



RAFFLES GIRLS' PRIMARY SCHOOL

SEMESTRAL ASSESSMENT 2 2010

Name : _____ Index No: _____ Class: P3__

28th Oct 2010

SCIENCE

Att: 1 h 15 min

| | | |
|----------------------------|-------|-------|
| Section A | 48 | |
| Section B | 32 | |
| Your score out of 80 marks | | |
| Highest score | Class | Level |
| | | |
| Average score | | |
| Parent's signature | | |

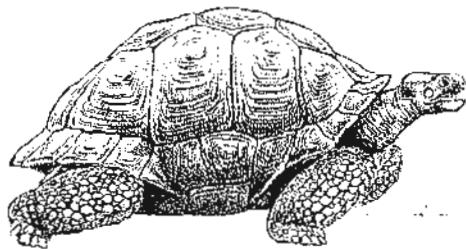
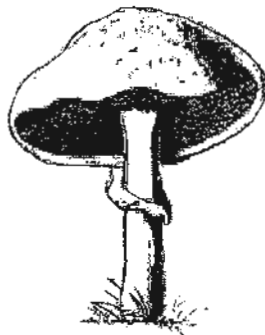
SECTION A (24 x 2 marks)

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 (1, 2, 3 or 4) on the Optical Answer Sheet (OAS) provided.

1. The pictures below show some examples of living things.



These living things need _____ to survive.

- A air
- B food
- C water
- D sunlight





(1) A, B and C only

(2) A, B and D only

(3) A, C and D only

(4) B, C and D only

The living things as shown below are grouped as follows:

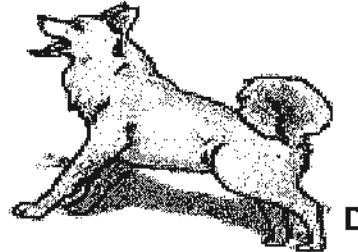
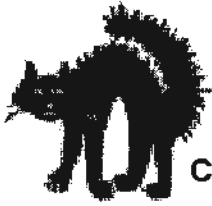
| living things | |
|--|---|
| group A | group B |
|   |   |

Based on the pictures above, answer **questions 2 and 3**.

2. These living things are grouped according to _____.
- (1) their body coverings
 - (2) the number of legs which they have
 - (3) the place where they live: on land or in water
 - (4) whether they respond to changes around them
3. Which one of the following can possibly be suitable sub-headings for the living things in groups A and B?

| | group A | group B |
|-----|-----------------|----------------|
| (1) | with fins | without fins |
| (2) | with a tail | without a tail |
| (3) | without feelers | with feelers |
| (4) | have wings | have no wings |

4. Donna went for a walk at a park and saw two different types of animals, C and D.



When animal C saw animal D, it got a fright and ran away.

Which one of the following characteristics does animal C show?

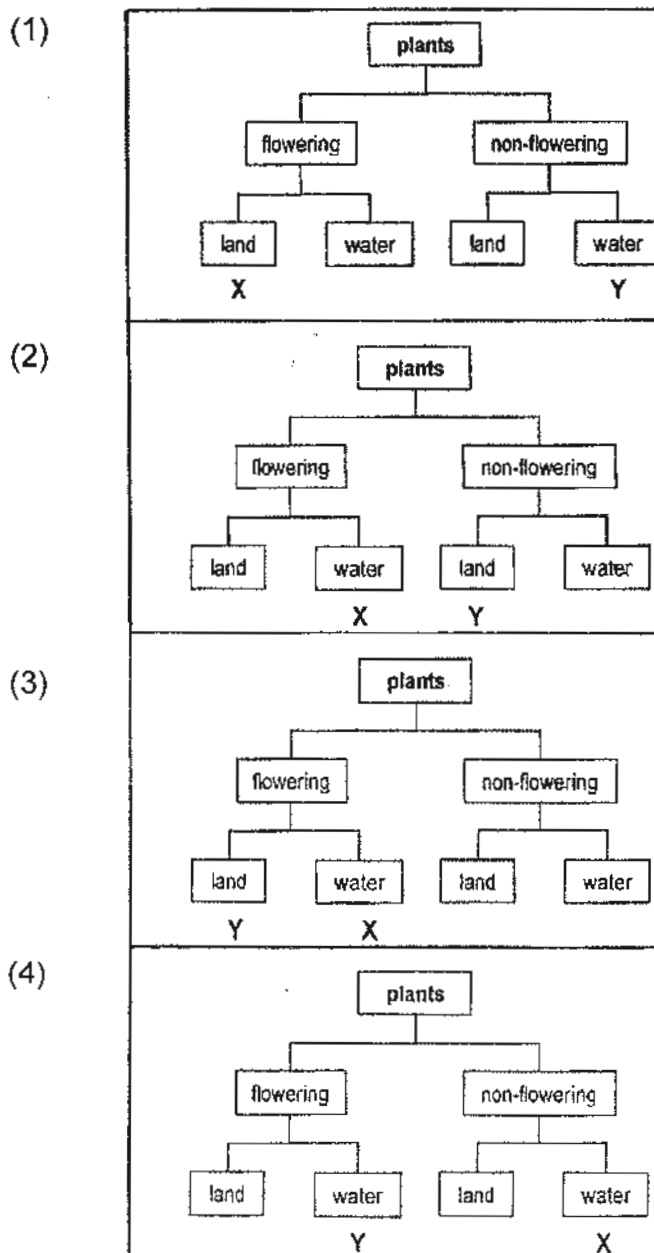
- (1) It grows.
- (2) It reproduces.
- (3) It needs air, food and water.
- (4) It responds to changes around it.

8. The table below gives the information on two plants, X and Y, based on some characteristics.

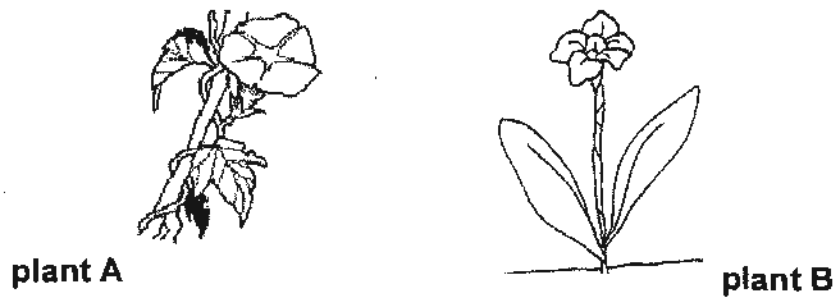
A tick (✓) in the box shows the characteristics which the plant has.

| characteristic | plants | |
|------------------------------|--------|---|
| | X | Y |
| It bears flowers and fruits. | ✓ | ✓ |
| It grows on land. | | ✓ |

From the information above, which one of the following diagrams classifies plants X and Y correctly?



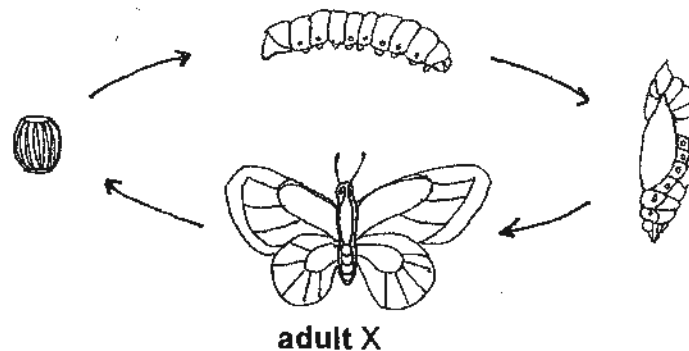
9. The diagrams below show two different types of plants, A and B.



Based on your observations, how are these plants A and B similar?

- (1) Both plants have leaves.
- (2) Both plants have strong stems.
- (3) Both plants have brightly coloured petals.
- (4) Both plants produce flowers with a pleasant smell.

10. The diagram below shows the life cycle of an animal, X.

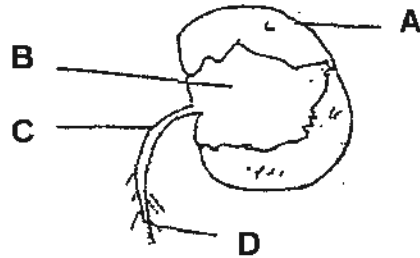


Based on your observations, which of the following statement(s) about the life cycle of animal X is/ are correct?

- A It develops from an egg.
- B It has 4 stages in its life cycle.
- C The young resembles the adult.

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

The diagram below shows a germinating seed.



Based on the diagram above, answer **questions 13 and 14**.

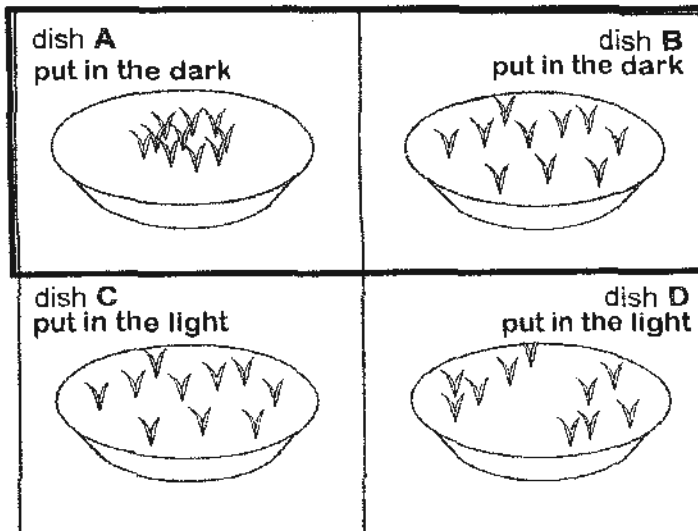
13. Which part of the seed protects the baby plant?

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

14. How does the seedling get its food?

- | | |
|---------------------------------|--------------------------------------|
| (1) from its parent plant | (2) from food stored in B |
| (3) A made the food in sunlight | (4) D took in the food from the soil |

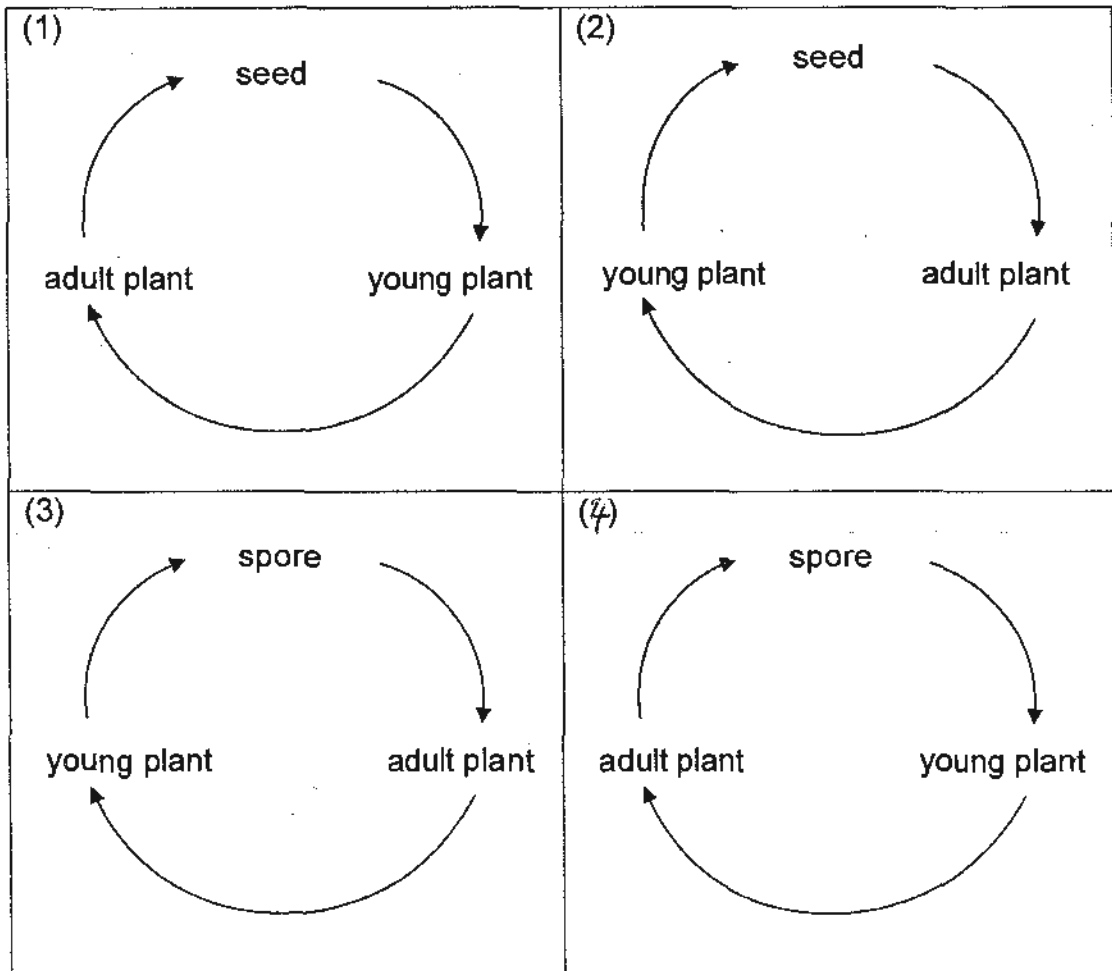
15. Nicole wanted to find out how light can affect the growth of plants. She had 4 different set-ups as shown in the diagrams below.



Which of these dishes should Nicole use to ensure a fair test?

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

16. Which one of the following diagrams shows the life cycle of a flowering plant?



17. Megan compared the hardness of three materials, A, B and C, by scratching each one of them with a different ruler, **ONE** at a time.

She recorded her observations in the table below.

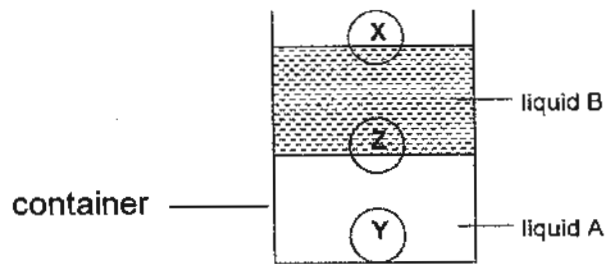
A tick (✓) in the box shows that the material was scratched.

| material | Did the plastic ruler scratch the material? | Did the metal ruler scratch the material? |
|----------|---|---|
| A | | ✓ |
| B | | |
| C | ✓ | ✓ |

Which one of the following shows the correct arrangement of these materials according to their hardness?

| | → hardest | | |
|-----|-----------|---|---|
| (1) | A | B | C |
| (2) | B | C | A |
| (3) | C | A | B |
| (4) | C | B | A |

18. Three balls of the same size, each made of a different material, X, Y and Z, were placed in a container filled with liquids A and B. Liquid B floated on liquid A. The balls stayed at the positions as shown below.

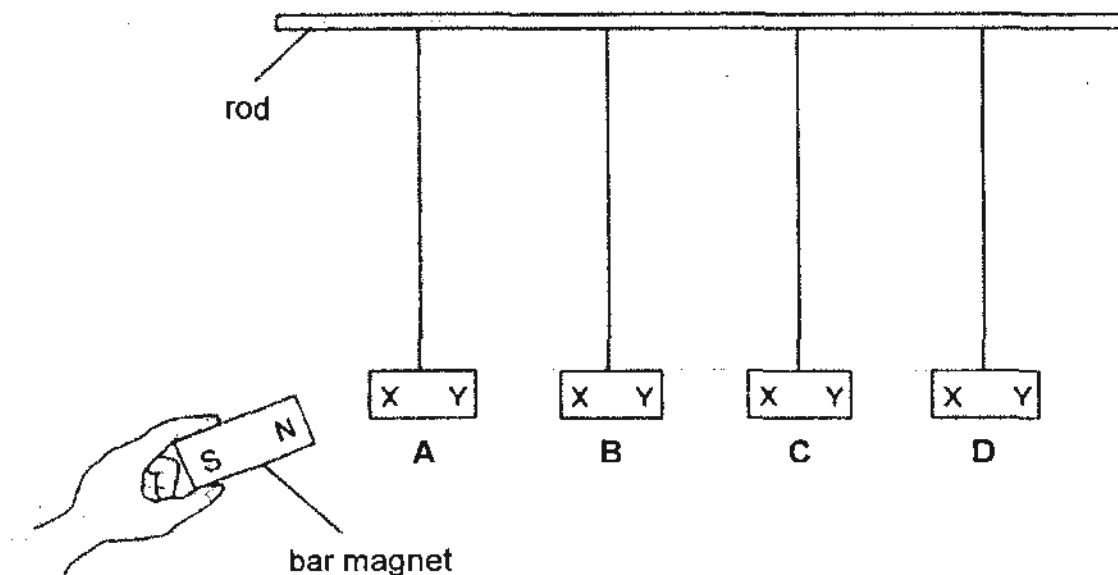


Steve separated liquid A and liquid B into two containers. Then he put in the same balls.

Which one of the following diagrams shows the correct positions of the balls?

- (1)
-
- Two separate containers are shown. The left container has liquid A and ball Y is partially submerged. The right container has liquid B and ball Z is partially submerged.
- (2)
-
- Two separate containers are shown. The left container has liquid A and balls Y and Z are fully submerged at the bottom. The right container has liquid B and ball X is fully submerged at the bottom.
- (3)
-
- Two separate containers are shown. The left container has liquid A and ball Z is partially submerged at the interface, while ball Y is fully submerged at the bottom. The right container has liquid B and ball X is partially submerged.
- (4)
-
- Two separate containers are shown. The left container has liquid A and balls Y and Z are fully submerged at the bottom. The right container has liquid B and ball X is partially submerged at the interface.

21. Andrew hung 4 metal bars of the same size from a horizontal rod as shown below.



He brought the N-pole of a bar magnet near X and then Y of each metal bar.

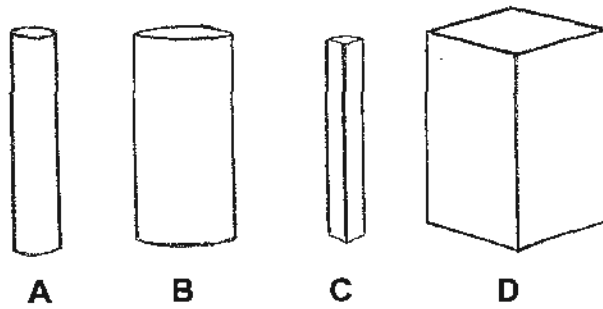
Andrew recorded his observations in the following table:

| bar | observations | |
|-----|------------------------|------------------------|
| | N-pole of magnet and X | N-pole of magnet and Y |
| A | repelled | attracted |
| B | attracted | attracted |
| C | no reaction | no reaction |
| D | repelled | attracted |

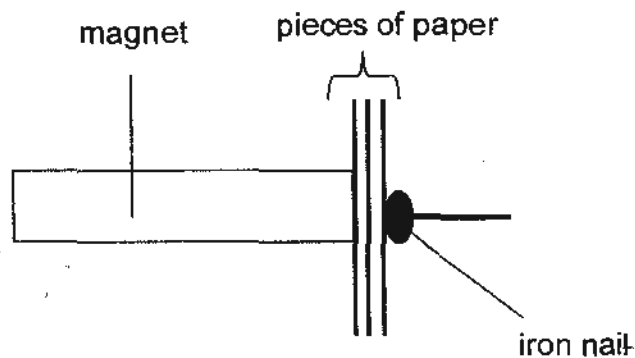
Which one of the following statements is correct?

- (1) Only B was a magnet.
- (2) Only C was a magnet.
- (3) All the bars were magnets.
- (4) Both A and D were magnets.

22. Ravi had four magnets, A, B, C and D, as shown below.



He wanted to find out which magnet was the strongest. He put pieces of paper, **ONE** at a time, between each magnet and an iron nail as shown in the diagram below.



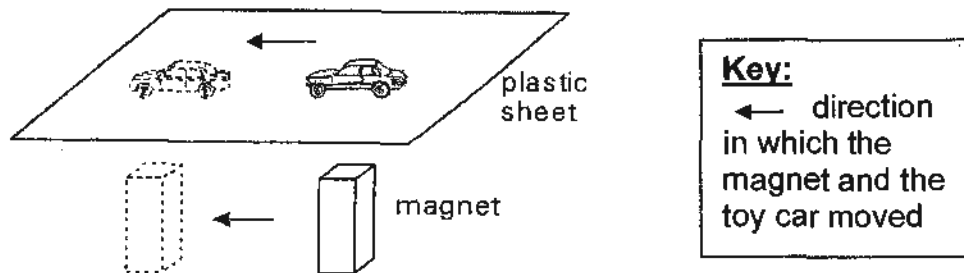
The table below shows how many pieces of paper Ravi put between each magnet and the iron nail just before the nail dropped off.

| magnet | number of pieces of paper |
|--------|---------------------------|
| A | 19 |
| B | 5 |
| C | 10 |
| D | 8 |

Which one of the following could Ravi possibly conclude?

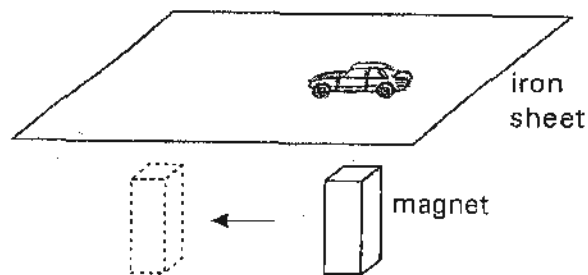
- (1) Magnet A is the strongest magnet.
- (2) Magnet A is as strong as magnet D.
- (3) Magnet B is stronger than magnet C.
- (4) Magnet D is stronger than magnet C.

23. Nurul placed a metal toy car on a plastic sheet and held a magnet under the sheet as shown in the diagram below.



She noticed that when the magnet moved, the toy car would move in the same direction.

Next, Nurul replaced the plastic sheet with an iron sheet. When she moved the magnet, the toy car did not move.



What was Nurul trying to find out?

She was trying to find out if _____.

- (1) the toy car was magnetic
- (2) the magnet repelled the plastic sheet
- (3) magnetic force could pass through the iron sheet
- (4) the iron sheet attracted the magnet and the toy car

24. Which of the following objects make use of magnets?

- A stapler
- B compass
- C television
- D mobile phone

(1) A and B only

(2) C and D only

(3) B, C and D only

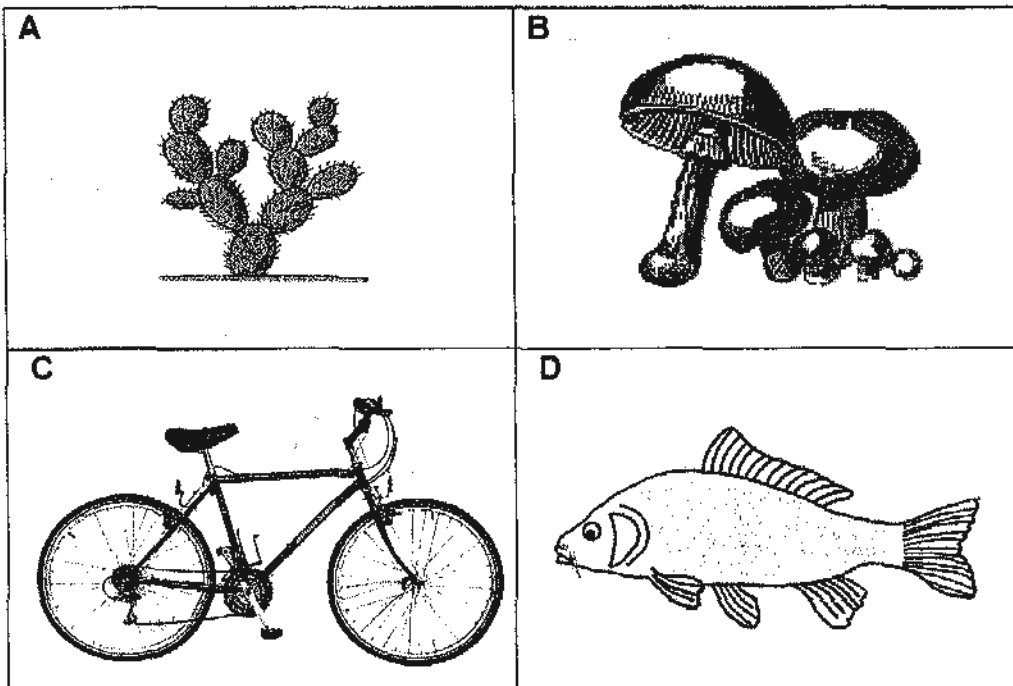
(4) A, B, C and D

SECTION B (32 marks)

For questions 25 to 37, write your answers clearly in the spaces provided.

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

25. The pictures below show different types of things.



To be continued on the next page

Based on the pictures on page 17, answer the following questions:

(a) Compare A and D.

State one common characteristic between A and D.

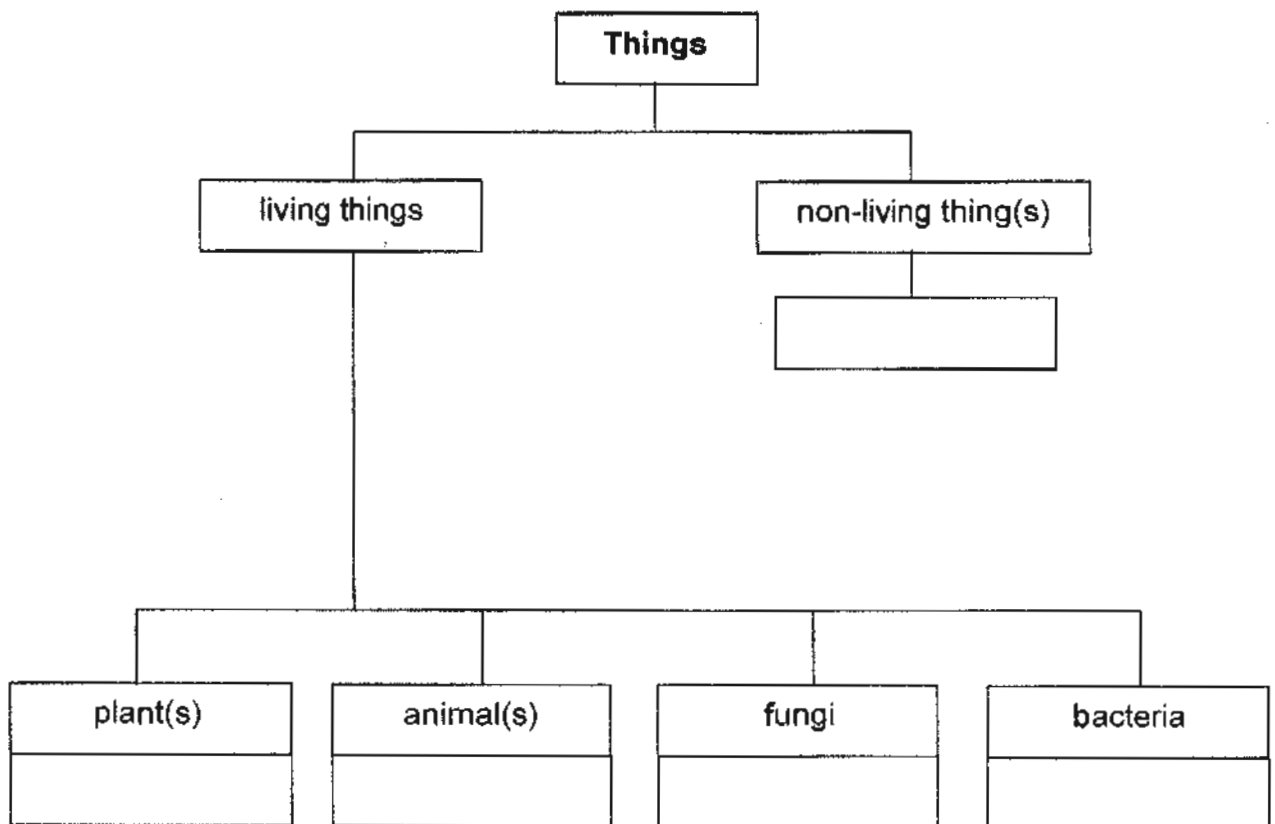
[1]

(b) Complete the following diagram.

Write letters A, B, C and D **ONCE** only in the appropriate box(es) below.

You need **NOT** fill in all the boxes.

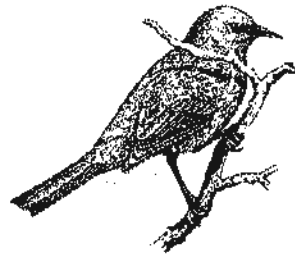
[2]



26. Two different animals, S and T, are shown below.



animal S



animal T

Based on your observations, answer the questions below:

Compare these animals, S and T.
Write each of the following:
(Do NOT compare size and colour.)

[2]

| | |
|---------------------------|--|
| ONE SIMILARITY | |
| ONE DIFFERENCE | |

27. The diagram below shows three different types of animals, X, Y and Z.



X



Y



Z

Based on your observations, answer the following questions:

Which one of these animals, X, Y or Z, is NOT an insect?
Give a reason for your answer.

[2]

| animal | reason |
|--------|--------|
| | |

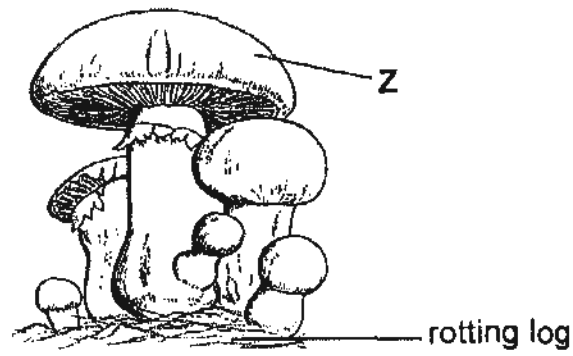
28. Observations of some organisms are tabulated as shown below.
A tick (✓) in each box shows the characteristic that each organism has.

| observation | organism | | |
|------------------------------|----------|---|---|
| | W | X | Y |
| It lives on land. | ✓ | ✓ | ✓ |
| It has feathers. | | | ✓ |
| It has hair on its body. | | ✓ | |
| It gives birth to its young. | | ✓ | |

Based on the information above, name the group of animals which each of the following belongs to: [2]

| | |
|---|--|
| X | |
| Y | |

29. The diagram below shows a group of living things of the same species.

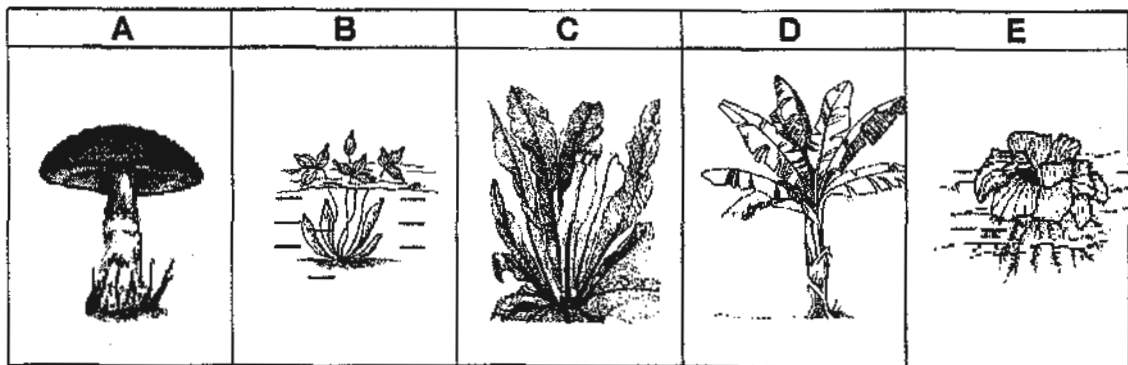


Based on the diagram above, answer the following questions:

- (a) How does Z reproduce? [1]

- (b) How does Z get its food? [1]

30. The diagrams below show organisms A, B, C, D and E.

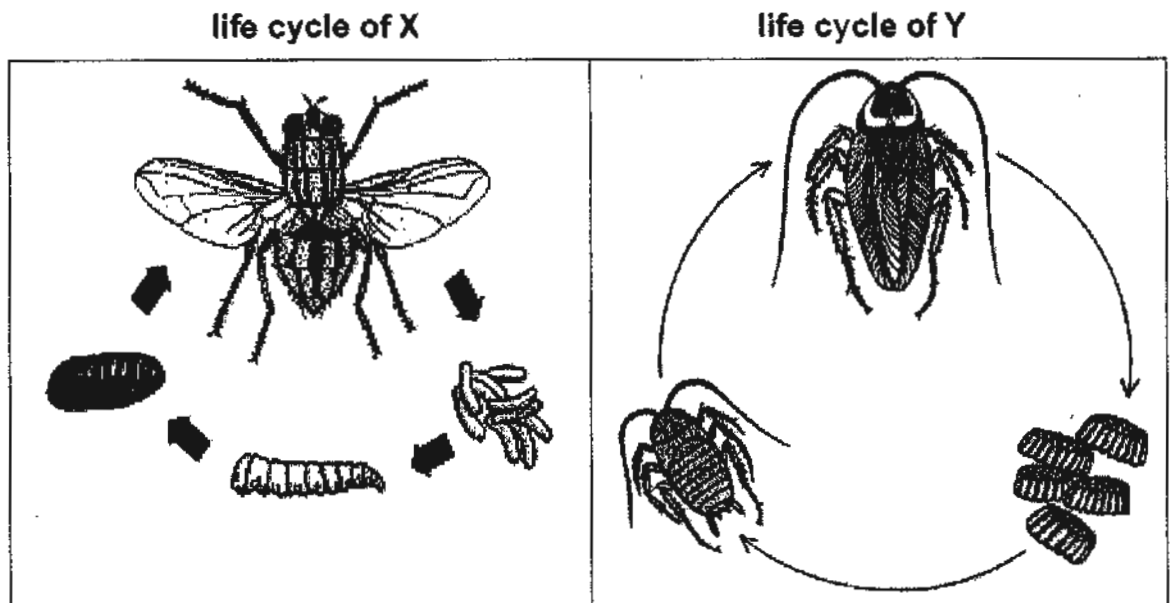


Classify these organisms into two different groups.

- (a) Write letters B, C, D and E in the appropriate boxes below. Letter A has been written down for you. [1]
- (b) Write down a suitable sub-heading for each group of organisms. [2]

| organisms | |
|--------------------|--------------------|
| Group 1 : _____ | Group 2 : _____ |
| | A |

31. The diagram below shows the life cycles of two different organisms, X and Y.



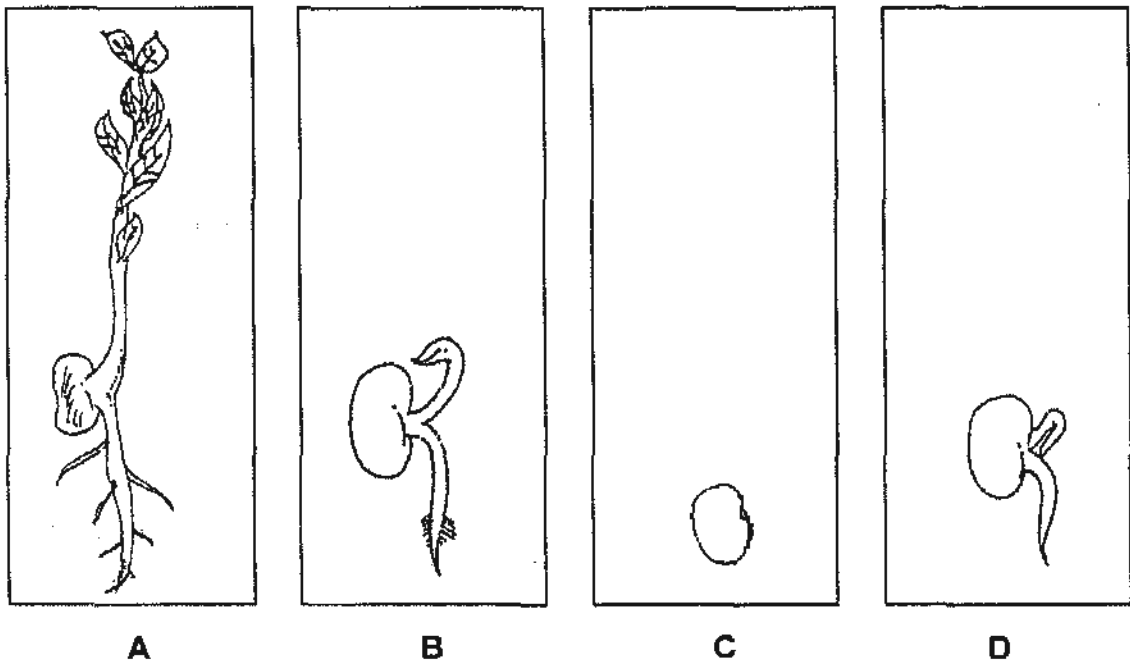
Based on the diagrams above, answer the following questions:

- (a) How many stages are there in the life cycle of X? [1]

- (b) Name the stage in which organism X moults several times. [1]

- (c) Name one similarity between the young and adult of organism Y. [1]

32. The diagrams below show the different stages in the growth of a germinated seed.



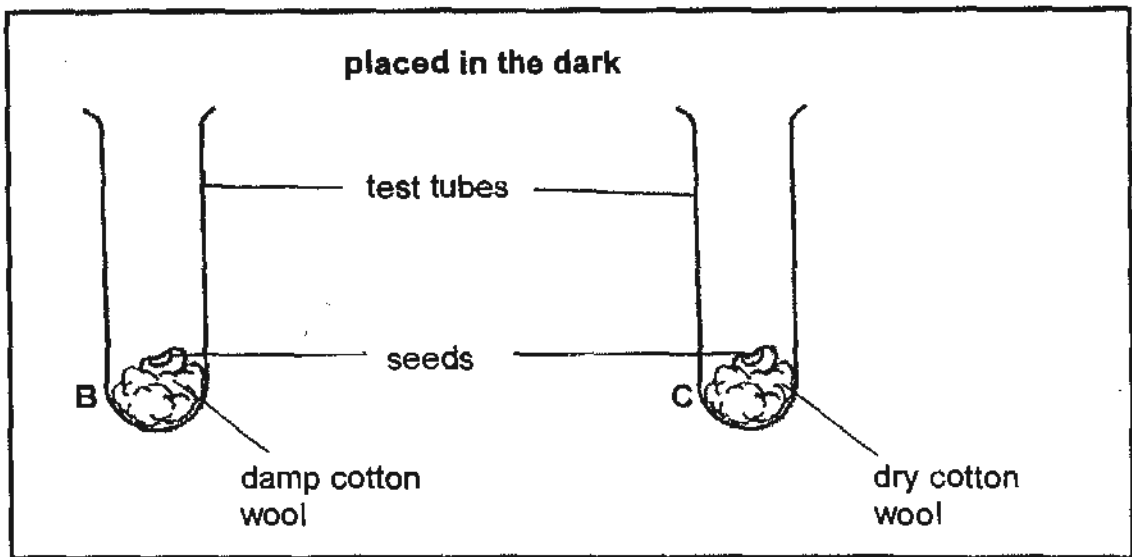
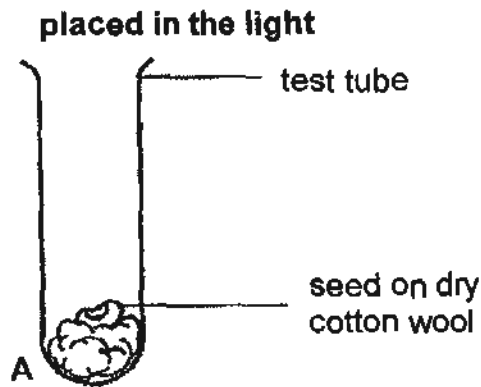
- (a) Arrange the stages in the growth of a germinated seed in the correct order.
Write the letters A, B, C and D in the appropriate boxes below. [1]

1st stage

| | | | |
|--|--|--|--|
| | | | |
|--|--|--|--|

- (b) At which stage(s), A, B, C and / or D, can the seedling make its own food?
Write letters, A, B, C and / or D ONLY. [1]

33. Clare placed a seed in each of the 3 identical test tubes, A, B and C, as shown in the diagrams below.



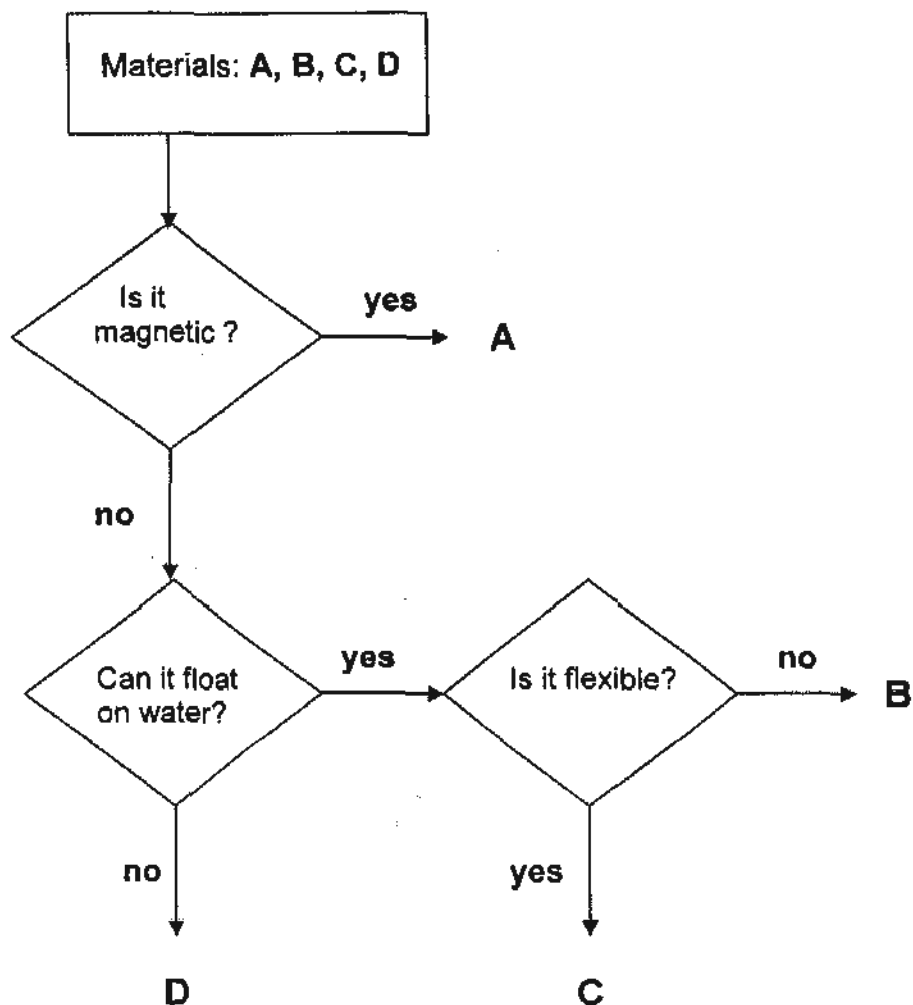
In which of these test tubes, A, B and / or C, would the seed(s) **NOT** be able to germinate?

Give a reason for each of your answer(s).

[2]

| test tube (s) | reason (s) |
|---------------|------------|
| | |

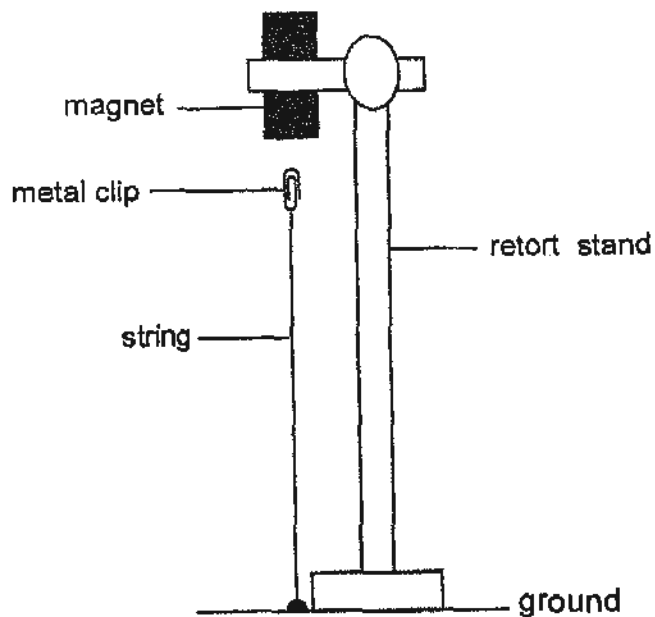
34. The flow chart below differentiates some materials: A, B, C and D.



Based on the information above, state two similarities between material B and material C. [2]

| | |
|-----------------|--|
| SIMILARITY 1 | |
| SIMILARITY 2 | |

35. Emma set up an experiment using the apparatus as shown below.

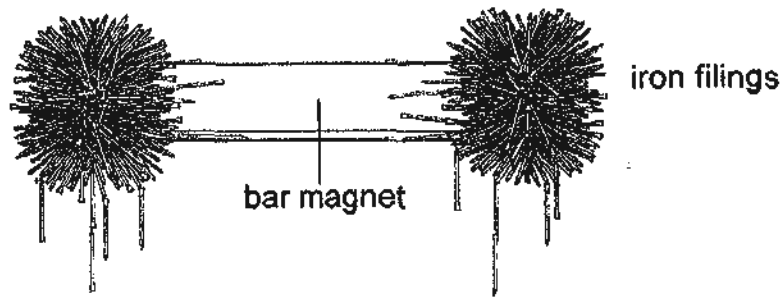


- (a) Give a reason why the metal clip did **NOT** drop to the ground. [1]

Next, Emma replaced the metal clip with a plastic clip.

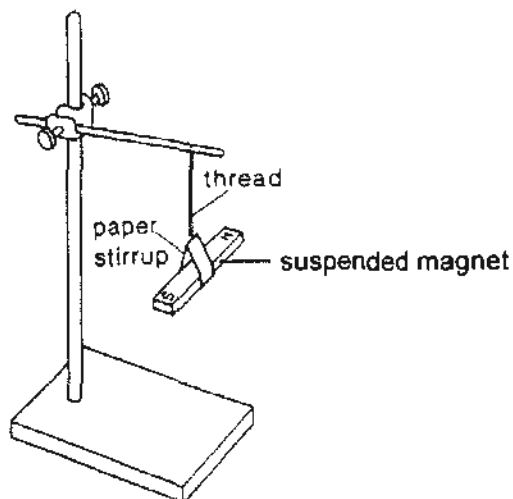
- (b) Could the plastic clip remain in the air like the metal clip?
Give a reason for your answer. [1]

36. Sara used a bar magnet to attract some iron filings. She noticed that the iron filings were attracted to the ends of the bar magnet only.



- (a) Give a reason why the iron filings were attracted to the ends of the magnet. [1]

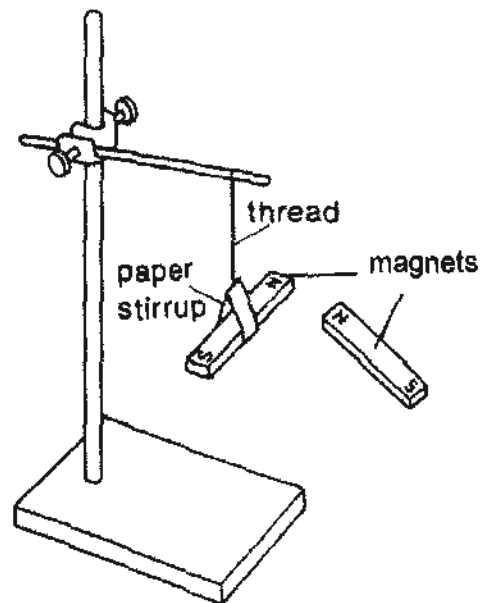
Sara removed the iron filings and hung the bar magnet in a paper stirrup as shown below.



Sara turned the bar magnet in the paper stirrup freely. The bar magnet stopped turning after a while.

- (b) In which direction would the bar magnet point to when it finally came to a rest? [1]

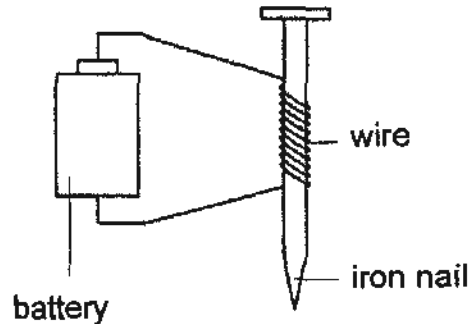
Next, Sara brought **ANOTHER** bar magnet near to the N-pole of the suspended magnet.



- (c) Describe how the suspended magnet moved when the N-poles of both magnets were brought near to each other. [2]

Give a reason for your answer.

37. Peter made an electromagnet by placing an iron nail in a coil of wire joined to the ends of a battery. He wanted to find out if the number of turns of the coil would affect the strength of the electromagnet. He tested the strength of the electromagnet by counting the number of steel paper clips it could attract at one of its ends.



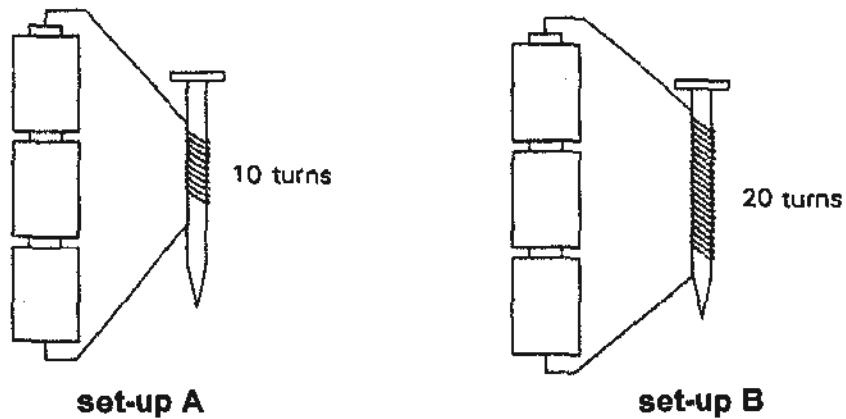
Peter recorded his results in the table below.

| number of turns round the iron nail | number of paper clips attracted |
|-------------------------------------|---------------------------------|
| 10 | 5 |
| 15 | 8 |
| 20 | 10 |
| 25 | 12 |

- (a) Based on the information above, fill in each blank with a suitable word. [1]

The _____ the number of turns round the iron nail,
 the _____ the number of paper clips was attracted to
 the iron nail.

Next, Peter wanted to find out if the number of batteries affected the strength of the electromagnet. He had two set-ups, A and B, as shown below.



Peter's teacher said that he did **NOT** conduct a fair test.

- (b) Suggest two ways in which Peter could do to conduct a fair test for his experiment. [2]

| | |
|-------------------------|--|
| SUGGESTION 1 | |
| SUGGESTION 2 | |

- END OF PAPER -

Setters: Ms Ho Win Nie, Mr Johnson Ong



RAFFLES GIRLS' PRIMARY SCHOOL
2010 PRIMARY 3 SCIENCE SA 2 ANSWER KEY

Setters : Ms Ho Win Nie, Mr Johnson Ong

SECTION A (24 X 2 marks)

| | |
|----|---|
| 1. | 1 |
| 2. | 2 |
| 3. | 3 |
| 4. | 4 |

| | |
|----|---|
| 5. | 1 |
| 6. | 3 |
| 7. | 3 |
| 8. | 3 |

| | |
|-----|---|
| 9. | 1 |
| 10. | 3 |
| 11. | 3 |
| 12. | 4 |

| | |
|-----|---|
| 13. | 1 |
| 14. | 2 |
| 15. | 3 |
| 16. | 1 |

| | |
|-----|---|
| 17. | 3 |
| 18. | 3 |
| 19. | 3 |
| 20. | 4 |

| | |
|-----|---|
| 21. | 4 |
| 22. | 1 |
| 23. | 3 |
| 24. | 3 |

SECTION B (32 marks)

| No. | Marks | Suggested answers | Remarks |
|-----|--------|---|---|
| 25 | a 1 | Both <ul style="list-style-type: none"> • need food, air and water • can die • can reproduce • can grow • respond to changes around them | Any characteristic of living things Accept also: <ul style="list-style-type: none"> - Need air, food, water and warmth - Both do not have legs - Both can move by themselves Do not accept <ul style="list-style-type: none"> - Both are living things - Both have outer covering |
| | b 2 | plants : A animals : D non-living thing : C fungi : B | NO partial marks |
| 26 | 2 | SIMILARITY : Both have <ul style="list-style-type: none"> • legs • eyes • a tail • at least 2 legs DIFFERENCE: <ul style="list-style-type: none"> • S has 4 legs while T has 2 legs. • T has a beak while S has a mouth or S does not. • T has wings but not S. • S has a pair of horns but not T. • S has hair but T has feathers. | Do not accept <ul style="list-style-type: none"> - Both are living things - Both have outer covering - Both do not have feet Do not accept: <ul style="list-style-type: none"> - S has ears but T does not |

| | | | | |
|------------|--------------|--------------------------|---|---|
| | | | <ul style="list-style-type: none"> T has feathers but S does not. [½] S has hair but T does not. [½] | |
| 27 | | 2 | <p>Animal: X</p> <p>Reason: X has</p> <ul style="list-style-type: none"> 8 legs as compared to an insect that has 6 legs. (2m) feelers as compared to an insect that has no feelers (2m) doesn't have 3 body parts as compare to an insect that has 3 body parts. (2m) no 6 legs as compared to an insect that has 6 legs. (2m) | <p>Mark holistically</p> <p>Award marks only when the animal is identified correctly with the correct reason given</p> <p>Note: No comparison with an insect, deduct 1 mark.</p> <p>Do not accept:</p> <ul style="list-style-type: none"> 3 body parts 8 legs only |
| 28 | | 2 | <p>X : mammal</p> <p>Z : bird</p> | <p>[1] for each correct answer</p> <p>-[½] for wrong spelling</p> |
| No. | Marks | Suggested answers | | Remarks |
| 29 | a | 1 | by spores | <p>-[½] for wrong spelling of words in bold</p> <p>-[½] for mentioning of 'living'</p> |
| | b | 1 | <ul style="list-style-type: none"> They feed on dead/rotting matter/log. They feed on dead/decaying/rotting/rotten, organisms/things/plants/matter. They feed of plant (0.5m) | |
| 30 | a | 1 | <p>Group 1 : do not reproduce by spores B, D, E</p> <p>Group 2 : reproduce by spores A, C</p> | <p>Mark holistically</p> <p>Make parallel comparison</p> <p>Reproduce by seeds for group not acceptable cause cannot see fruits on pictures.(no mark)</p> |
| | b | 2 | <p>Group 1 : [organisms] found in/on water B, E</p> <p>Group 2 : [organisms] found on land A, C, D</p> <p>Group 1 : plants : B, C, D, E</p> <p>Group 2 : fungi : A</p> <p>Group 1 : found on/in water : B, E</p> <p>Group 2 : found on land : A, C, D,</p> | |
| 31 | a | 1 | 4 | |
| | b | 1 | <u>larval stage</u> / larva | Not acceptable for word is totally different meaning |
| | c | 1 | <ul style="list-style-type: none"> Both legs or 6 legs. Both have feeler/ a pair of feelers/antennae. young resemble its adult | Any one of the suitable answers |
| 32 | a | 1 | C B D A | NO partial marks |
| | b | 1 | A | NO partial marks |
| 33 | | 2 | <p>Answer: A and C A or C given only, award [½]</p> <p>Reason:</p> | <p>Mark holistically</p> <p>Award marks only when the test tubes are identified correctly with the</p> |

| | | | |
|--|--|---|---|
| | | <ul style="list-style-type: none"> • Seeds in both test tubes did not get water. • Seeds in both test tubes did not get moisture. • Water was not present in test tubes A and C. • Plants need water to germinate (apply rule R4) | correct reason given -[½] for wrong spelling of words in bold mentioned about DRY cotton wool only, no marks awarded. |
|--|--|---|---|

| No. | Marks | Suggested answers | Remarks |
|-----|-------|--|--|
| 34 | 2 | Both B and C <ul style="list-style-type: none"> • are non-magnetic (materials) • are not magnetic (materials) • can float on water | Any 2 of these possible answers -[½] for wrong spelling of words in bold i.e magnetic but not material |
| 35 | a | 1 <p>The magnet attracted the metal clip. <i>The metal clip attracted/attracting to / by the magnet.</i> <u>Magnetic force is pulling on the magnet.</u></p> | [0] The metal clip attracted/ is attracting the magnet. Magnet is pulling on the magnet (0m). Magnetic force is <u>holding</u> the clip. (1/2 m) Metal clip is made of magnetic material (1/2 m) |
| | b | 1 <p><u>Answer:</u> No.</p> <p><u>Reason:</u></p> <ul style="list-style-type: none"> • The magnet could not attract non-magnetic materials such as plastics. <p><i>Plastic is a not magnetic/ not a magnetic object.</i></p> | <i>Plastic is not made up of nickel, iron, steel or cobalt.</i> ½ m if 'magnetic' is spelled incorrectly |
| 36 | a | 1 <p>A magnet is strongest at its poles /ends.</p> | -[½] for wrong spelling of word in bold Do NOT accept: other form of strong e.g. stronger, powerful |
| | b | 1 <ul style="list-style-type: none"> • North-South direction • N-S direction • North only • South only | -[½] for wrong spelling |
| | c | 2 <p><u>Description:</u></p> <ul style="list-style-type: none"> • The suspended magnet moved/swing/(any form of movement related to movement) away from the other magnet. | Mark holistically Award marks only when the description is correct with the |

| | | | | |
|----|---|---|---|---|
| | | | <ul style="list-style-type: none"> Both magnets moved away from each other. They repelled <p>Reason: Like poles of both magnets were facing each other. Like poles repel.</p> | <p>correct reason given</p> <p>-[½] for wrong spelling of repel</p> |
| 37 | a | 1 | <p>more more</p> <p>greater greater</p> <p>fewer fewer</p> | <p>-[½] for wrong spelling</p> <p>Penalise ONCE only</p> |
| | b | 2 | <ul style="list-style-type: none"> Use a different number of batteries in <u>each set-up</u> Use the same number of turns in <u>both set-ups</u> Remove a battery from set-up A/ B Add another battery to set-up A/ B | <p>Mark holistically</p> <p>Concepts:</p> <p>1. coils</p> <p>2. batteries</p> <p>-[½] for wrong spelling of</p> <ul style="list-style-type: none"> battery |

- END OF PAPER -