface of the soil. Which of the following statements is/are true about the earthworm and its habitat?

A The earthworm does not need water to live.

B The earthworm cannot grow well in the dark.

C The soil contains air for the earthworm to breathe in.

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

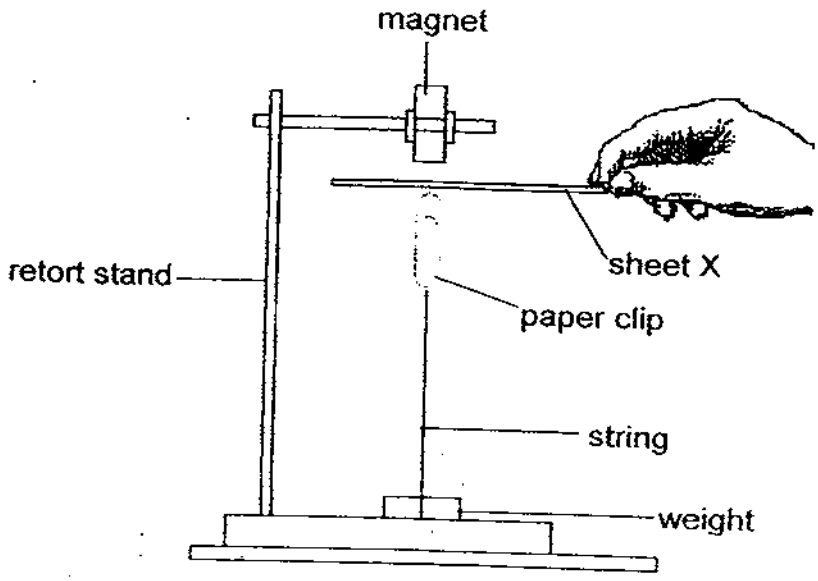
10. Which of the following objects are magnetic?

A Steel rod
B Iron filings
C Nickel coin
D Copper pin

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

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11. An experiment was set up as shown below.



Which of the following conditions are needed to ensure that the paper clip remains in the upright position?

A Sheet X must allow magnetism to pass through.

B Sheet X must be made of non-magnetic materials.

C The paper clip must be made of magnetic materials.

D The magnet must be strong enough to attract the paper clip.

(1) B only

(2) B and C only

(3) A, B and C only

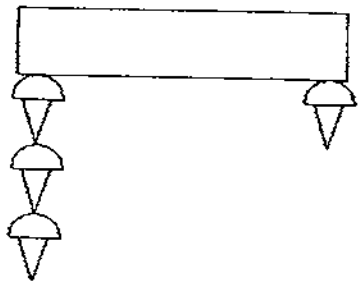
(4) All of the above

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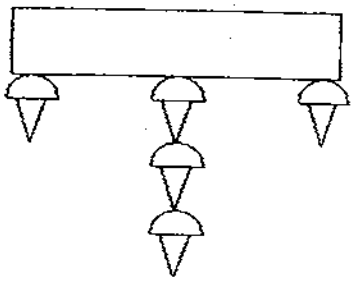
12. A bar magnet was used to attract steel pins which were identical.

Which one of the following diagrams is most likely to be the observation of the magnet and pins?

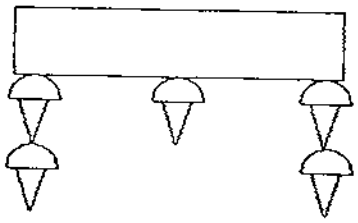
(1)



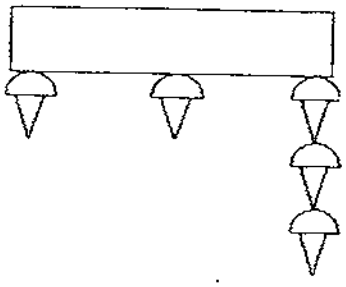
(2)



(3)

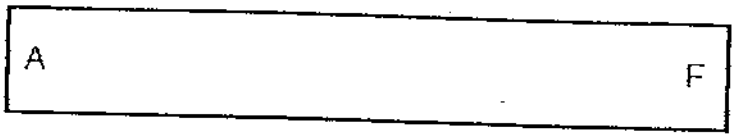


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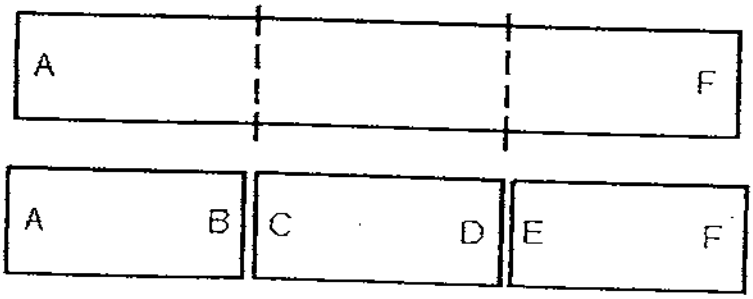


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13. Shun Ping has a bar magnet with two ends marked A and F, as shown below.

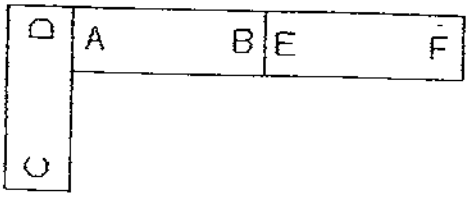


He mischievously cut the magnet into 3 shorter pieces and labelled the ends A, B, C, D, E and F as shown below.

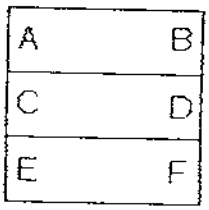


Shun Ping then rearranged the 3 pieces of magnet such that all the pieces of magnets are attracted together. Which one of the following arrangements is correct?

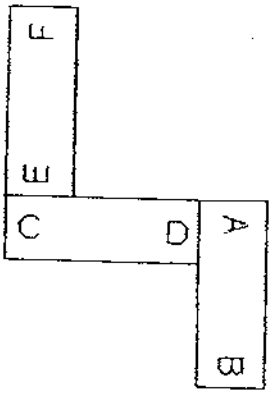
(1)



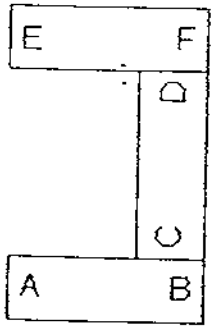
(2)



(3)

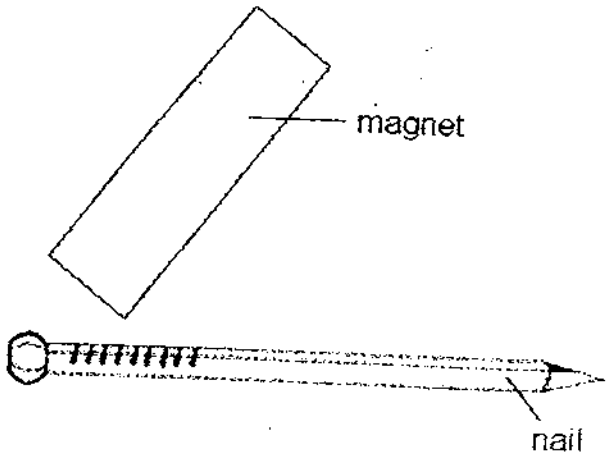


(4)



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14. Kelly tried to make a temporary magnet by stroking a nail with a magnet as shown below.



However, when she placed some iron filings near the nail, she observed that the nail did not attract the iron filings.

Which of the following are possible reasons to explain her observation?

A Kelly had used a copper nail.

B Kelly had used the wrong pole of the magnet to stroke the nail.

C Kelly had stroked the nail with the magnet in an anti-clockwise direction.

D Kelly did not stroke the nail with the magnet in the same direction all the time.

(1) A and B only

(2) A and D only

(3) B, C and D only

(4) A, B, C and D

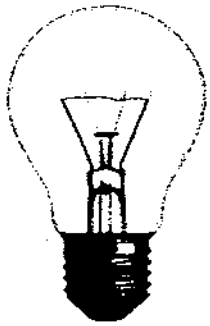
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15. Which one of the following appliances does not make use of magnets to work?

(1)



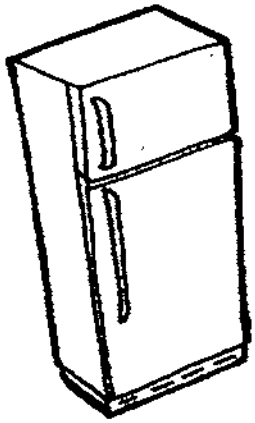
(2)



(3)



(4)

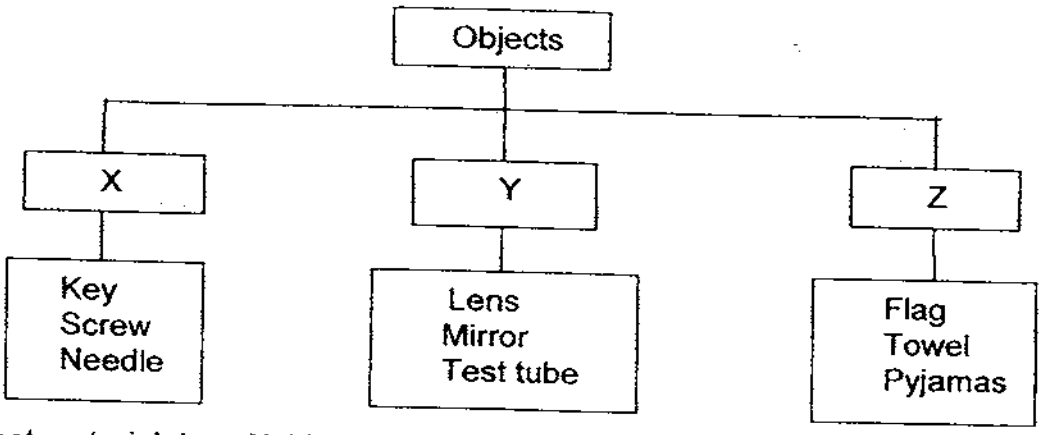


16. Which one of the following objects is not matched correctly to the materials that it is made of?

	Materials	Objects
(1)	Wood and iron	Hammer
(2)	Ceramic and steel	Sink
(3)	Rubber and wood	Screwdriver
(4)	Copper and plastic	Electric plug

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17. The chart below shows how some objects are classified according to the materials that they are made of.



What material does X, Y and Z represent?

	X	Y	Z
(1)	Metal	Wood	Fabrics
(2)	Plastic	Glass	Rubber
(3)	Metal	Glass	Fabric
(4)	Rubber	Plastic	Paper

18. Wei Ming compared the hardness of four objects A, B, C and D by scratching them with different spoons.

He recorded his observations in the table below, using a (√) to indicate the presence of scratch marks on the rocks.

	Presence of scratch marks made by		
Object	Plastic spoon	Wooden spoon	Metal spoon
A		√	√
B			
C	√	√	√
D			√

Which one of the following shows the correct arrangement of the four objects in increasing order of hardness?

Softest ⟶ Hardest

(1) B D A C

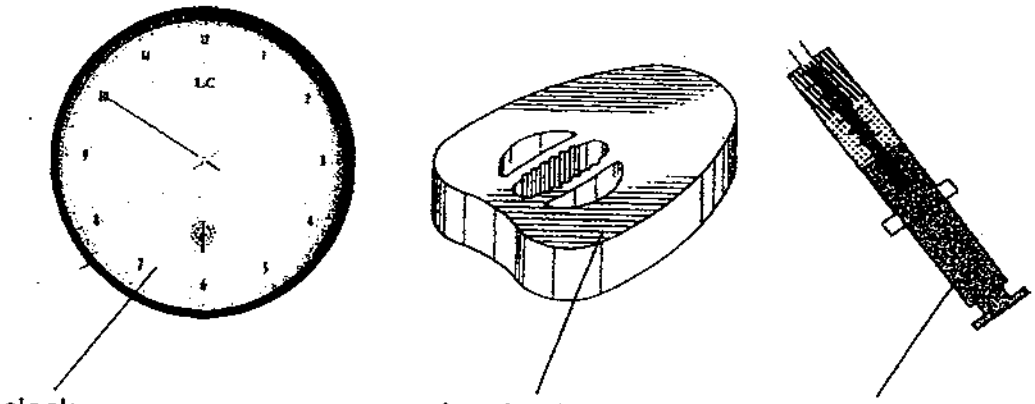
(2) D B A C

(3) C A D B

(4) A D C B

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19. The diagram below shows a clock, a swimming board and a syringe with plunger. The labelled parts of the objects are made of plastic.



clock cover | swimming board | syringe plunger

What properties must the plastic used to make the parts of the above objects have, in order for them to be useful?

	Clock cover	Swimming board	Syringe plunger
(1)	Transparent	Flexible	Able to float
(2)	Strong	Waterproof	Transparent
(3)	Waterproof	Hard	Flexible
(4)	Transparent	Able to float	Strong

20. Ceramics and glass are similar because both are _____.

(1) flexible and strong
(2) flexible and opaque
(3) transparent and can sink
(4) waterproof and break into pieces

21. The _____ carries digested food, oxygen and waste materials to and from different parts of the body.

(1) circulatory system
(2) digestive system
(3) respiratory system
(4) skeletal system

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22. Which one of the following body human systems is matched correctly with its functions stated?

	Human system	Functions
(1)	Muscular system	Enables the body to move
(2)	Skeletal system	Protects the blood vessels
(3)	Respiratory system	Enables the heart to pump blood around the body
(4)	Digestive system	Transports digested food to all parts of the body

23. Which of the following statement(s) is/are true about our skeletal system?

A It supports and gives the body shape.

B It protects important organs in the body.

C It works with the digestive system to digest food.

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

24. Which one of the following pairs of systems work together to allow us to move?

(1) Skeletal and muscular system
(2) Circulatory and digestive system
(3) Digestive and respiratory system
(4) Respiratory and digestive system

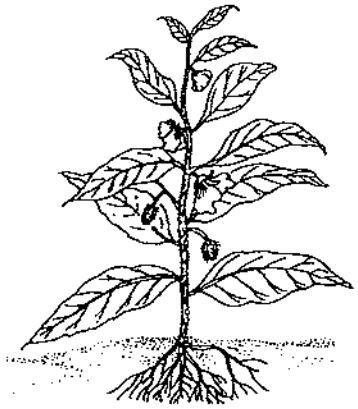
circulatory

25. Which one of the following organ parts are matched correctly with the organ system?

	Organ system	Parts of the organ system
(1)	Respiratory system	Lungs and heart
(2)	Circulatory system	Blood and windpipe
(3)	Skeletal system	Skull and backbone
(4)	Digestive system	Mouth and blood vessels

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26. Look at the two plants carefully.



Land Plant



Water Plant

How are the roots of the above plants similar?

(1) They store food for the plant.

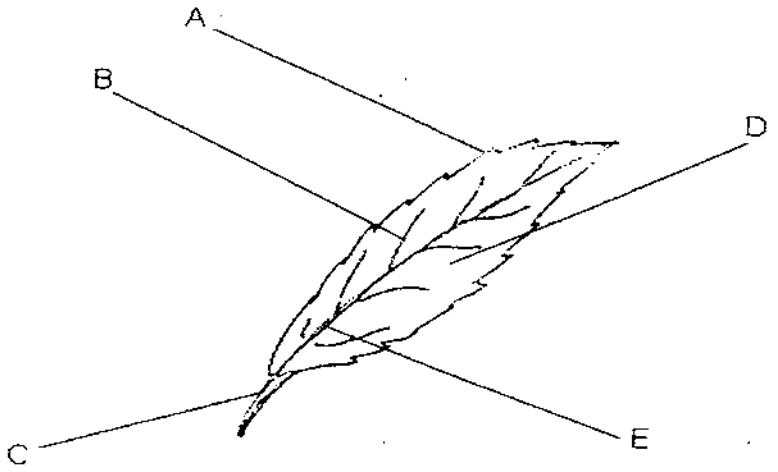
(2) They make food for the plant.

(3) They hold the plant firmly to the soil.

(4) They absorb water and mineral salts for the plant.

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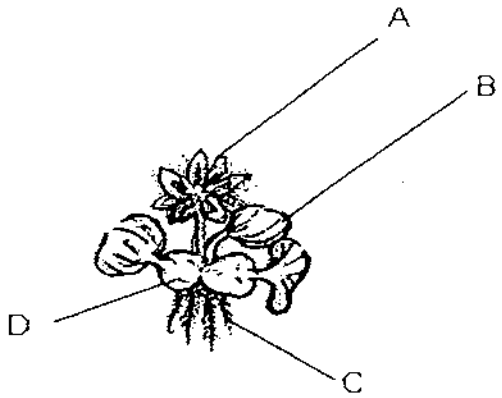
27. In the diagram below, the different parts of the leaf are labelled A, B, C, D and E.



Which one of the following options correctly labels the different parts of a leaf?

	Leaf stalk	Leaf blade	Main vein	Leaf edge
(1)	B	A	D	C
(2)	C	D	E	A
(3)	E	A	C	B
(4)	C	D	B	A

28. Look at the diagram below.

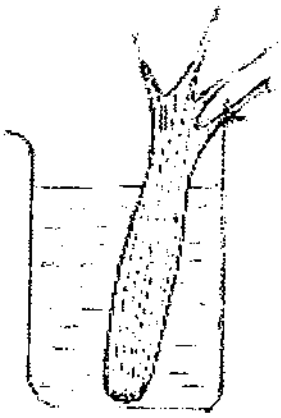


Which part of the plant, A, B, C or D helps it to float on water?

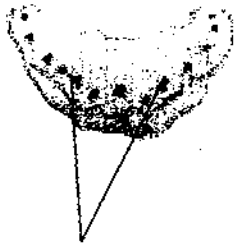
(1) A
(2) B
(3) C
(4) D

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29. Minah placed a stalk of celery in a jar of blue coloured water. After one day, she cut across the stalk and observed the inside of the stalk. She noticed that parts of the stalks were coloured blue.



Stalk of celery in jar of blue coloured water



Parts of stalk were coloured blue

What was she trying to show in the above experiment?

(1) The stem has tubes to store food.

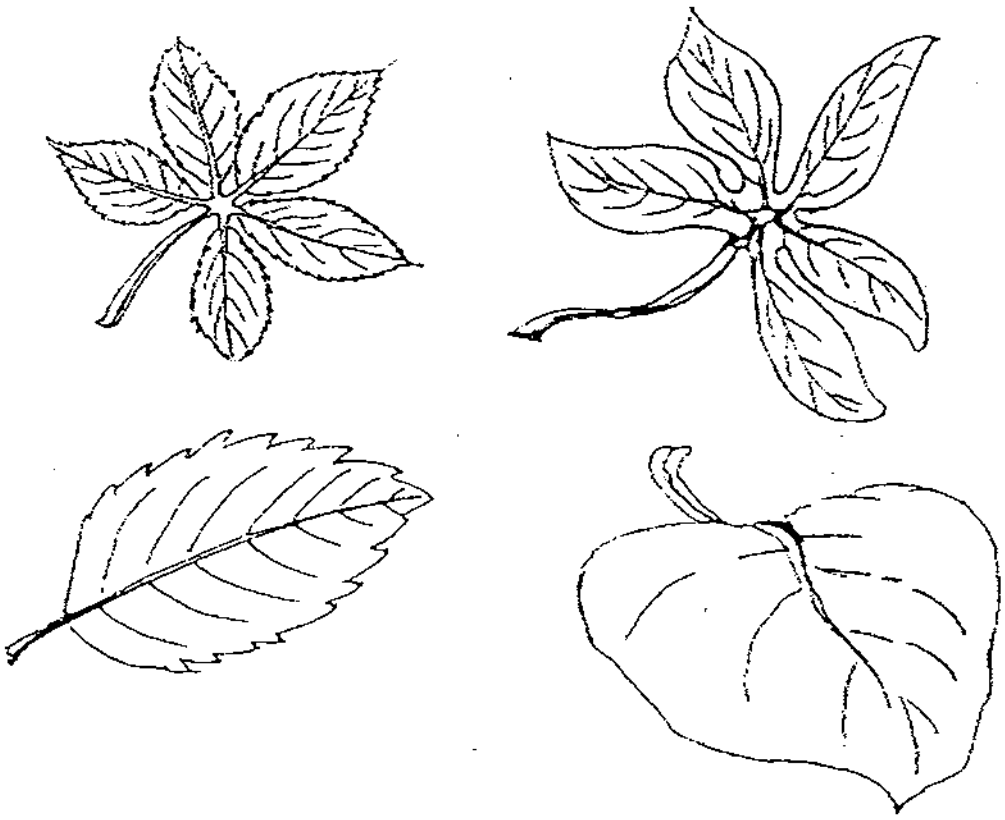
(2) The stem has tubes to carry water.

(3) The stem helps the plant to stay upright.

(4) The stem carried water to the leaves to make food.

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30. Ahmad was given four leaves to classify.



Based on the above diagrams, Ahmad was able to classify them according to _____.

A The vein pattern

B The edge of the leaves

C The shape of the leaves

(1) A and B only

(2) A and C only

(3) B and C only

(4) A, B and C

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PRIMARY THREE SCIENCE

SEMESTRAL ASSESSMENT 2

2009

BOOKLET B

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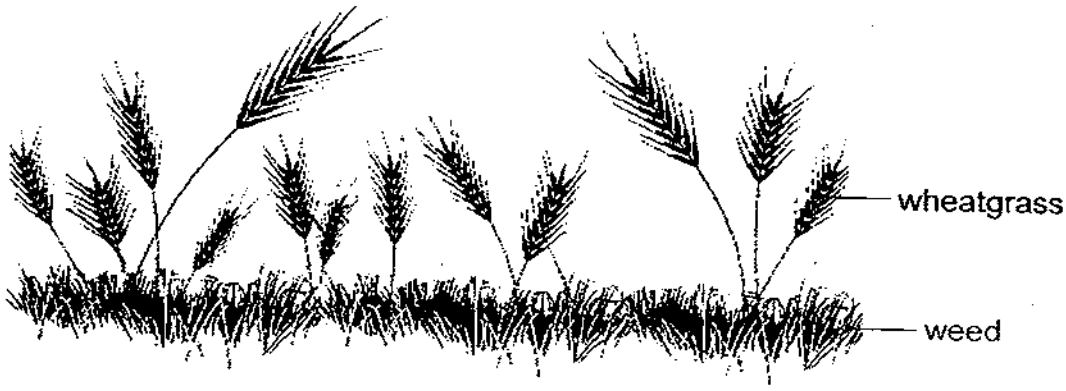
Booklet B consists of 16 printed pages including this cover page.

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Section B (40 marks)

Write your answers to questions 31 to 46 in the spaces provided.
Marks will be deducted for misspelt key words.

31. The diagram below shows some weeds growing among a crop of wheatgrass.



(a) Name the process through which green plants make food. [1]

_____

(b) When the weeds were growing among the crops, it was found that the wheatgrass did not grow well. Explain why this is so. [1]

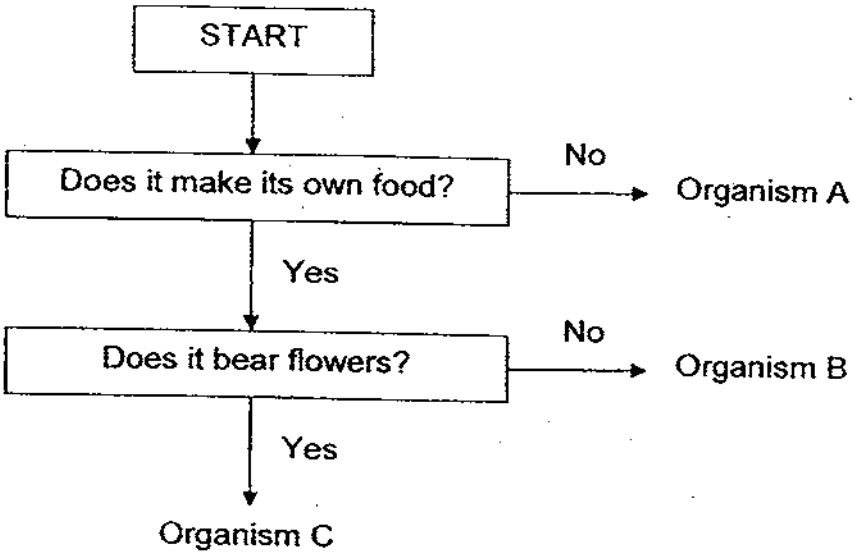
_____

_____

_____

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32. The flowchart below is used to classify 3 organisms, A, B and C.



(a) Based on the information given in the flowchart, write down two characteristics of organism C. [1]

_____

_____

(b) Which organism, A, B or C best represents 'moss'? [1]

_____

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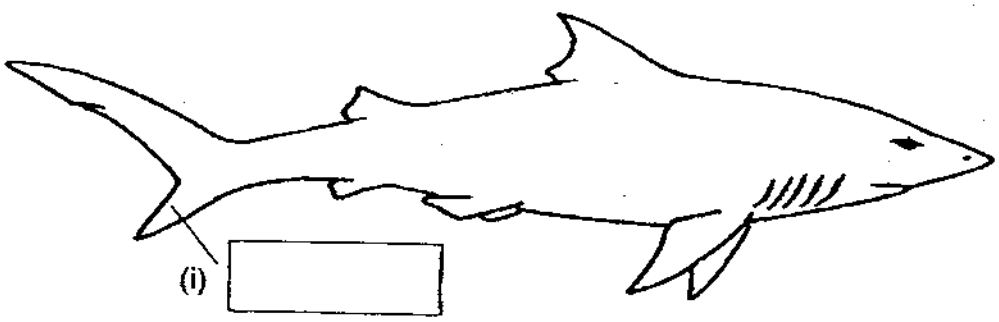
33. Complete the classification table below by using the plants listed in the box below, and fill in suitable headings for each group. [2]

Cactus	Frangipani	Fern
Casuarina	Coconut tree	Orchid

Heading:	Heading:

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34. The diagram below shows a shark.



(a) Label part (i) of the shark in the diagram above. [½]

(b) State the function of the part labelled (i). [½]

_____

_____

(c) A shark and a whale obtain oxygen from the surroundings in different ways. Name the parts that allow them to do so. [1]

Shark: _____

Whale: _____

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35. State one similarity and one difference between a platypus and a penguin. Do not compare their shape, size and colour.

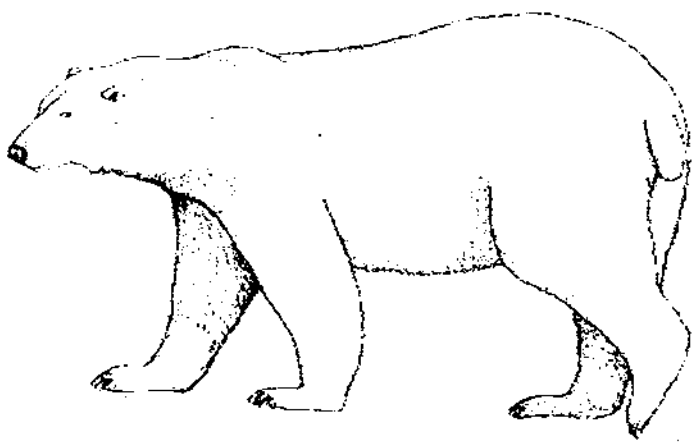
Similarity: _____ [1]

_____

Difference: _____ [1]

_____

36. The following diagram shows a polar bear.



(a) State the body covering of the polar bear. [1]

_____

(b) Besides keeping the polar bear warm, state another use of the body covering mentioned in (a). [1]

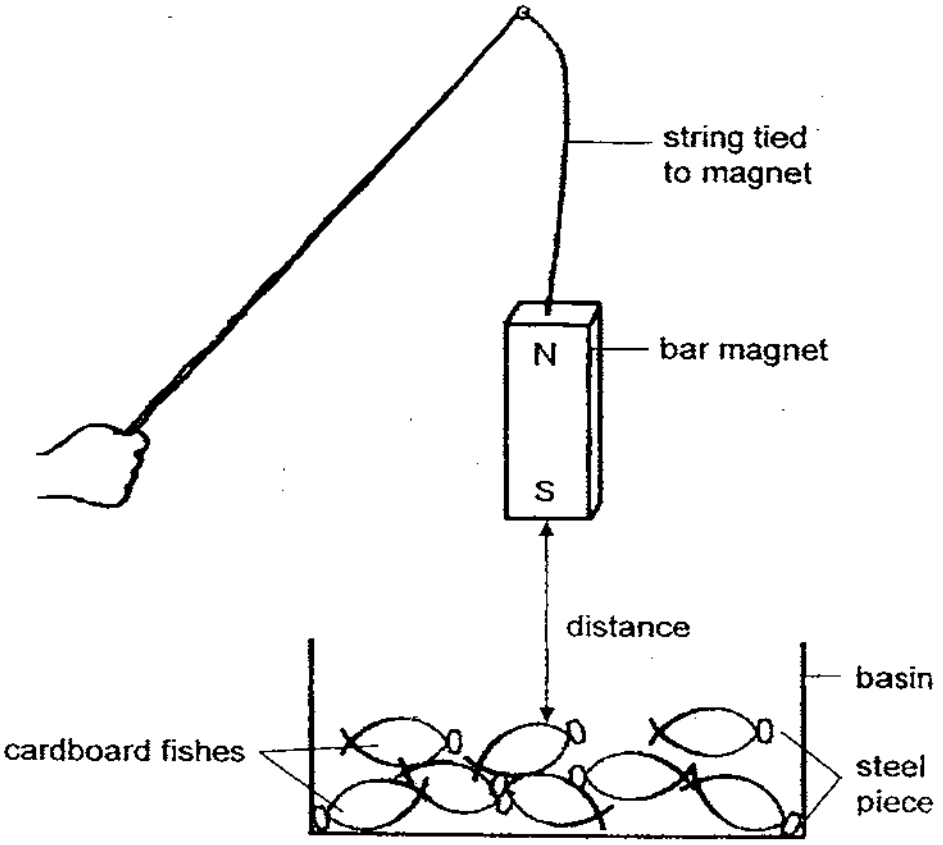
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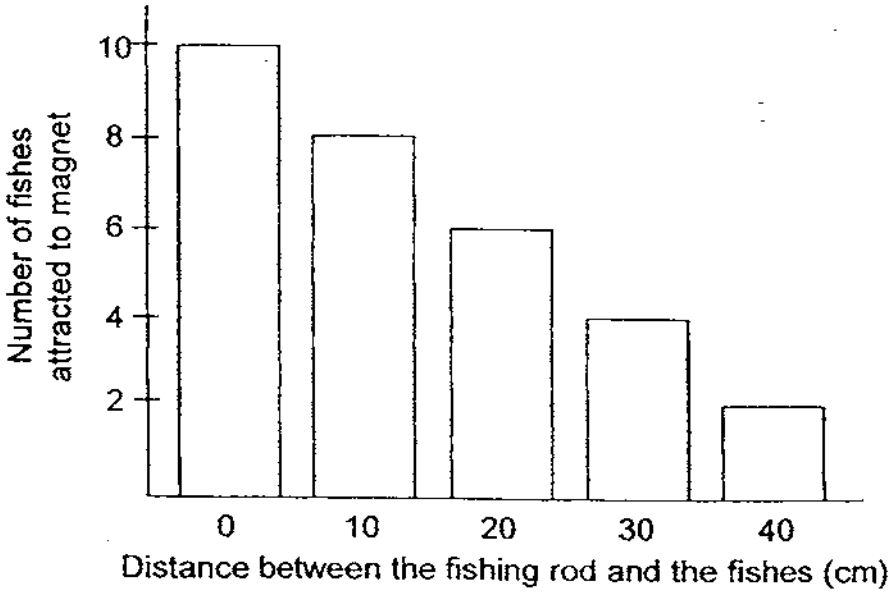
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37. Gopal made a simple fishing rod by tying a strong bar magnet to the end of a string. He cut out some cardboard fishes and attached a steel paper clip to each of the fish.

At first, the South pole of the magnet was closer to the fishes.



He recorded the number of fishes that were attracted to the magnet at different distances and drew the bar chart as shown below.



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(a) Predict the number of fishes that would be attracted when the rod is 25 cm away from the fishes. [1]

_____

(b) Gopal turned the magnet around such that the North pole of the magnet was nearer to the fishes. When the North pole of the magnet was 10cm away from the fishes, how many fishes would most likely be attracted? [1]

_____

_____

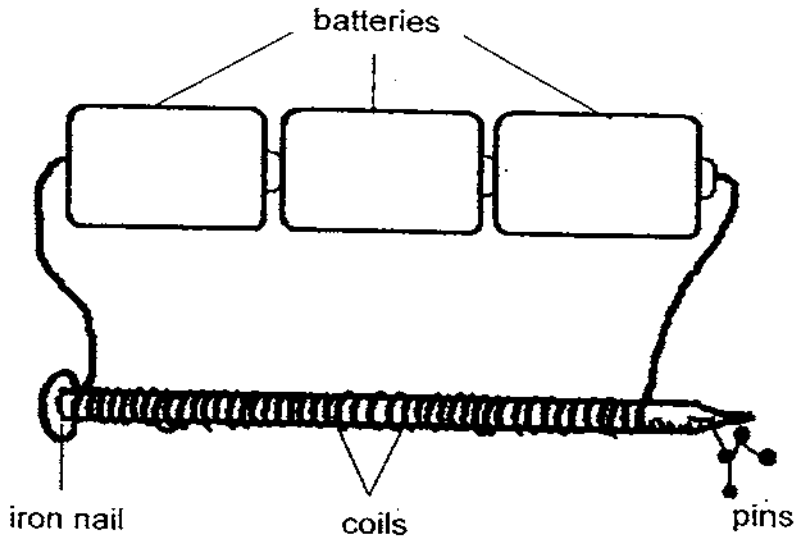
(c) Gopal replaced the fishes and steel paper clips with metallic coins which were light. He observed that the coins were not picked up. Explain why. [1]

_____

_____

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38. Hui Ping wanted to find out how the number of coils around an iron nail affects the strength of an electromagnet. She set up an experiment as shown below.



She varied the number of coils around the iron nail and recorded the number of pins attracted to the electromagnet. The following table shows her results.

Number of coils	Number of pins attracted
40	4
60	7
80	10
100	12
120	12
140	?

(a) State the relationship between the number of coils around the iron nail and the strength of the electromagnet. [1]

_____

_____

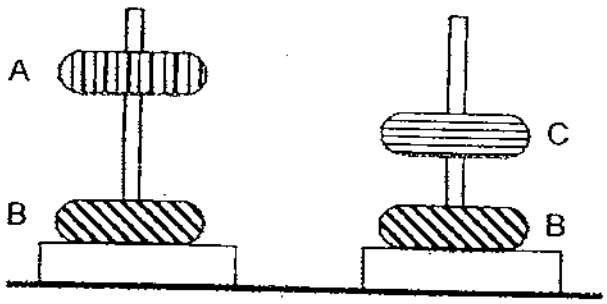
(b) In the table above, what is the most likely number of pins to be attracted when 140 turns of coils is used? [1]

_____

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39. The following diagram shows 2 set-ups. Three ring magnets, A, B and C of the same mass are used. Each magnet has a different magnetic strength.

In each set-up, two magnets are slotted through a wooden stick. The amount of repulsion between the two magnets is observed.

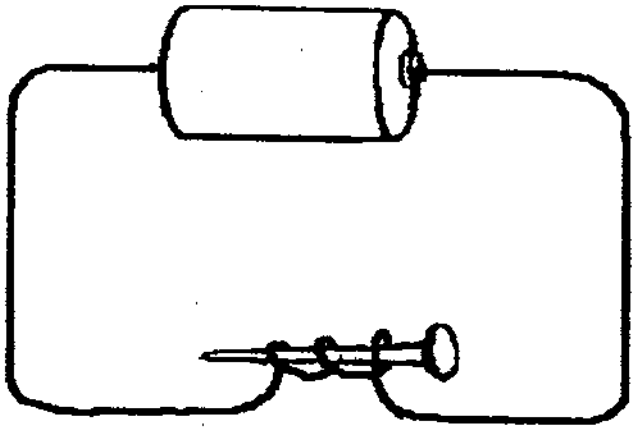


(a) Explain why magnet A and B are repelling each other. [1]

(b) From the above diagram, which magnet is definitely stronger than magnet C? [1]

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40. Aziq was given a new battery, a steel nail and a piece of insulated copper wire. He made an electromagnet as shown below.



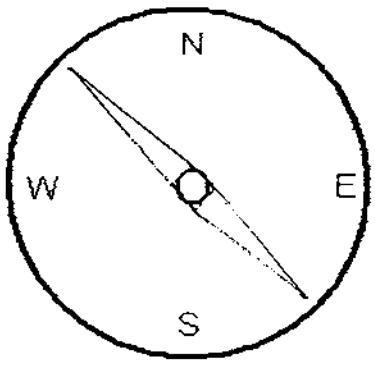
However, he observed that the nail did not attract any iron filings.

(a) Suggest a possible reason why his electromagnet failed to work. [1]

_____

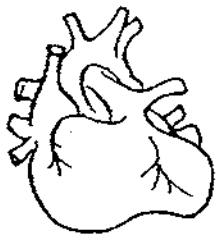
_____

(b) The diagram below shows a compass. Shade on the diagram, the part of the compass which is a magnet. [1]

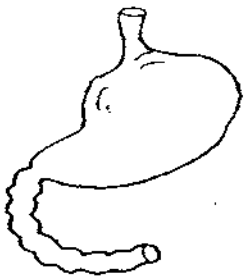


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41. Name the two organs below.



Organ X



Organ Y

(a) Organ X: _____ [½]

Organ Y: _____ [½]

(b) Which organ will work faster when we run continuously for half an hour? [1]

_____

(c) Which organ helps to pump blood around the body? [1]

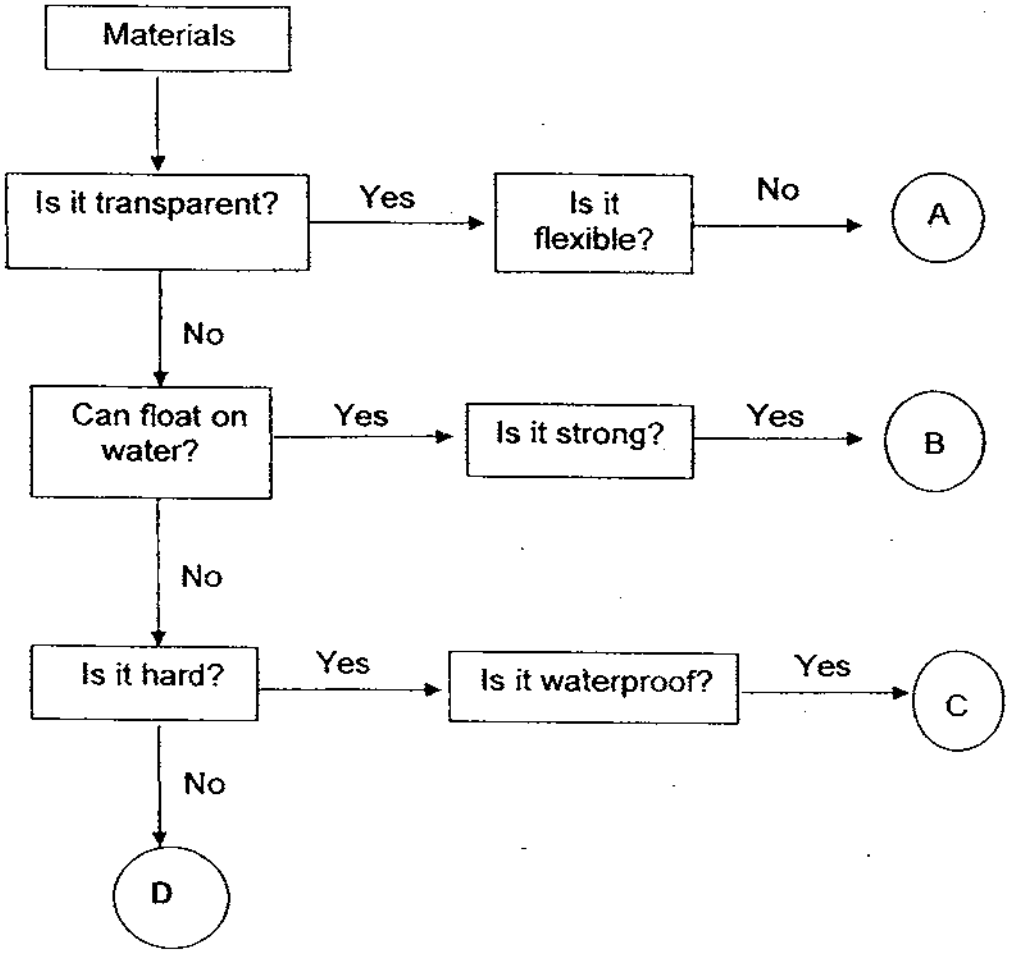
_____

42. The table shows the functions of parts of the human organ system. Fill in the blanks below with the correct organ part. [2]

	Functions	Parts of the Organs System
(a)	Protects the lungs and heart.	
(b)	Absorbs water from the undigested food.	
(c)	Enables the limbs to move.	
(d)	Enables the exchange of gases with the surrounding.	

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43. Study the flowchart below carefully.



(a) Write down two properties of material C. [1]

_____

(b) Which letters best represent "wood" and "glass"? [1]

Wood: _____ Glass: _____

(c) State two properties of rubber that make it a suitable material for making rubber boots for firemen. [1]

_____

_____

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44. Look at the plant below.



Bean plant

(a) Explain why the stem needs to twine around a support. [2]

_____

_____

_____

(b) Most stems grow above ground but some grow underground and these stems store food as well.

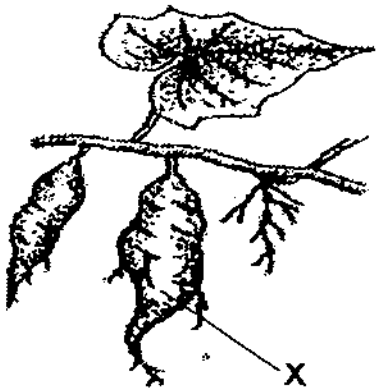
Name 2 plants with such underground stems.

1. _____ [½]

2. _____ [½]

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45. The diagram below shows a sweet potato plant.



(a) Which plant part is X? [1]

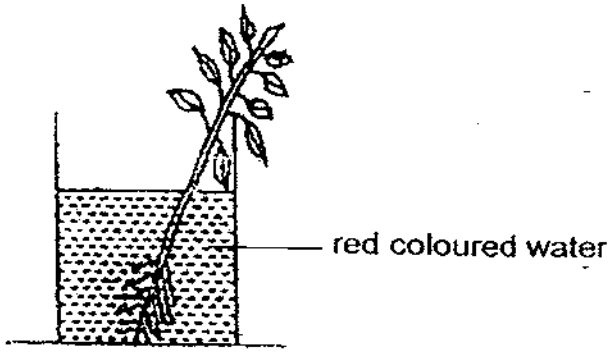
_____

(b) Name 2 functions of X. [1]

_____

_____

46. Sulin put a balsam plant into a beaker of red coloured water. The next day, she noticed the leaves were stained red.



Explain why the leaves were stained red. [2]

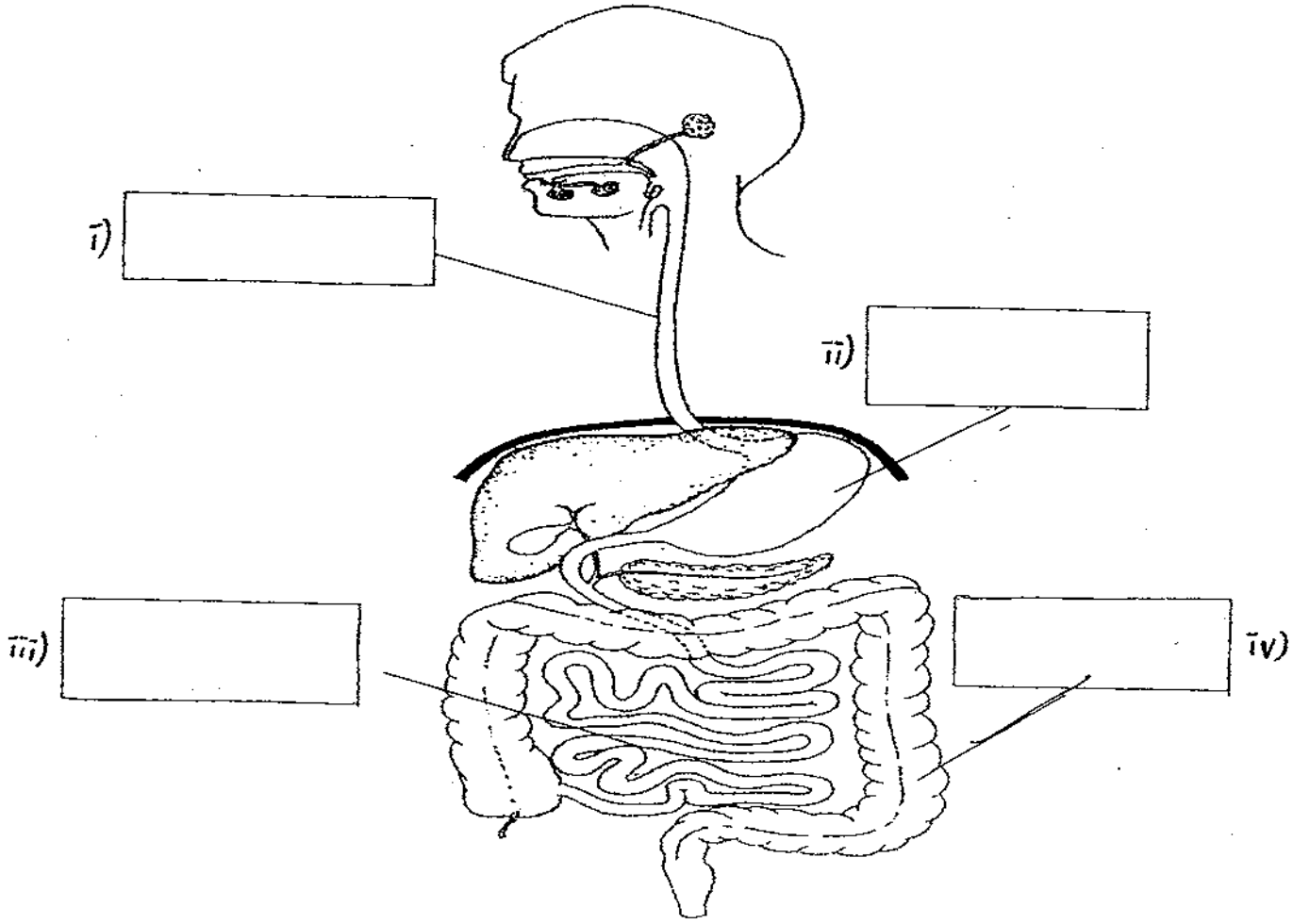
_____

_____

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47. The diagram below shows the human digestive system.



(a) Label the parts of the digestive system by writing the names of the parts in the boxes provided. [2]

(b) State the function of the above system. [1]

_____

_____

(c) In the digestive system, where does the digestion of food start and end?

Digestion of food begins in the _____ and ends [½]

in the _____ [½]

Setters: Mr Low Kiah Wee
Mrs Tan Yoke Cheng

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ANSWER SHEET

EXAM PAPER 2009

SCHOOL : NANYANG PRIMARY
SUBJECT : PRIMARY 3 SCIENCE

TERM : SA2

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

Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
3	4	4	1	1	2	1	3	4	2	4	2	3

31)a)Photosynthesis.
b)Compete for water and mineral salts.

32)a)Organism C can make its own food, and also bear flowers.
b)Organism B.

33)Heading: <u>Flowering.</u>
Coconut-tree
Orchid
Frangipani
Cactus

Heading: <u>Non-flowering</u>
Fern
Casuarina

34)a)i)tail
b)It helps the shark to swim.
c)Shark: Gills Whale: Blowhole

35)Similarity: Both lay eggs to reproduce.
Difference: The platypus is a mammal and the penguin is a bird.

36)a)Fur
b)It helps the polar bear bend in with its surroundings.

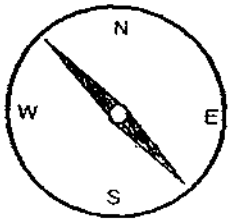
37)a)5 fishes.
b)8 fishes would most likely be attracted.
c)They were made of non-magnetic materials.

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38)a)The more number of coil around the iron nail the stronger the magnet would be.
b)12

39)a)The poles of magnets A and B that are facing each other are like poles.
b)magnet A.

40)a)There are not enough coils around the nail.
b)



41)a)X: Heart Y: Stomach
b)Organ X.
c)Organ X.

42)a)Ribcage b)Large intestine c)Muscles d)Lungs

43)a)It is hard and waterproof.
b)Wood: B Glass: A
c)It is waterproof and does not gain heat easily.

44)a)It's stems are weak and is reaching out for sunlight.
b)1: Potatoes. 2: Yam

45)a)Roots.
b)It stores food and absorbs water and mineral salts from the soil.

46)The stem has transported the water to the leaves.

47)a)i)gullet ii)stomach iii)small intestine iv)large intestine
b)Breaks down food into simpler substance which the food go to other part easily.
c)Mouth, small intestine

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