



RAFFLES GIRLS' PRIMARY SCHOOL

SEMESTRAL ASSESSMENT (2)

2013

Name : _____ Index No: _____ Class: P 3 _____

21 October 2013

SCIENCE

Attn: 1 h 15 min

Section A	4
Section B	3
Your score out of 80 marks	
Parent's signature	

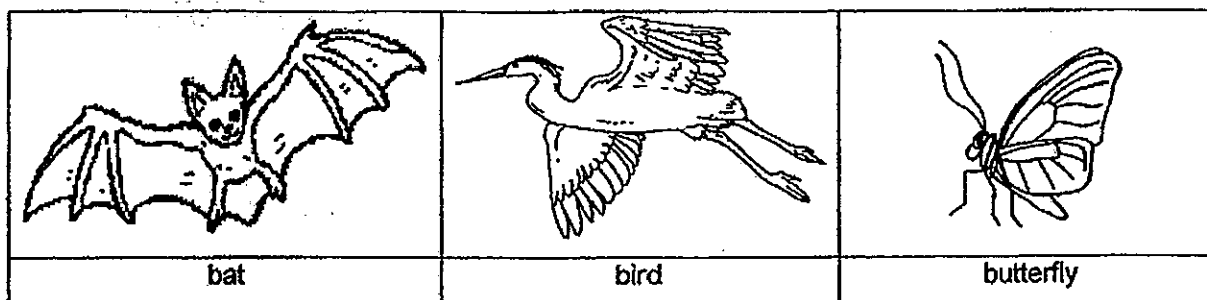
SECTION A (24 X 2 marks)

For each question from 1 to 24, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet (OAS).

1. Which one of the following statements about living things is true?

- (1) All living things need food to live.
- (2) All living living things will survive without water.
- (3) Living things are only made up of plants and animals.
- (4) All living things reproduce by giving birth to live young.

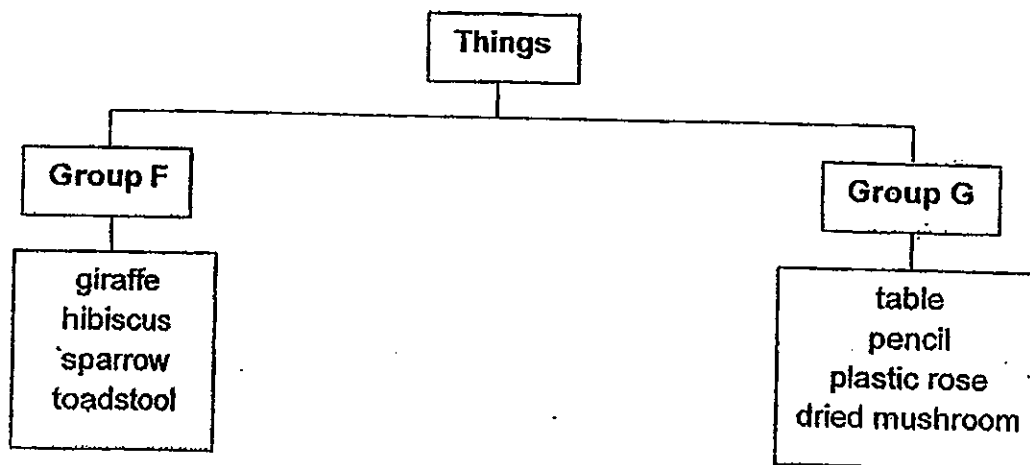
2. The following diagram shows three animals (not drawn to scale).



What are 2 observable characteristics that they all have in common?

- (1) fur and legs
- (2) fur and feathers
- (3) wings and legs
- (4) wings and feathers

3. Two different groups of things are shown in the diagram below.



Which of the following could possibly represent F and G?

	Group F	Group G
A	alive	not alive
B	make their own food	cannot make their own food
C	can respond to changes	cannot respond to changes
D	can move from place to place	cannot move from place to place

(1) A only

(3) A and C only

(2) A and B only

(4) A, B, C and D

4. The following classification charts, A, B, C and D, show 4 ways of grouping insects.

A	B	C	D
<p style="text-align: center;">Insects</p> <div style="display: flex; justify-content: space-around;"><div>Lay eggs</div><div>Give birth</div></div>	<p style="text-align: center;">Insects</p> <div style="display: flex; justify-content: space-around;"><div>Has 6 legs</div><div>Has 8 legs</div></div>	<p style="text-align: center;">Insects</p> <div style="display: flex; justify-content: space-around;"><div>Has 2 body parts</div><div>Has 3 body parts</div></div>	<p style="text-align: center;">Insects</p> <div style="display: flex; justify-content: space-around;"><div>Has 1 pair of wings</div><div>Has 2 pairs of wings</div></div>

Which of the following classification chart(s) is/ are incorrect?

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

5. Leela observed an animal and made the following observations:

- It has gills.
- It has tail and fins.
- It give birth to live young.
- It has a body covering of scales.

Which one of the following animals did Leela most likely observe?

- (1) whale
- (2) guppy
- (3) dolphin
- (4) crocodile

6. The table below shows the characteristics of animals W, X, Y and Z.

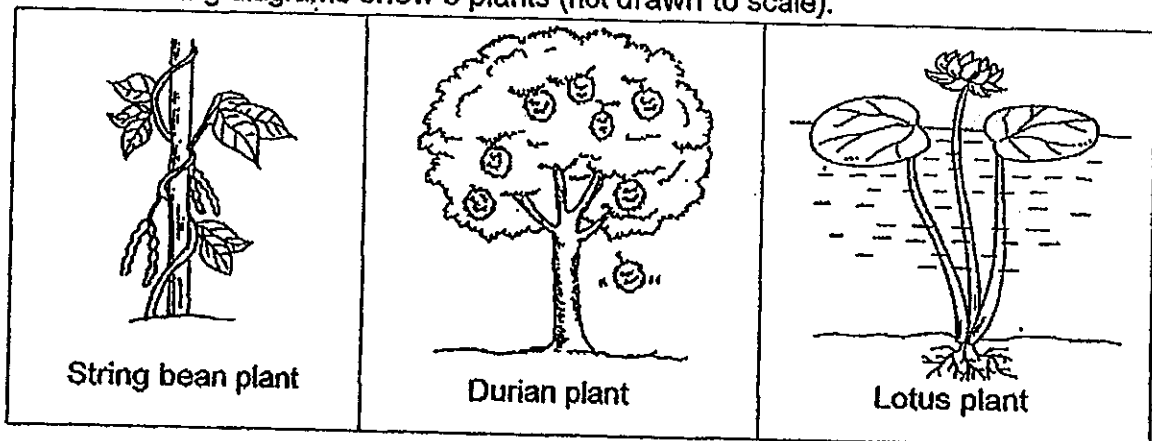
Animals	Has 2 legs	Has 4 legs	Has wings	Feed their young with milk
W	√		√	
X	√		√	√
Y	√			√
Z		√		√

Based on the table above, which of the following statements is/ are true?

- A Animal X is an insect.
- B Only animal Z is a mammal.
- C Both animals W and X are birds.
- D Animals X, Y and Z are mammals.

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

7. The following diagrams show 3 plants (not drawn to scale).



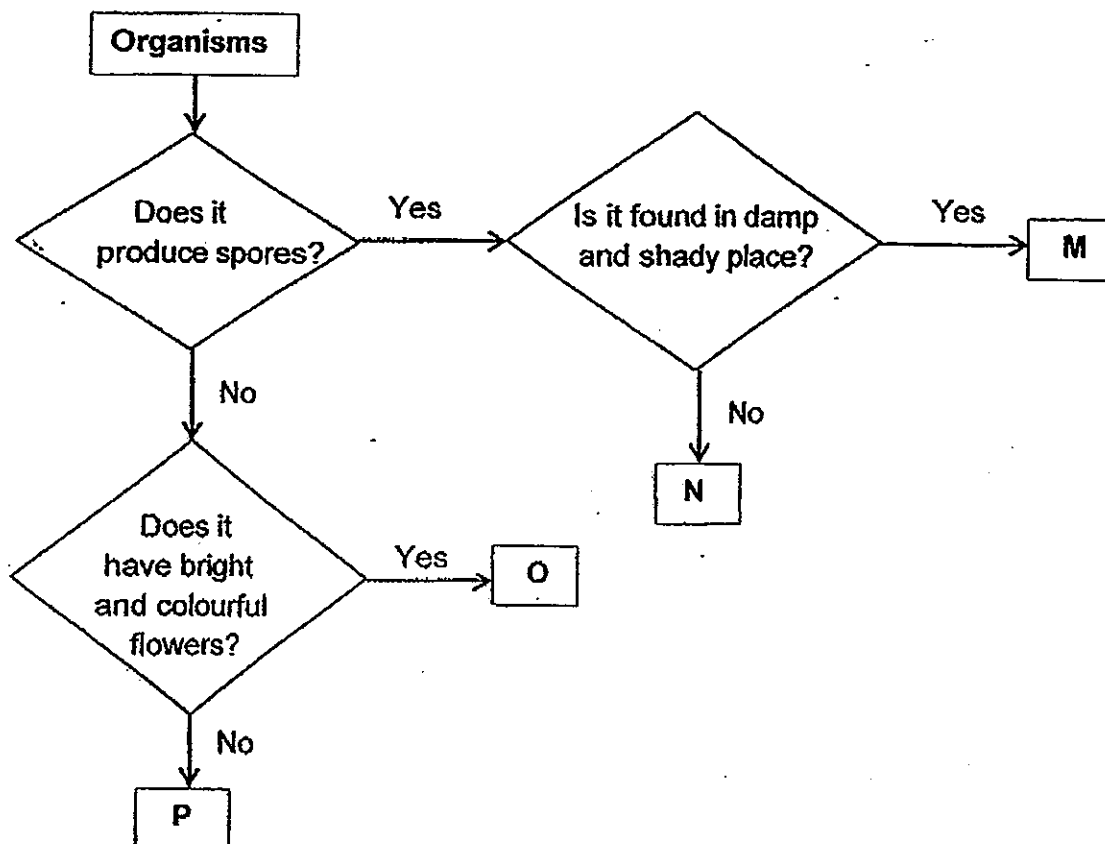
What are the similarities of the 3 plants shown above?

- A They are land plants.
- B They are flowering plants.
- C They reproduce by seeds.

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

8. Peter found an organism Z in a park. He recorded his observations of Z in the table below.

It produces spores.	✓
It has bright and colourful flowers.	x
It is found in damp and shady area.	✓



Which one of the following best represents organism Z?

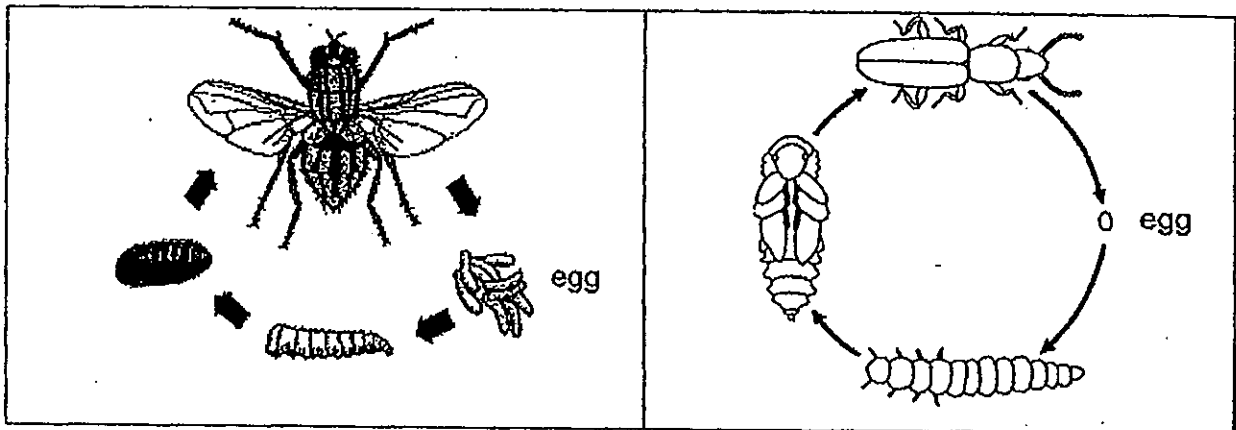
- | | |
|-------|-------|
| (1) M | (2) N |
| (3) O | (4) P |
9. Which one of the following statements about fungi is true?

- (1) All have seeds.
- (2) All can make their own food.
- (3) All get their food from dead things.
- (4) All cannot be seen with our naked eyes.

10. Which one of the following best represents one particular stage in a life cycle?

- (1) A tiger running
- (2) A leaf falling
- (3) A seed sprouting
- (4) A bird feeding on seeds

11. The diagrams below show the life cycles of two different animals.



Which of the following statements of the two life cycles above are correct?

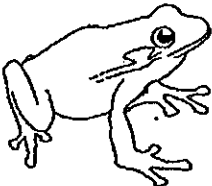
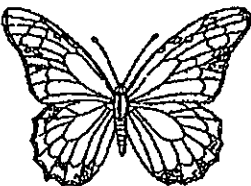
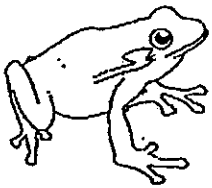

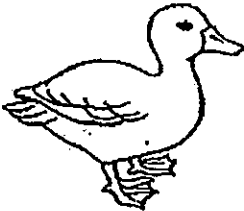
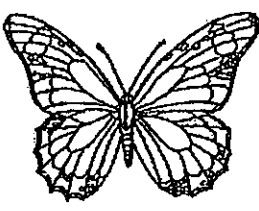
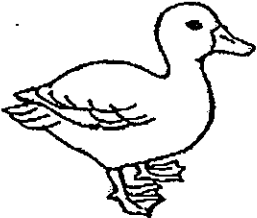

- A They have a 4-stage life cycle.
- B Their pupa feeds on the same diet as the adult.
- C They do not eat when they are at their pupal stage.
- D The diet of the larva is different from the diet of the adult.

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

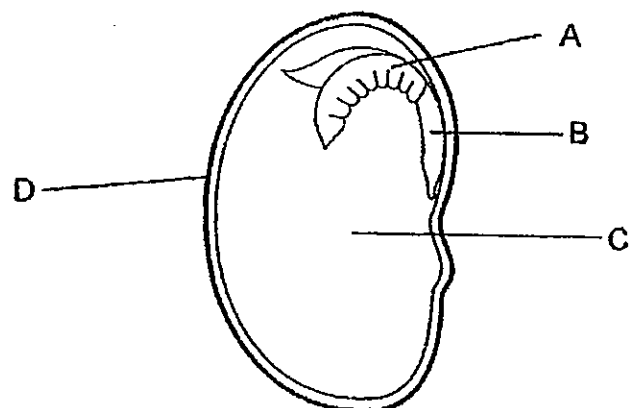
12. The information of animals G and H are given in the table below.

Questions	Animal G	Animal H
Does the young look like its parent?	Yes	No
Do both the young and adult live on land?	Yes	No
How many stages are there in its life cycle?	3	4

Based on the information above, which of the following best represent animal G and H? (Note: the diagrams are not drawn to scale)

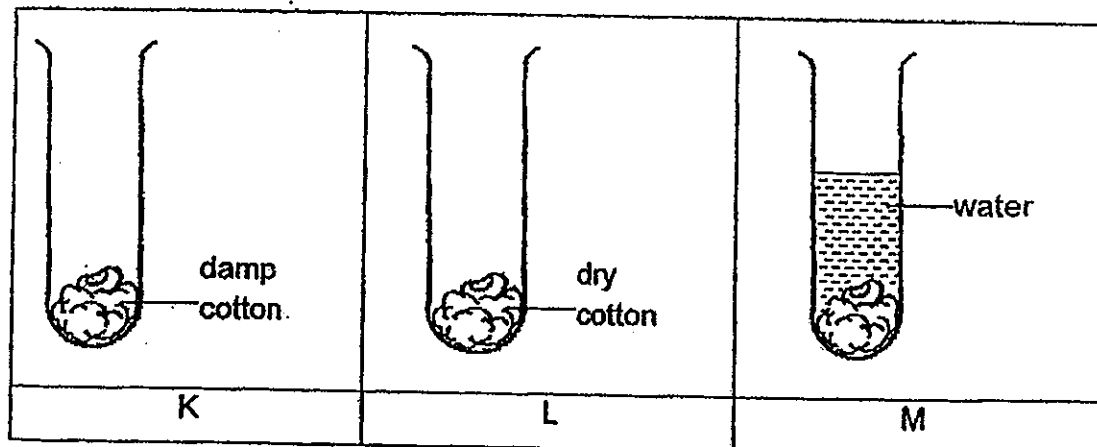
	Animal G	Animal H
(1)		
(2)		
(3)		
(4)		

13. The diagram below shows a seed with its labelled parts A, B, C and D.



Which part of the seed protects the baby plant?

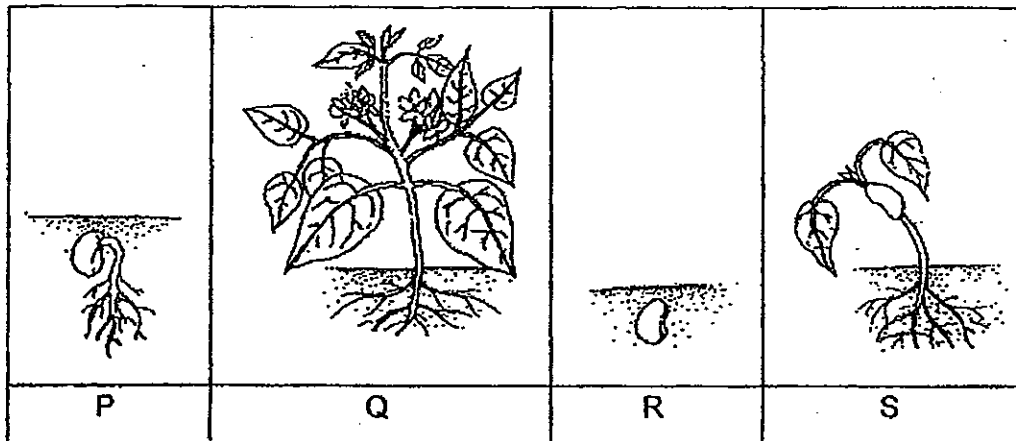
- (1) A (2) B
(3) C (4) D
14. A seed of the same type was placed in each of the set-ups, K, L and M. The set-ups were placed in a room as shown in the diagram below.



In which of the following set-up(s) will the seed most likely to develop a root after some time?

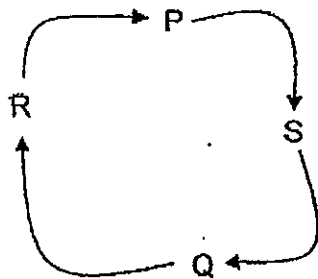
- (1) K only (2) M only
(3) K and M only (4) K, L and M

15. The pictures below shows a plant at different stages of development, not arranged in order.

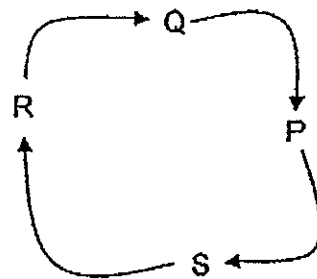


Which one of the following shows the correct sequence of growth of the seed?

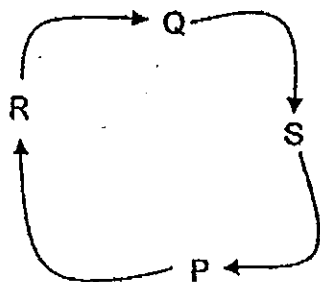
(1)



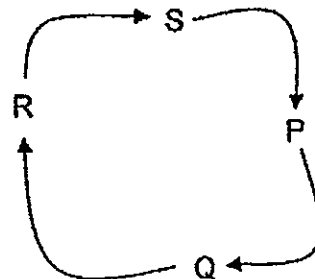
(2)



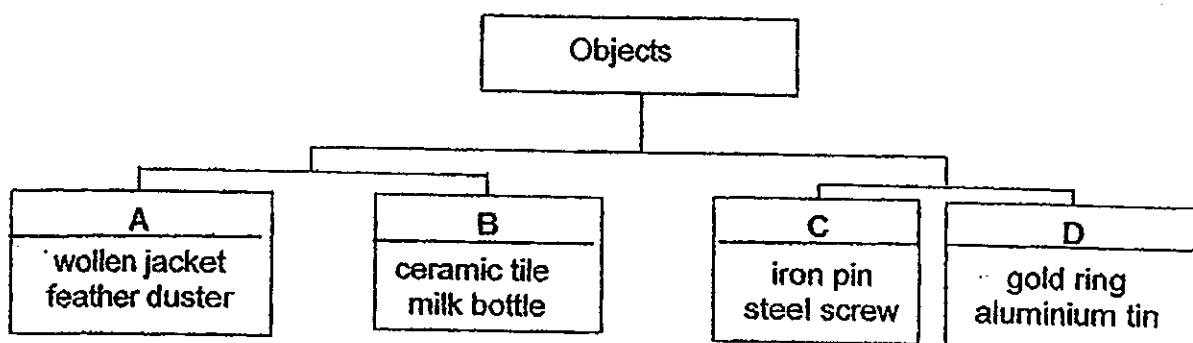
(3)



(4)

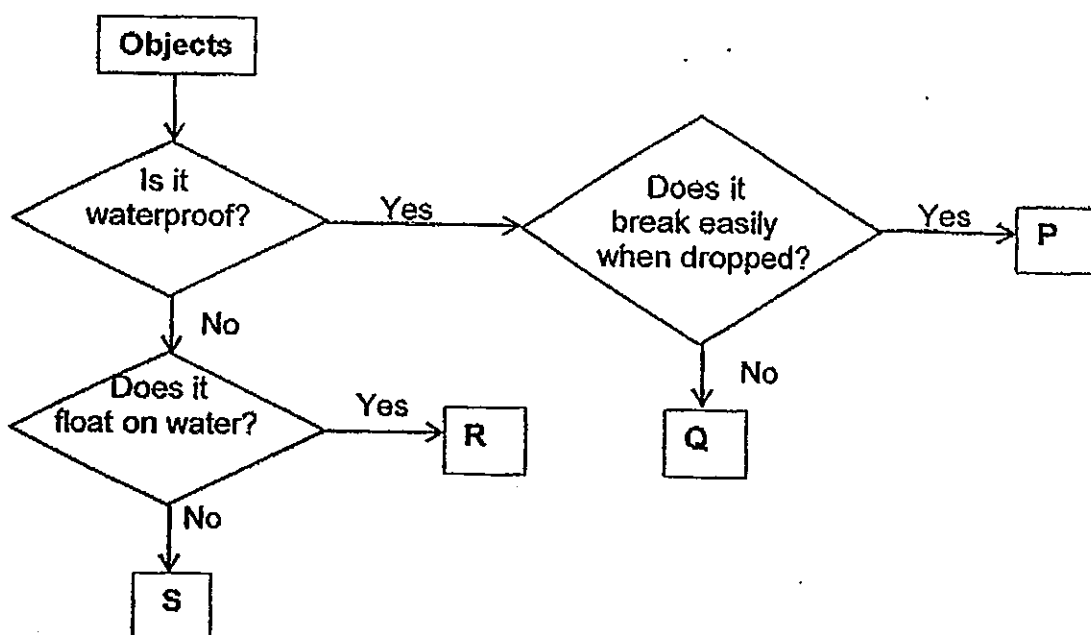


16. The classification chart below shows how some objects are classified.



Based on the information above, in which group, A, B, C or D, should a leather wallet be placed?

- (1) A
(2) B
(3) C
(4) D
17. Four objects, P, Q, R and S, each made of a different material, were grouped using the flow chart as shown below.

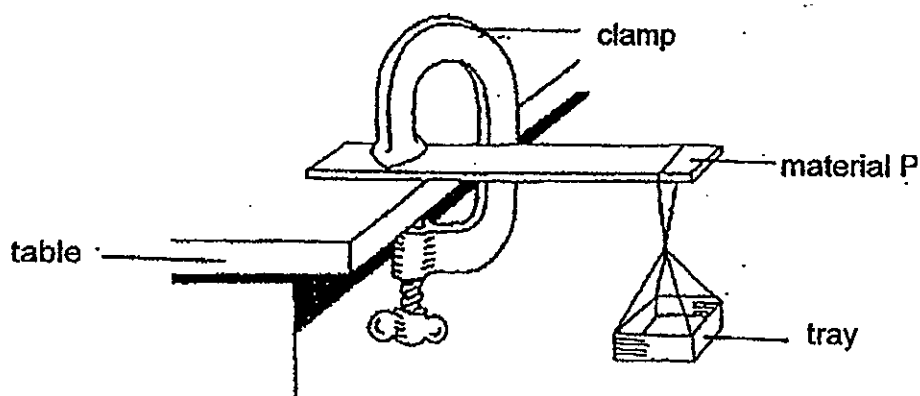


Which one of the following identifies objects P and R correctly?

	P	R
(1)	mirror	marble
(2)	mirror	toothpick
(3)	rubber band	marble
(4)	rubber band	toothpick

18. Min Li used the following set-up to find out which type of material, P, Q or R, was the strongest. The materials were of the same thickness and length.

She clamped one end of material P on a table and hung a tray on its other end as shown in the diagram below.



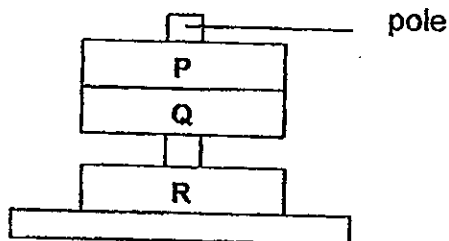
Min Li put a 5-g weight on the tray, one at a time, until the material P began to break. She repeated the same experiment by replacing material P with Q and R respectively.

At the end of her experiment, Min Li concluded that R was the strongest and Q was stronger than P.

Which one of the following most probably shows Min Li's results of her experiment?

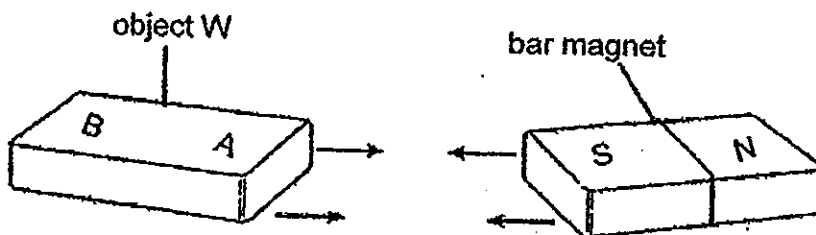
Minimum number of 5-g weights on the tray that caused the material began to break			
	P	Q	R
(1)	3	7	16
(2)	10	7	16
(3)	16	3	7
(4)	16	7	3

19. Janet placed three rings, P, Q and R, of the same size and thickness through a pole. The diagram below shows Janet's observation.



Based on Janet's observation, which one of the following statements about the rings is definitely true?

- (1) Rings P and Q were magnets.
 - (2) Like poles of rings Q and R were facing each other.
 - (3) Unlike poles of rings P and R were facing each other.
 - (4) Two of the three rings were made of a non-magnetic material.
20. Minah brought a strong bar magnet near object W. The bar magnet attracted part A of object W to its S-pole as shown in the diagram below.



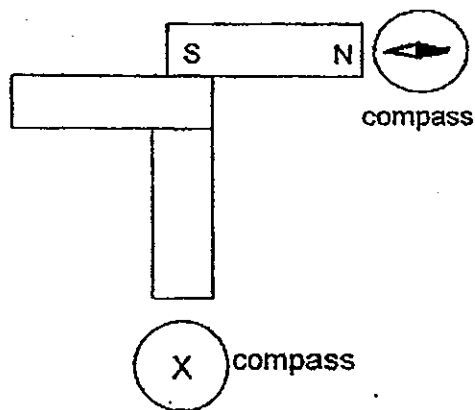
Based on the above observation, Minah made the following conclusions:

- A Object W is a magnet.
- B Object W is made of a magnetic material.
- C The N-pole of the bar magnet would repel part A of object W.

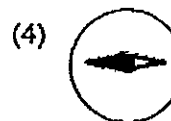
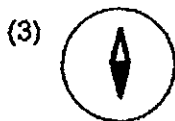
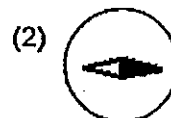
Which of Minah's conclusions is/ are definitely correct?

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

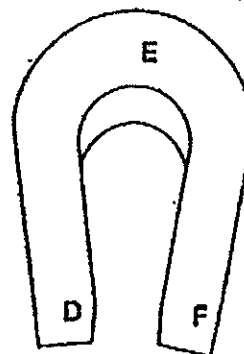
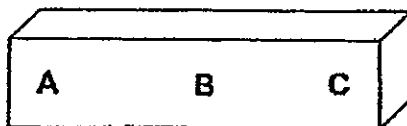
21. Jim arranged three magnets as follows.



Which one of the following diagrams shows the correct position of the needle in compass X?



22. The diagram below shows 2 magnets.



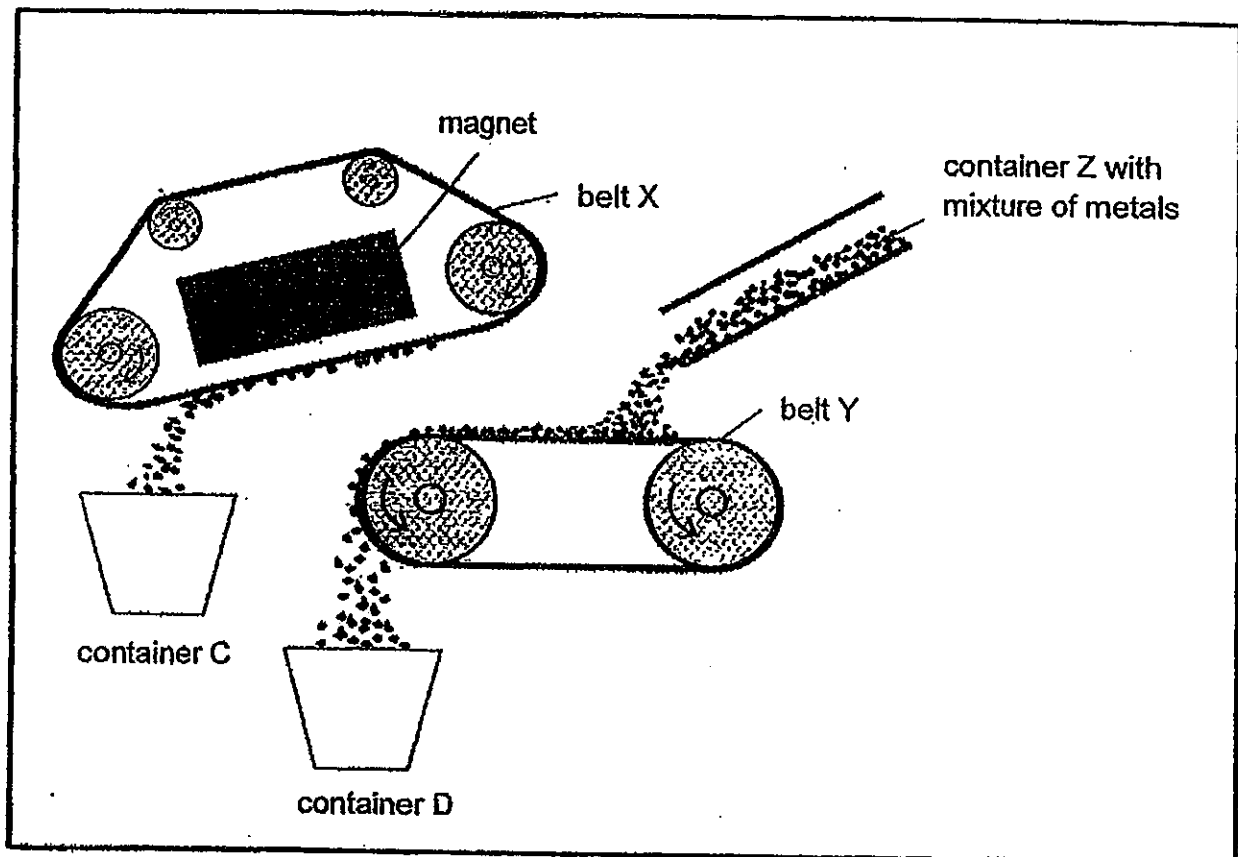
Which parts of the 2 magnets will attract the most number of paper clips?

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

23. Mr Lee used the following machine which consists of 2 moving belts, X and Y, to separate magnetic metals from non-magnetic metals.

The 2 belts are moving at the same time. Moving belt X contains a strong magnet as shown in the diagram below.

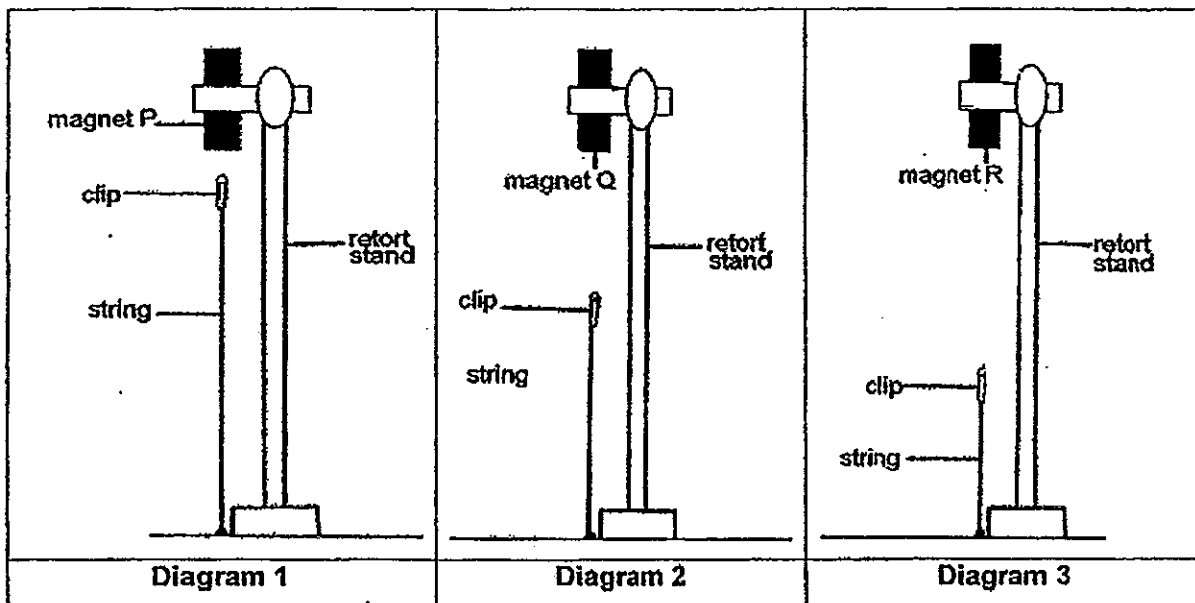
He started the separation process by first pouring a mixture of metals from container Z onto the moving belt Y.



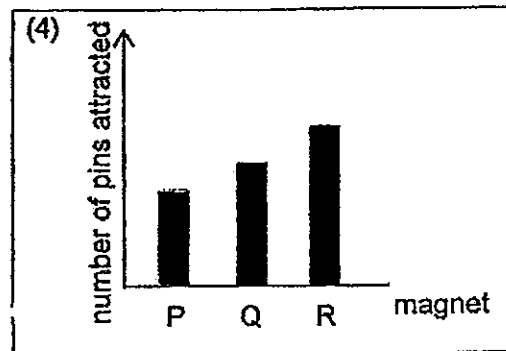
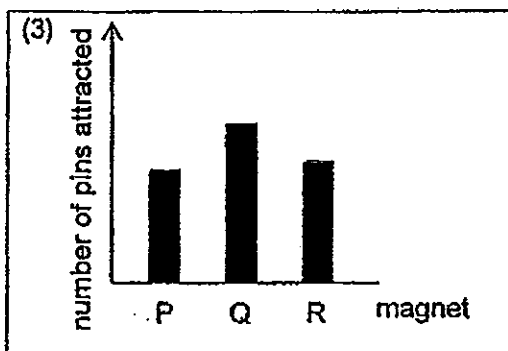
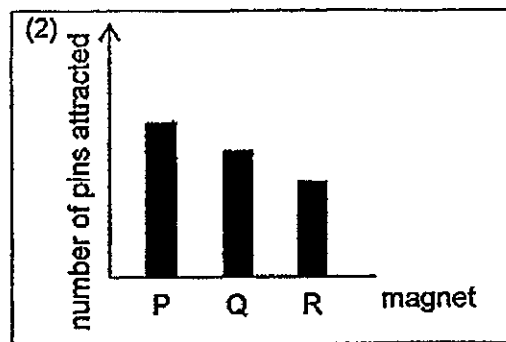
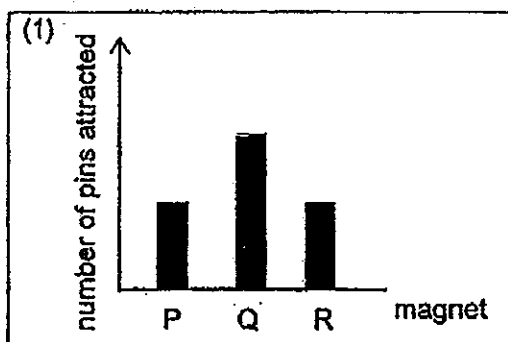
Which of the following container(s) would contain only the non-magnetic metals after the separation process?

- | | |
|------------------|------------------|
| (1) C only | (2) D only |
| (3) C and D only | (4) C and Z only |

24. Kumar wanted to find out the magnetic strength of magnets P, Q and R. He hung the magnet above a paper clip attached to a string. He adjusted the length of the string until the magnet started to attract the paper clip as shown in the diagrams below.



Based on the information above, which one of the following graphs would show the correct number of pins attracted by magnets P, Q and R?



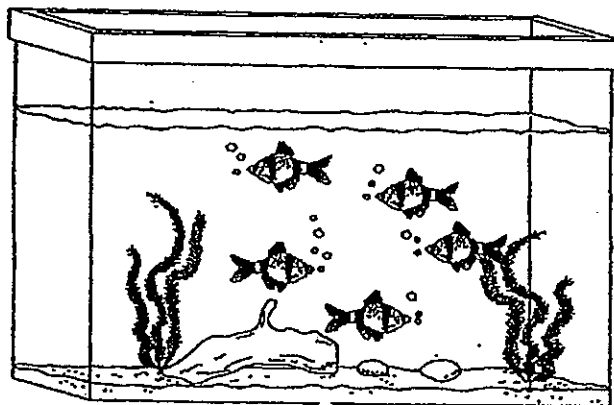
Name : _____ Index No: _____ Class: P3_____

32

SECTION B (32 marks)

For questions 25 to 39, write your answers clearly in the spaces provided.
The number of marks available is shown in brackets [] at the end of each question or part question.

25. Amy kept fishes in a fish tank. After some time, the number of fishes in the tank increased even though no fish was added to the tank.



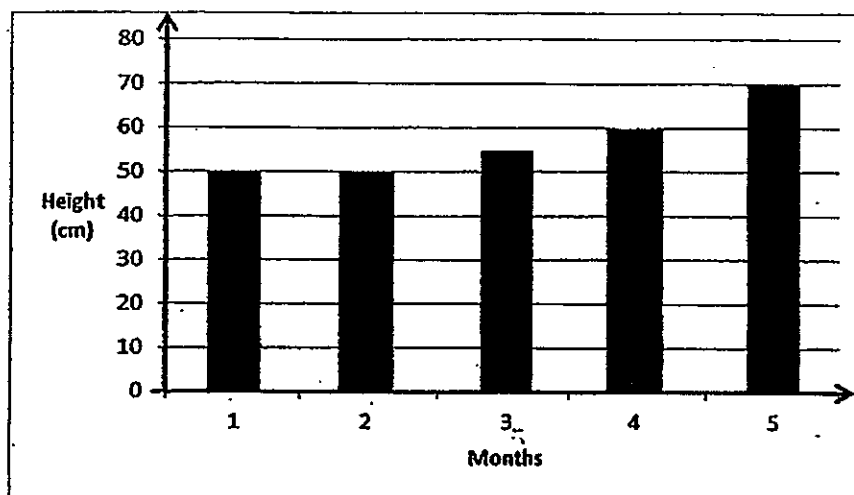
- (a) What could be the possible reason for the increased number of fishes? [1]

When Amy removed the plants from the tank and covered the tank with an airtight lid, she observed that all the fish died the next day.

- (b) Explain why the fish died. [2]

Score	3
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26. The graph below shows the height of Peter over 5 months.


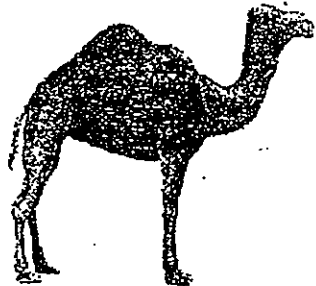






- (a) Based on the graph, describe the change in Peter's height over time. [1]

- (b) What is the characteristic of living things that is shown by the observation in your answer in (a)? [1]

Score	<div style="border: 1px solid black; width: 100px; height: 100px; position: relative;"><div style="position: absolute; top: 0; right: 0; text-align: right;">2</div></div>
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27. The animals, not drawn to scale, shown below are classified according to their common characteristics.

Group X	 
Group Y	 
Group Z	 

Based on the information above, answer the following questions:

- (a) Name the body covering of the animals in each of these groups: [2]

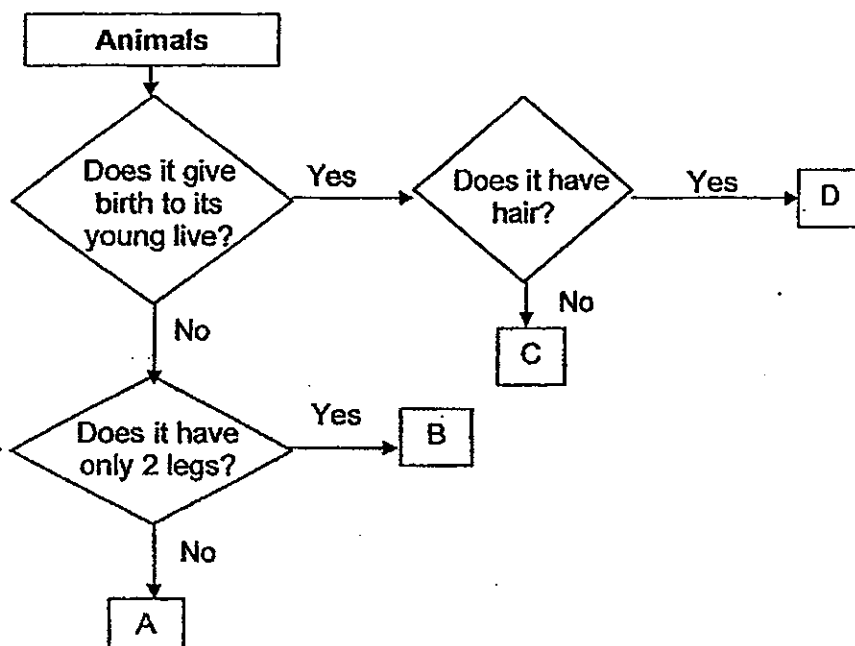
(i) Group X : _____

(ii) Group Y : _____

- (b) Name the animal group of Z. [1]

Score	3
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28. Study the flow chart as shown below.



Based on the information above, answer the following questions:

(a) Which animals, A, B, C or D, best represent whale and ostrich respectively? [1]

(i) whale : _____

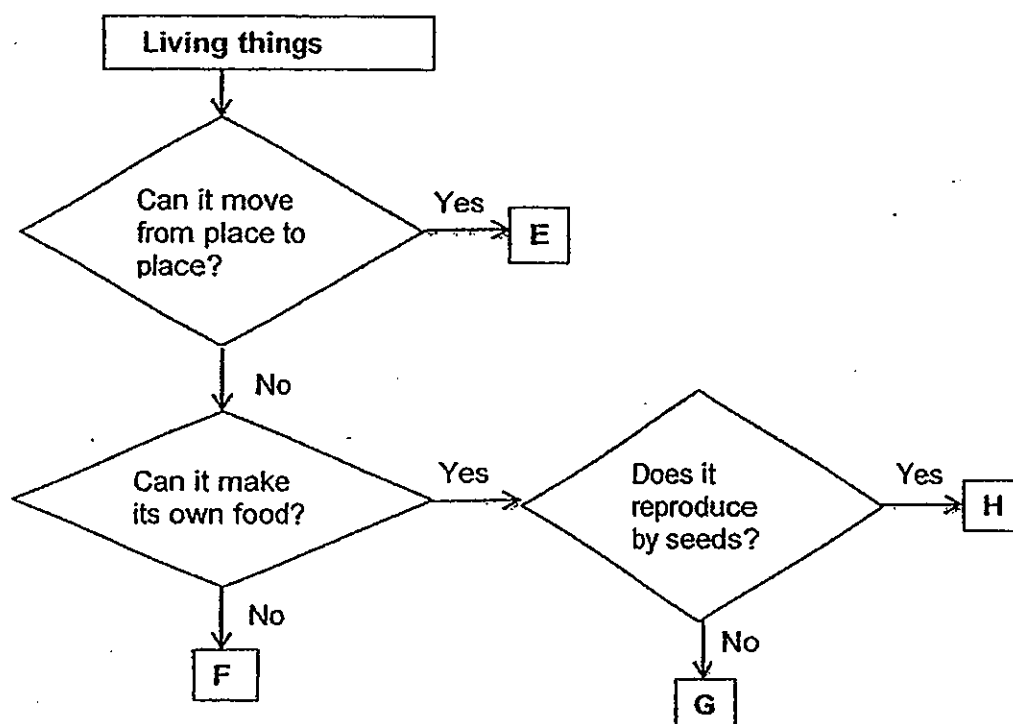
(ii) ostrich : _____

(b) State one similarity between animal C and D.

[1]



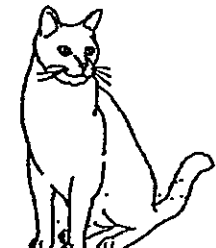

Score	2
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29. The flow chart differentiates some living things below.




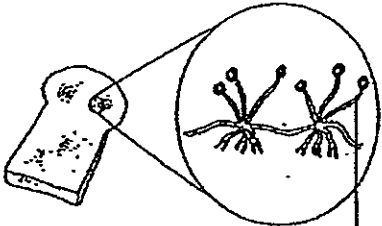

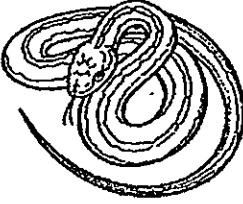


Based on the information above, identify the following living things (not drawn to scale).

Write the letters E, F, G or H in the boxes provided. Use each letter ONCE only. [2]

			
mushroom	fern	cat	tulip plant

Score	2
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30. The table below shows how Janet grouped some living things.

Living things	
X	Y
 Daisy Plant	 Bread mould
 Morning Glory Plant	 Python
 Bird's Nest Fern	 Bracket fungus

- (a) Suggest a sub-heading of each group. [1]

X: _____

Y: _____

- (b) Joe looked at Janet's classification and told her that he could regroup them into 3 groups.
Suggest how Joe could group the living things into 3 groups. [1]

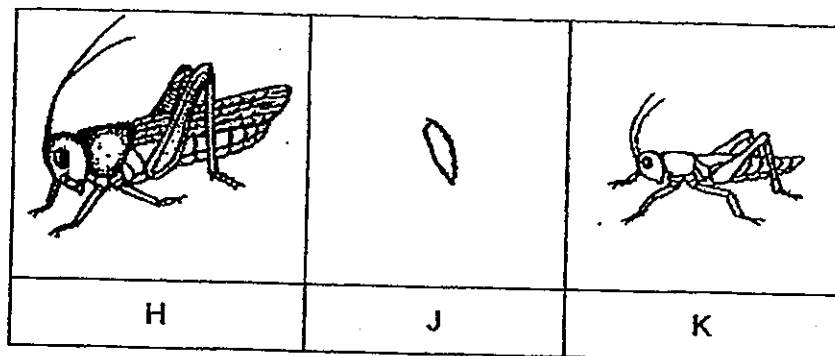
Group 1: _____

Group 2: _____

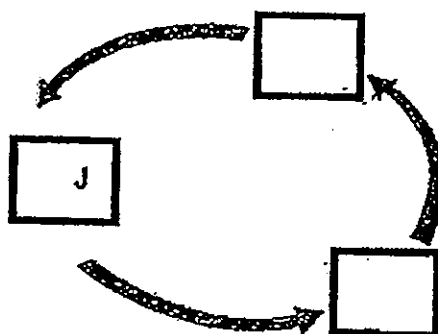
Group 3: _____

Score	
	2

31. The diagrams below show the different stages of the life cycle of an insect, not arranged in the correct order.

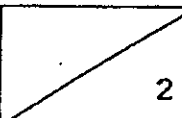


- (a) Fill in the stages of growth, H, J and K, in the correct order in the diagram below. [1]

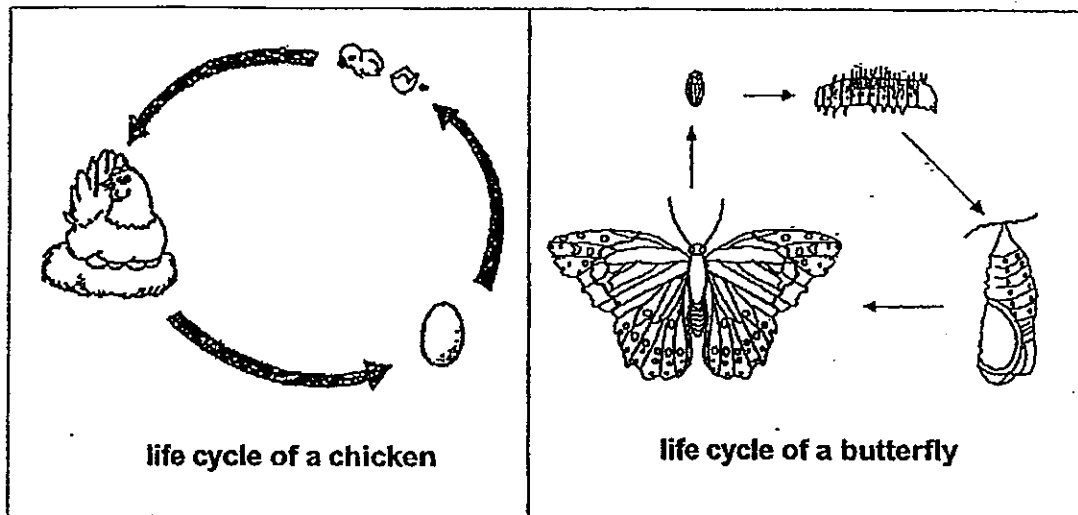


- (b) State one similarity between the organism in stage H and stage K. [1]

SIMILARITY	

Score	
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32. The diagrams below shows the life cycles of a chicken and butterfly.

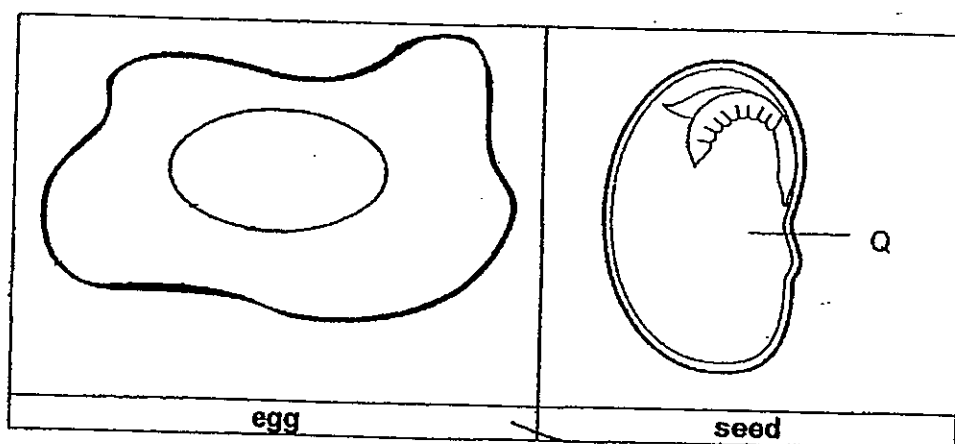


- (a) Based on the information above, state one difference between the two life cycles. [1]

- (b) State one difference between the young stage of the chicken and pupa stage of a butterfly. [1]

Score	2
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33. The diagrams below show an egg and a seed.



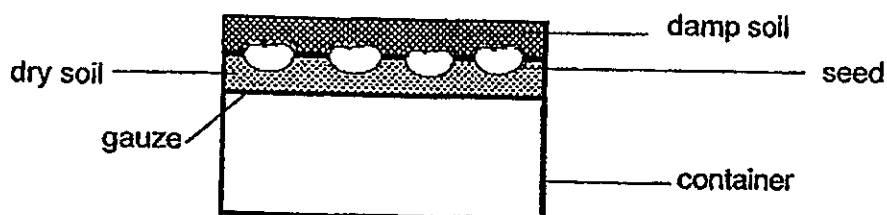
- (a) State a similarity between the egg and the seed.
[Do NOT compare the size and shape.]

[1]

- (b) In the diagram above, mark and label with the letter R, the part of the egg that has the same function as part Q of the seed.

[1]

34. David placed some seeds between two layers of soil, dry and damp, in a container as shown in the diagram below.



David placed the container on a table in the science laboratory.

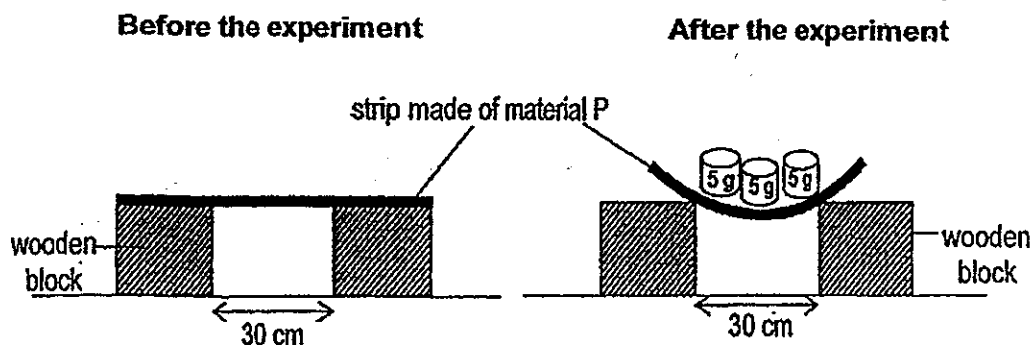
In which direction would the roots of the seeds grow?
Explain your answer.

[2]

Score	
	4

35. Agnes placed a strip made of material P on two wooden blocks 30 cm apart. Next, she added 5-g weight on it, one at a time, until the strip first started to bend.

She observed that the strip made of material P just started to bend when three 5-g weights were placed on it as shown in the diagram below.



Agnes repeated her experiment using another strip made of material Q of the same length and size. She recorded her observations in the table below.

Strip of material	Number of weights on the strip just before strip started to bend
P	3
Q	2

Based on the information above, answer the following questions:

- (a) State another variable that must be kept the same in order for Agnes to conduct a fair test. [1]

- (b) State the property of the materials which Agnes was trying to compare in the above experiment. [1]

Score	2
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36. Sufen tested the hardness of three rods, each made of different materials, X, Y and Z. She recorded her observations as shown below:

Material of rod	Did rod made of material X scratch the rod?	Did rod made of material Y scratch the rod?	Did rod made of material Z scratch the rod?
X		no scratches	moderate scratches
Y	fine scratches		deep scratches
Z	no scratches	no scratches	

Based on Sufen's observations above, answer the following questions:

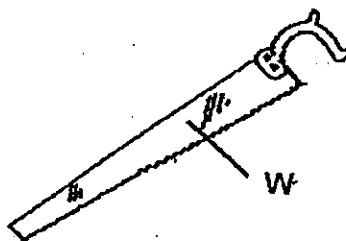
- (a) Arrange materials, X, Y and Z, according to their hardness, starting from the least hard.

Write letters X, Y and Z in the given boxes below.

[1]



The diagram below shows a saw.

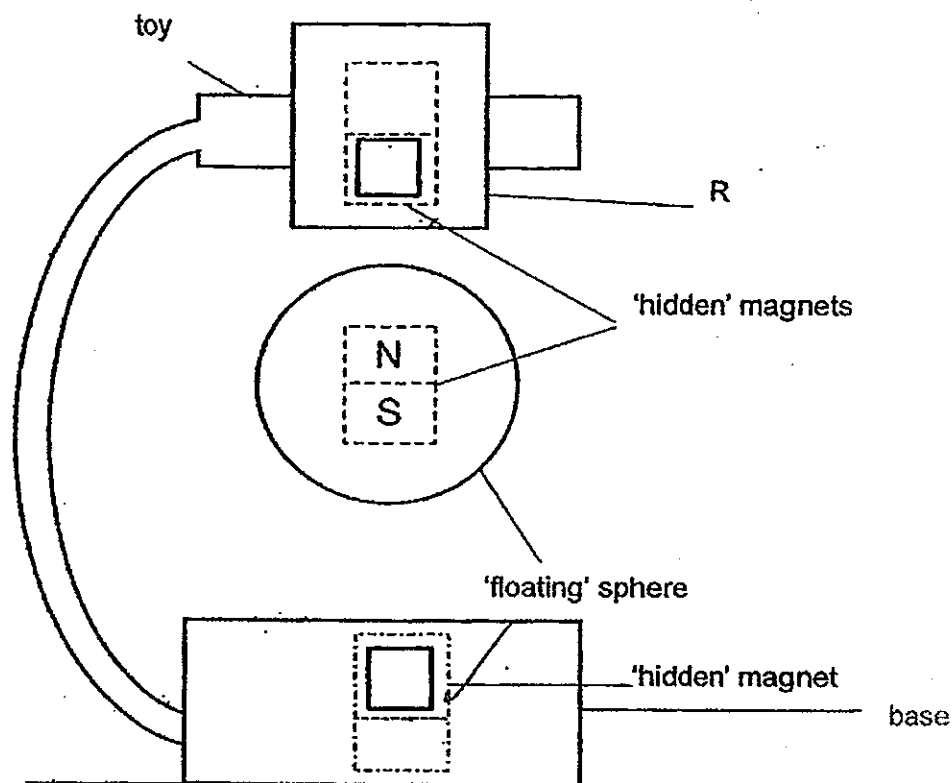


- (b) Which material, X, Y or Z, is most suitable to make part W of the saw?
Give a reason for your answer.

[1]

Score	2
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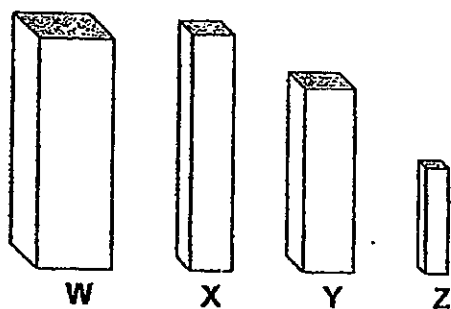
37. The diagram below shows the 'hidden' magnets in a toy which has a 'floating' sphere.



- (a) In the diagram above, write the poles of the 'hidden' magnets in part R and in the base of the toy facing the floating sphere, with the letter "N" or "S" in the boxes provided. [1]
- (b) Explain clearly why the sphere shown in the above diagram is able to float. [1]

Score	
	2

38. Ai Lan positioned the poles of magnets W, X, Y and Z of different sizes at an equal distance from a tray of pins.



She recorded the number of pins attracted to each magnet in the table below.

Magnet	Number of pins attracted
W	12
X	26
Y	5
Z	31

Based on the information above, answer the following questions:

- (a) What could Ai Lan conclude about the magnetic strength of the magnets and their sizes? [1]

Ai Lan heated magnet Z and repeated the above experiment.

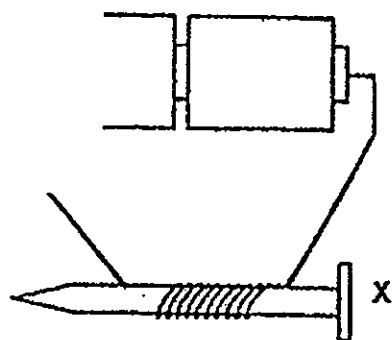
- (b) Would the number of pins attracted to magnet Z be the same, more than 31 or less than 31?

Give a reason for your answer.

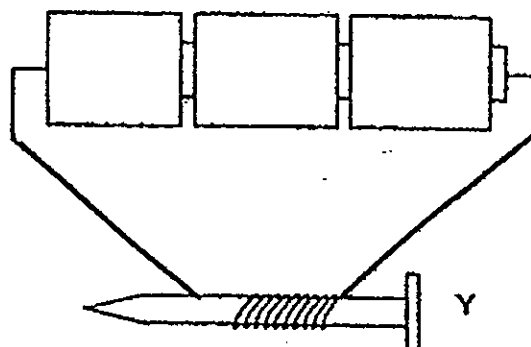
[1]

Score	2
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39. Peiyan uses the following set-ups, A and B, to find out if the number of batteries affects the strength of the electromagnet.



Set-up A



Set-up B

- (a) Which one of these electromagnets, X or Y, has a greater magnetic strength?

Give a reason for your answer.

[1]

- (b) Using the same set-up A, without adding anything to it, describe another way which Peiyan can do to increase the magnetic strength of electromagnet X.

[1]

- END OF PAPER -

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Answer Ke

EXAM PAPER 2013

SCHOOL : RAFFLES GIRLS' PRIMARY SCHOOL

SUBJECT : PRIMARY 3 SCIENCE

TERM : SA2

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

Q18	Q19	Q20	Q21	Q22	Q23	Q24
1	2	2	3	2	2	4

Section B

Q25

- a) The fishes have reproduced, increasing the number of fishes
- b) The fishes died as they did not have enough water

Q26

- a) His height increases at month 3
- b) Living things grow

Q27

- a) i) Hair/ Fur
- ii) Feathers
- b) Insects

Q28

- a) i) D
- ii) B
- b) They both give birth to its young alive

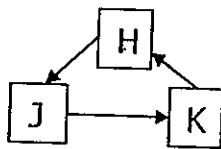
Q29) Mushroom: F
Fern: G
Cat: E
Tulip plant: H

Q30

- a) X: Can make its own food
Y: cannot make its own food
- b) Group 1: Plants
Group 2: Fungi
Group 3: Animals

Q31

a)



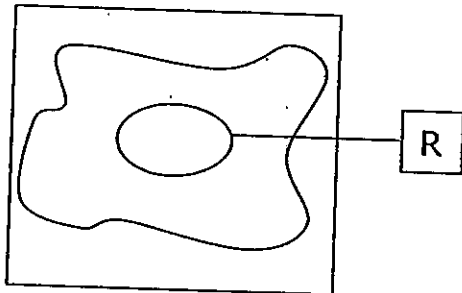
- b) Stages H and K both feed on leaves

Q32

- a) The life cycle of a chicken has three stages while the butterfly has four stages
- b) The young of the chicken can move by itself but the pupa of the butterfly cannot move by itself

Q33

- a) Both the seed and egg help in reproduction
- b)



Q34) The roots will grow upwards. Seeds need moisture to germinate

Q35

- a) Thickness of the material used
- b) The flexibility of materials

Q36

a) Y, X, Z

b) Material Z. It is the hardest material

Q37

a) R: N

Base: S

b) Like poles of each hidden magnets are facing each other and like poles repel

Q38

a) The thinner the magnets are, the stronger it will be. The size of the magnet do not matter

b) Less than 31. Magnet Z lost its magnetism due to heat

Q39

a) Y. Electromagnet Y has more batteries than electromagnet X

b) Add a greater number of coils to electromagnet X

