



**AI TONG SCHOOL**

**2012 SEMESTRAL ASSESSMENT (2)**

**PRIMARY THREE SCIENCE**

**DURATION : 1hr 45 min**

**DATE: 24th October 2012**

**INSTRUCTIONS**

**Do not open the booklet until you are told to do so.  
Follow all instructions.  
Answer all questions.**

**Name : \_\_\_\_\_ ( )**

**Class : Primary \_\_\_\_\_**

**Parent's Signature : \_\_\_\_\_**

**Date : \_\_\_\_\_**

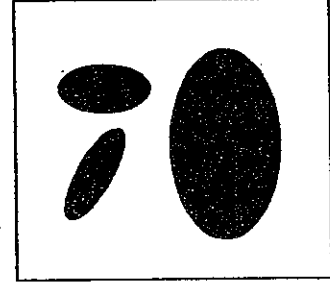
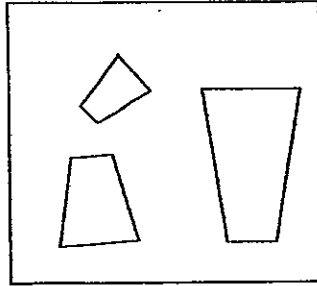
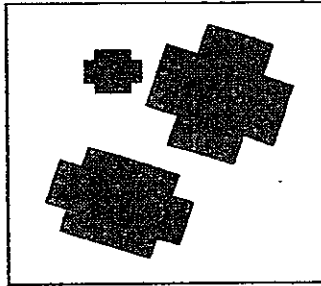
<b>MARKS</b>	<b>100</b>
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**Section A (30 x 2 marks)**

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.**

1. The objects below are grouped according to their \_\_\_\_\_.



- A size
- B shape
- C colour

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

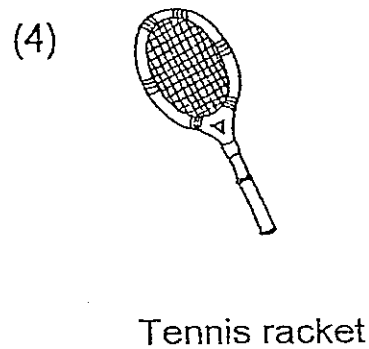
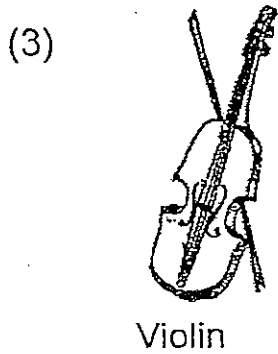
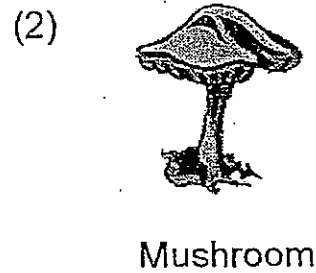
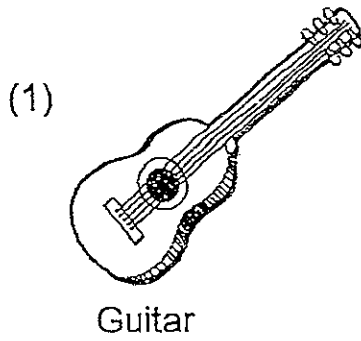
2. The following table shows how some objects were classified under groups A and B.

A	B
Writing paper Paper cups Rubber tyres	Marble tiles Glass bottles Wooden chairs

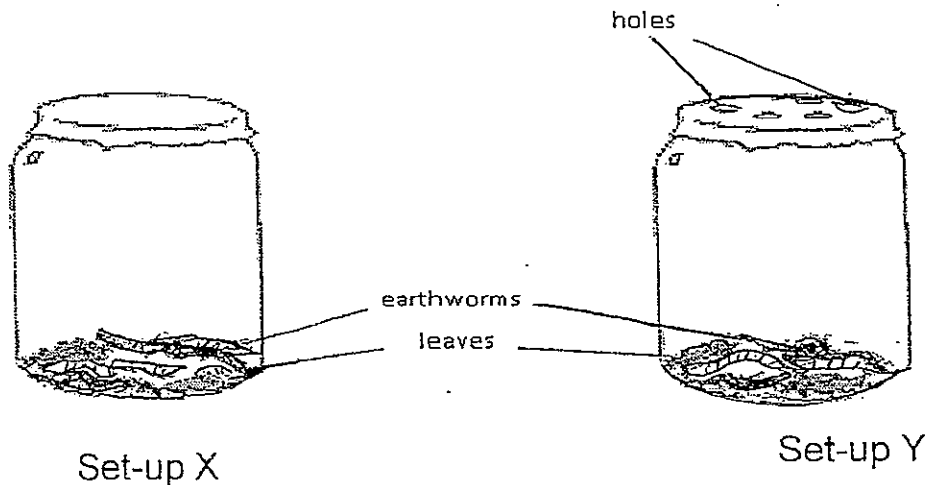
The objects were grouped according to \_\_\_\_\_.

- (1) how hard they were
- (2) whether they were breakable
- (3) the type of materials they were made of
- (4) whether they were made of waterproof materials

3. Which of the following is an example of a living thing?

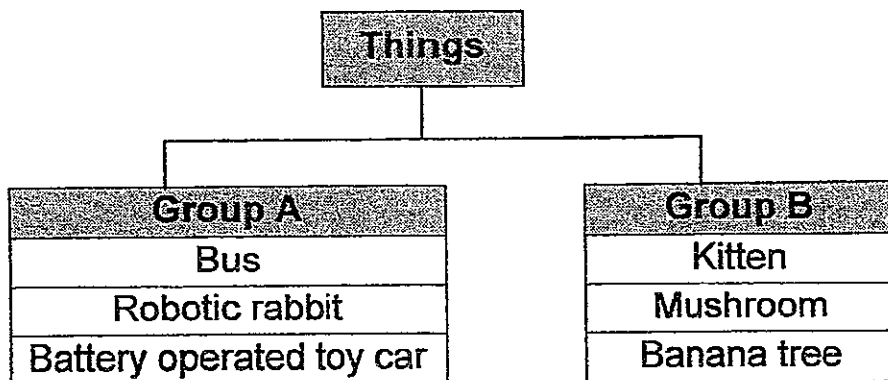


4. Mary prepared two set-ups, X and Y, with the same number of earthworms in each set-up, as shown in the diagram below. A few days later, the earthworms in set-up X died while the earthworms in set-up Y were still alive. Mary can conclude that living things \_\_\_\_\_.



- (1) need air to survive
- (2) need food to survive
- (3) need leaves for shelter
- (3) can reproduce in the container

5. The classification table shown below groups several things according to their characteristics.



What would be a suitable heading for Groups A and B?

	<b>Group A</b>	<b>Group B</b>
(1)	Able to produce its own food.	Unable to produce its own food.
(2)	Able to respond to changes.	Unable to respond to changes.
(3)	Unable to move from place to place.	Able to move from place to place.
(4)	Unable to reproduce.	Able to reproduce.

6. Which of the following correctly shows the part of animal that helps it to move?

	<b>Animal</b>	<b>Part of animal that helps it to move</b>
(1)	Bee	Wings
(2)	Clownfish	Gills
(3)	Earthworm	Legs
(4)	Duck	Beak

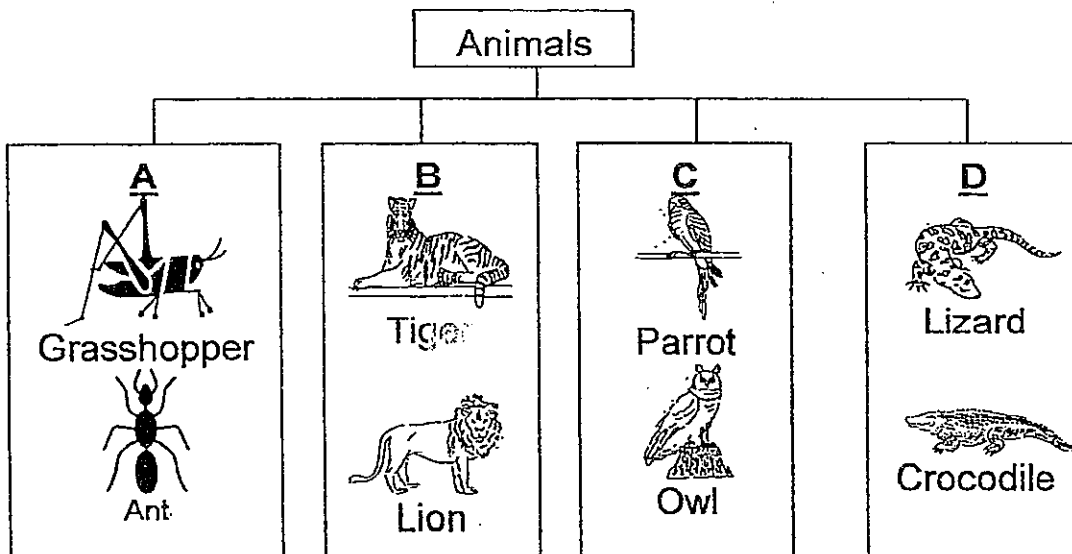
7. Peter made a few observations of an animal over a period of time.

	Yes	No
Does it swim?	√	
Does it have legs?		√
Does it have a tail?	√	
Does it give birth to young alive?	√	

Which animal is it likely to be?

- (1) toad
- (2) guppy
- (3) snake
- (4) goldfish

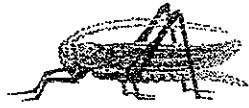
8. The animals below are grouped according to their outer covering.



A beetle can be placed in Group \_\_\_\_\_.

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

9. Francis found a grasshopper and a spider in his garden.



Grasshopper



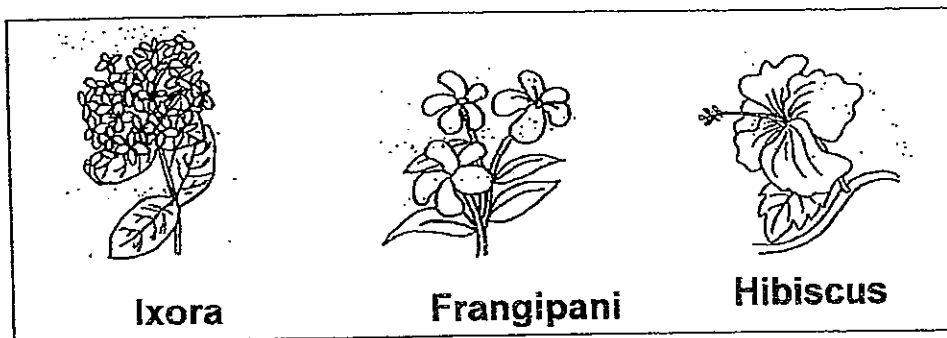
Spider

Which of the following activities would help him to find out which organism is an insect?

- A Measure the body length
- B Count the number of legs
- C Look for the presence of wings
- D Count the number of body parts

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

10 The following things are grouped together based on a common characteristic.



We cannot put a mango together with the above group because it is not a \_\_\_\_\_.

- (1) fruit
- (2) leaf
- (3) stem
- (4) flower

11. Karen classified the following fruits into two groups, X and Y.

X	Y
Chilli	Mango
Tomato	Longan
Papaya	Lychee
Watermelon	Rambutan

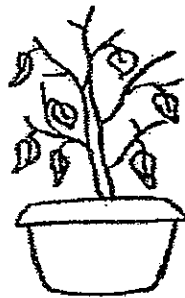
What are the suitable headings for both groups X and Y respectively?

	X	Y
(1)	Edible	Inedible
(2)	Many seeds	One seed
(3)	Rough texture	Smooth texture
(4)	Non-poisonous	Poisonous

12. Tim placed three pots of similar plants using the same amount soil. After a week, the three pots of plants were observed as follows:



A plant watered with right amount of water.



A plant not watered for a week.



A plant watered with too much water.

From the above observations, we can conclude that plants need \_\_\_\_\_ to grow healthily.

- (1) soil
- (2) sunlight
- (3) air, water and food
- (4) the right amount of water



13. Mary found a plant in the school eco-garden. The plant has the following characteristics:

- It produces flowers all year round.
- It is found in the pond.

What could the plant be?

- (1) Chilli
- (2) Hibiscus
- (3) Water lily
- (4) Water moss

14. How should bread be kept so that mould would not grow too quickly and cause it to spoil?

- A Bread should be kept in a dark corner.
- B Bread should be kept in the refrigerator.
- C Bread should be kept in an airtight container.
- D Bread should be sprinkled with water before storing.

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

15. Look at the two organisms below.



Bird's nest fern



Shiitake mushroom

Which of the following statements about both organisms is/are not true?

- A They have gills.
- B They reproduce from spores.
- C They cannot make their own food.

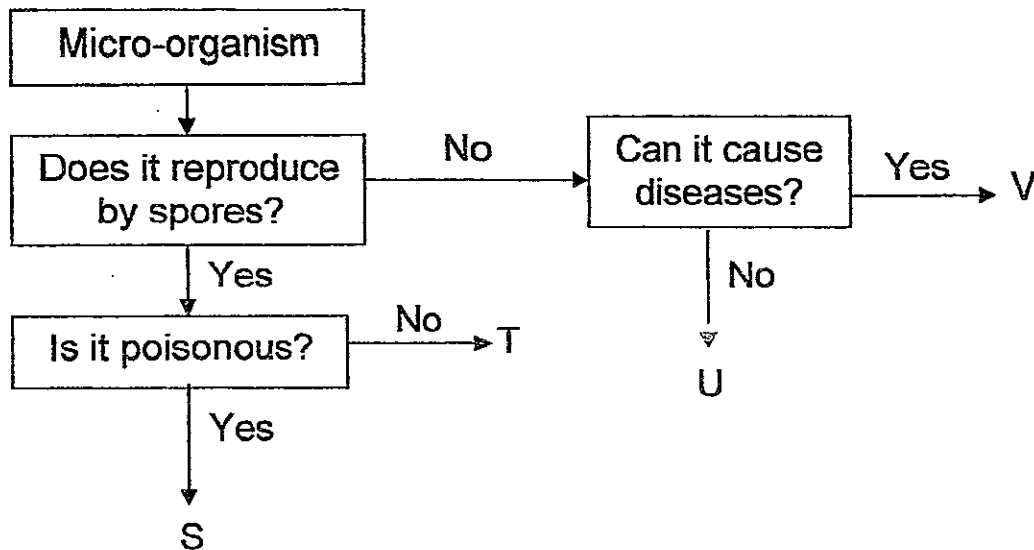
- (1) A only
- (2) B only
- (3) A and B only
- (4) A and C only

16. Which of the following statements about bacteria are not true?

- A Bacteria can only be seen under the microscope.
- B Bacteria can be seen by the naked eye
- C All bacteria can make their own food.
- D Bacteria can be harmful or useful.

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

17. Cathy was doing research and decided to group four different micro-organisms S, T, U and V. Study the flowchart shown below.



From the flowchart, Cathy made the following conclusions.

- A S and T reproduce by spores.
- B U and V may cause illness to living things.
- C T and U may not be harmful to living things.
- D S, T, U and V must all be seen under a microscope.

Which of the following best describes her conclusions?

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

18. The diagram below shows a pair of spectacles.



Which one of the following is the most suitable material for making the lenses?

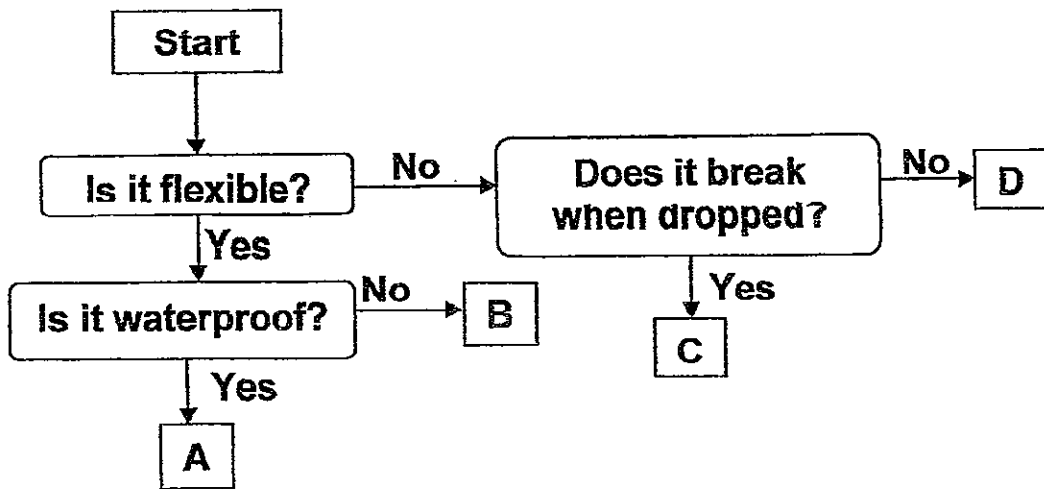
- (1) Wood
  - (2) Metal
  - (3) Plastic
  - (4) Rubber
19. Three materials, A, B and C, have the following characteristics.

- Material A is able to leave scratches on Material C, <sup>and</sup> but not on Material B.
- Material C breaks more easily than Materials A and B.
- Material B absorbs water more but not Materials A and C.

Based on the above descriptions, which of the following are most likely to be materials, A, B and C?

	<b>Material A</b>	<b>Material B</b>	<b>Material C</b>
(1)	glass	paper	wood
(2)	iron	rubber	paper
(3)	plastic	cotton	copper
(4)	steel	cloth	glass

20. Study the flowchart below.



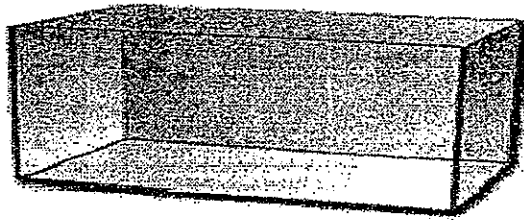
Which one of the following best represents a glass bottle?

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

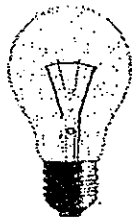
21. Study the pictures below.



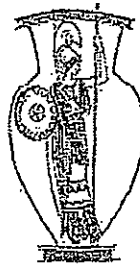
**Drinking  
glass**



**Glass fish tank**



**Glass light  
bulb**

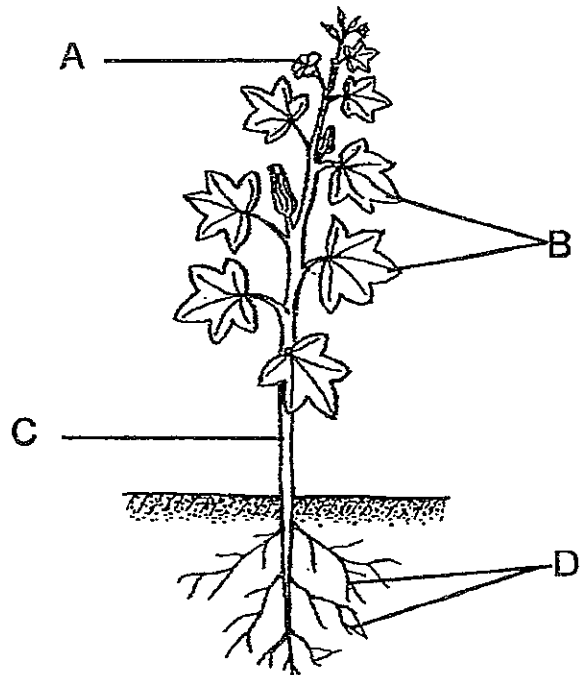


**Porcelain  
vase**

Which of the following properties is common to all four objects?

- (1) They are all flexible.
- (2) They are all transparent.
- (3) They can be broken easily.
- (4) They are all made of the same materials.

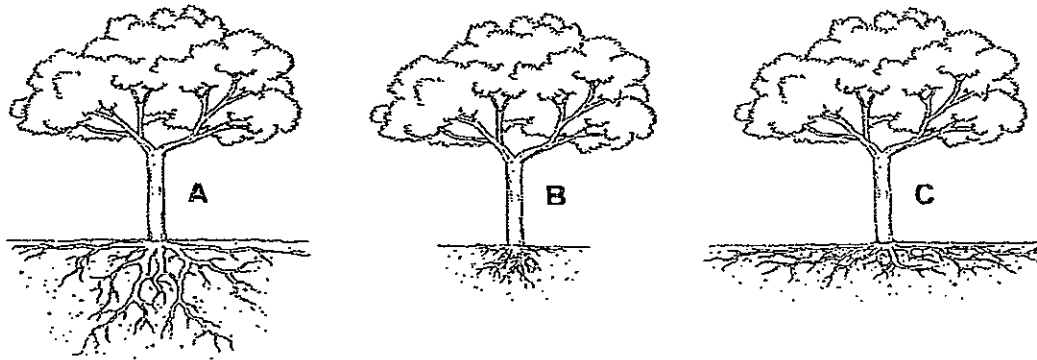
22. The picture below shows a flowering plant.



Which of the parts, A, B, C or D, has the main function of **making food** for the plant?

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

23. Mary sketched three similar trees in a park in her notebook as shown below.

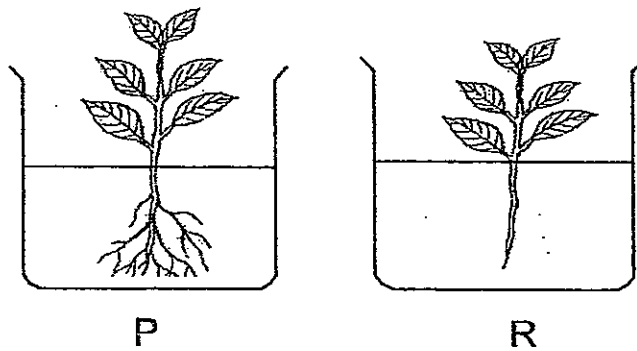


Which tree(s) would most likely fall over if there is a heavy storm?

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



24. In an experiment, two similar plants, P and R, were each put into a jar containing 200 ml of water.



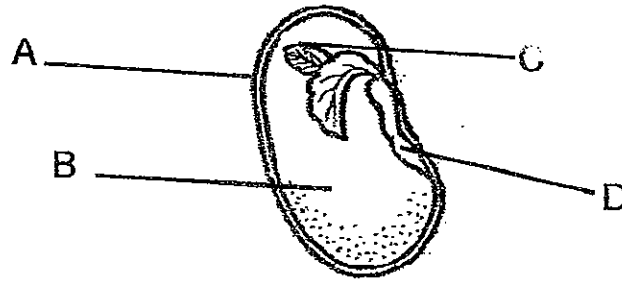
The table below shows the amount of water left in the jar after 5 days.

Plant	P	R
Volume of water left (ml)	110	158

Which one of the following statements below is a correct conclusion of the experiment?

- (1) Plant R absorbed more water than Plant P.
- (2) Plant R absorbed the same amount of water as Plant P.
- (3) Plant P absorbed less water than Plant R as it has roots.
- (4) Plant P absorbed more water than Plant R through its roots.

25. Parts of a seed are shown in the diagram below. Which part of the seed provides it with food when it starts to become a seedling?



- (1) A  
(2) B  
(3) C  
(4) D
26. David wants to find out how water affects the germination of seeds. Which of the following should he use as his two set-ups for the experiment?

	Number of seeds	Light	Water
A	5	Present	Present
B	3	Absent	Present
C	3	Absent	Absent
D	5	Absent	Present

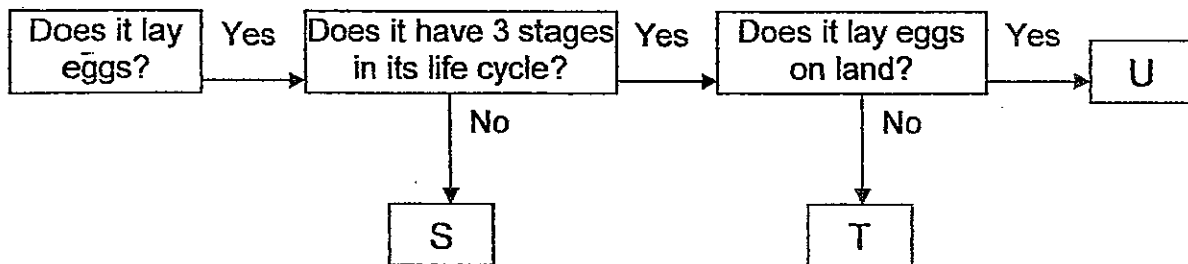
- (1) A and B  
(2) B and C  
(3) C and D  
(4) A and D

27. Abby carries out an experiment to find out whether red beans or green beans **germinate** faster. Which of the variables must she **keep the same** for this experiment?

- A Type of soil
- B Type of seeds
- C Amount of water
- D Duration of the experiment

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

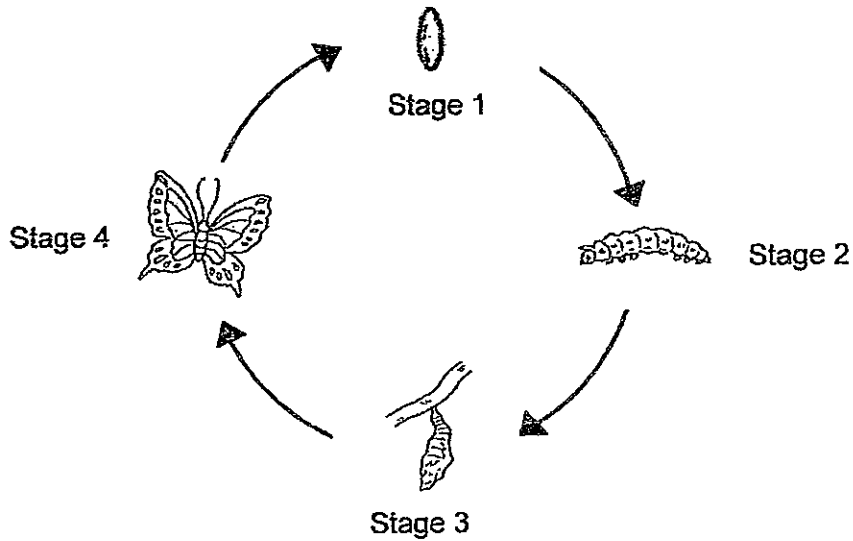
28. The flow chart below provides information about 3 animals, S, T and U.



Which of the following correctly represents animals S, T and U?

	<b>Animal S</b>	<b>Animal T</b>	<b>Animal U</b>
(1)	Chicken	Grasshopper	Cockroach
(2)	Cockroach	Frog	Butterfly
(3)	Mealworm beetle	Cockroach	Frog
(4)	Mosquito	Frog	Chicken

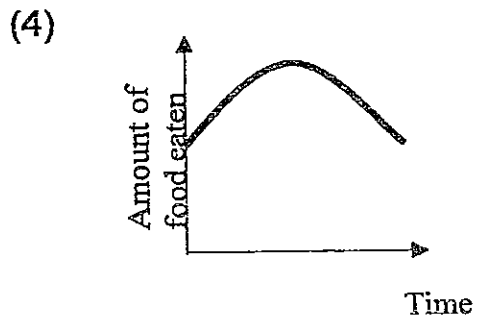
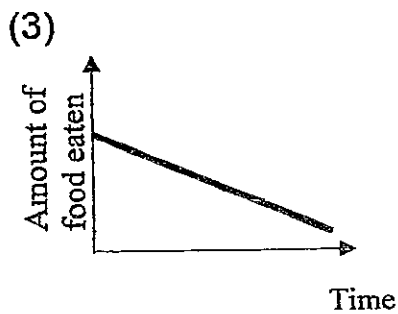
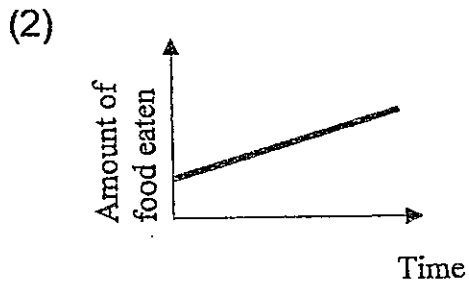
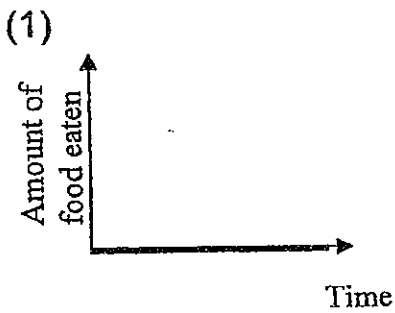
29. The diagram below shows the life cycle of a butterfly.



At which stage(s) of the life cycle of the butterfly will there be little or no movements?

- (1) Stage 3 only
- (2) Stage 1 and 2
- (3) Stage 1 and 3
- (4) Stage 2 and 4

30. Which graph best represents the amount of food eaten by a caterpillar at the larva stage?



Name : \_\_\_\_\_ ( )

Class: 3( )

SECTION B: (40 MARKS)

For questions 31 to 44, write your answers in the blank spaces provided.

31. Based on the list of given items in the box, classify them into two separate groups in the table below. [ 3 ]

Fur coat	Spider	Wooden stool
Rose plant	Magazine	Mimosa plant

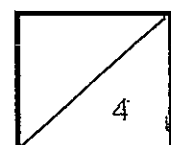
(a)

Living Things	Non-Living Things

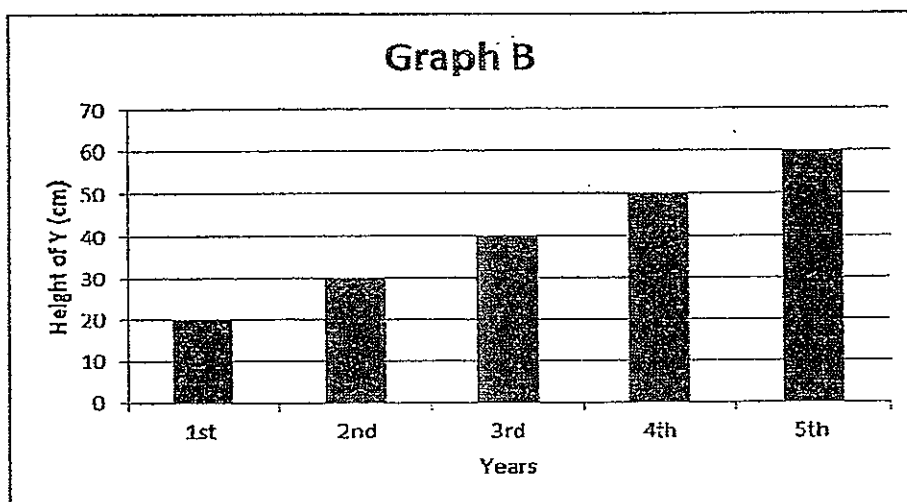
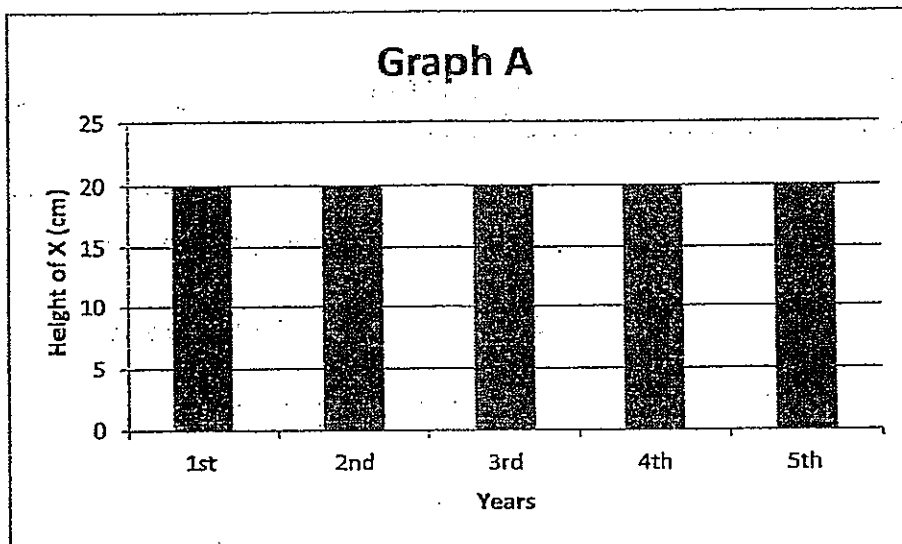
- (b) Which item listed under the 'Living Things' column does not match the other two? Explain your answer. [ 2 ]

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32. Study the two graphs below. Graph A shows the height of 'X' and Graph B shows the height of 'Y' over a period of 5 years.



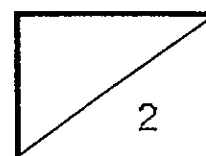
(a) Based on the graphs given, state one difference between X and Y. [ 1 ]

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(b) Give an example of X and Y. [ 1 ]

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33. The table below shows how four animals are classified.

Lays Eggs		Gives Birth to Young Alive	
Can fly	Cannot fly	Can swim	Cannot swim
Eagle	Angel Fish	Dolphin	Cow

Use the information given to answer the following questions.

- (a) State one difference between an eagle and a cow. [ 1 ]

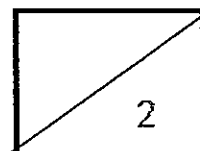
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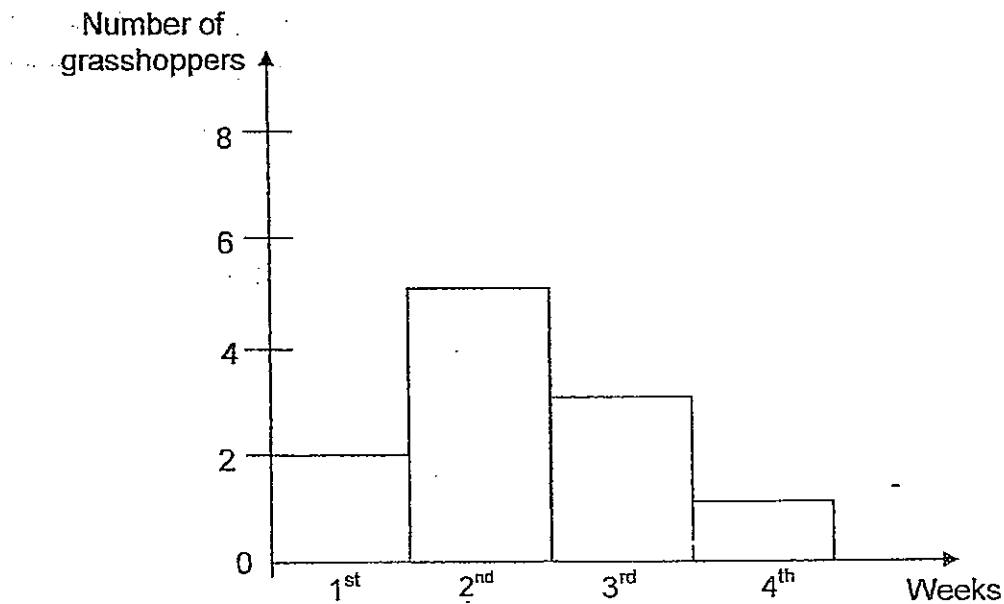
- (b) Which characteristic in the table describes a mammal? [ 1 ]

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34. The graph below shows the changes in the number of grasshoppers in a glass tank over 4 weeks.



1 How many grasshoppers were there in the 3<sup>rd</sup> week? [ 1 ]

a \_\_\_\_\_

After some time, some insecticide was added into the tank.

b. (i) When was the insecticide added? [ 1 ]

\_\_\_\_\_

(ii) Give a reason for your answer. [ 1 ]

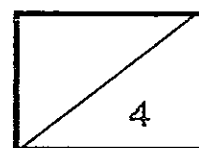
\_\_\_\_\_

\_\_\_\_\_

(c) What will happen to the grasshoppers in the 5<sup>th</sup> week? [ 1 ]

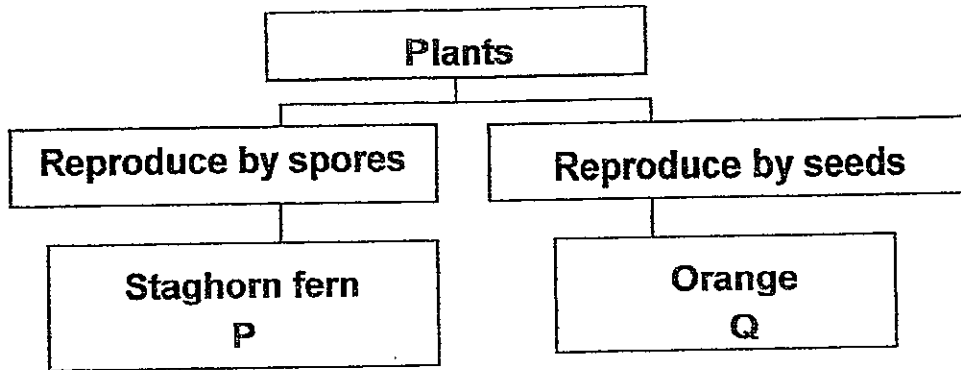
\_\_\_\_\_

\_\_\_\_\_





35. Study the classification table below.



(a) Based on the classification chart above, write two characteristics of the Staghorn fern. [ 1 ]

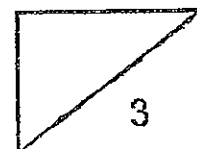
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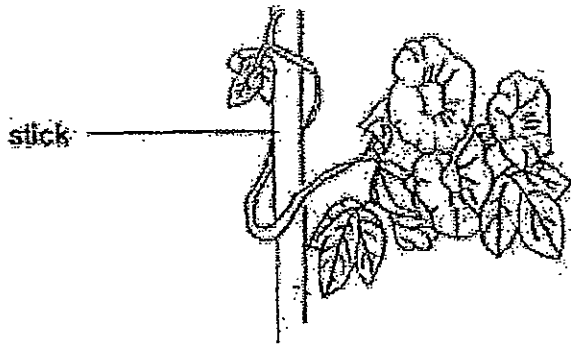
(b) Which plant (P or Q) can best represent a lemon plant? Explain your answer. [ 2 ]

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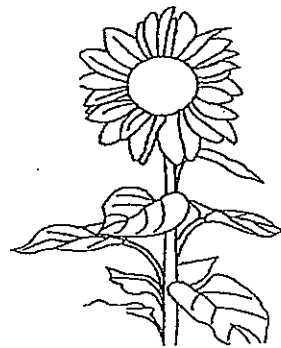
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36. Compare the two plants based on the pictures below.



Morning Glory



Sunflower

- (a) State an observable similarity between the two plants.  
(Do not compare the size) [ 1 ]

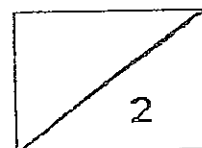
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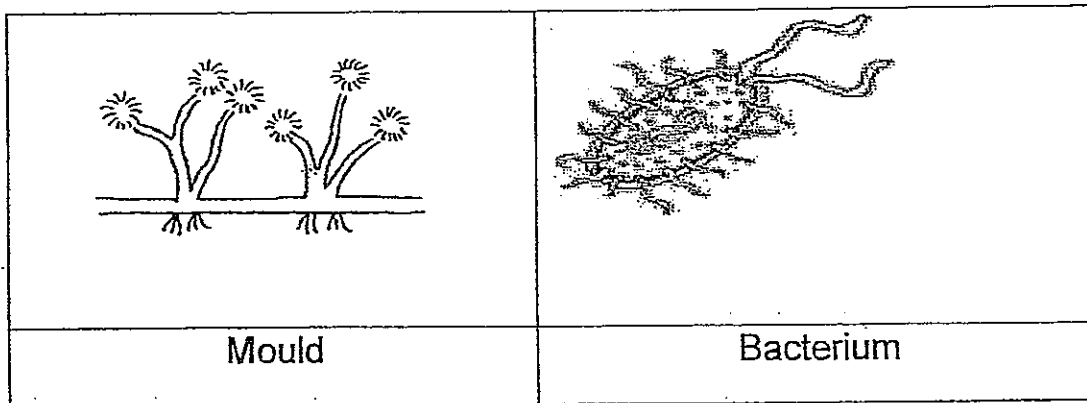
- (b) State an observable difference between the plants. [ 1 ]

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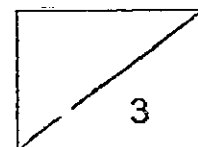


37. The diagram below shows two types of organisms.



Read the sentences in the table below carefully. Complete the table below by filling a tick (✓) in the correct box after each statement. [ 3 ]

Characteristics.	True	False
These organisms contain chlorophyll.	<input type="checkbox"/>	<input type="checkbox"/>
These organisms have flowers and bear fruit.	<input type="checkbox"/>	<input type="checkbox"/>
These organisms can only be seen under microscope.	<input type="checkbox"/>	<input type="checkbox"/>



38. Meiling is going for an exchange programme to China during the winter season. Her mother advised her to bring a woollen sweater.



- (a) Give a reason why a woollen sweater is suitable for cold weather during winter. [ 1 ]

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- (b) Materials A, B and C have the characteristics as shown in the table below.

Property	A	B	C
Light		✓	✓
Flexible		✓	
Waterproof	✓	✓	
Breaks when drop	✓		✓

- (i) Compare materials A, B and C. Which is the most suitable material to make a travel pouch? [ 1 ]

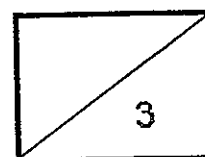
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- (ii) Give two reasons to support your answer in (i). [ 1 ]

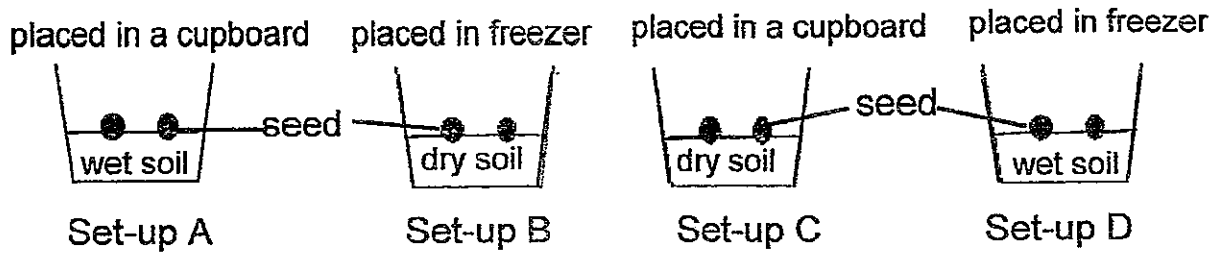
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39. Kenny conducted an experiment. He put some seeds into 4 containers as shown below. He started to observe if the roots of the seeds appeared.

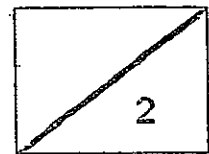


- a) Which of the above set-ups should he use in his experiment? [ 1 ]

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- b) What was the aim of Kenny's experiment? [ 1 ]

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40. Study the table below and answer the questions that follow.

Characteristics of organism	A	B	C
Floating water plant	√		√
Has green leaves	√	√	√
Has flowers		√	√

(a) Describe C. [1]

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(b) Give an example of C.

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(c) Which organism can be a water moss? [1]

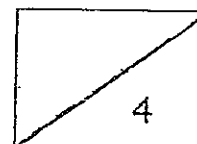
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(d) State a similarity between A and B. [1]

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41. Peter wanted to find out how the amount of water affected the growth of plants. He placed four plants in four similar pots in the garden. He gave the plants the same amount of fertilizers but different amounts of water. After 5 weeks, he recorded the growth of the plants below.

	Plant S	Plant T	Plant U	Plant V
Amount of water	30 ml	40 ml	50 ml	60 ml
Amount of fertilizers	4 g	4 g	4 g	4 g
Number of leaves recorded after 5 weeks	12	23	36	36

- (a) What is the maximum amount of water required for healthy growth of leaves? [ 1 ]

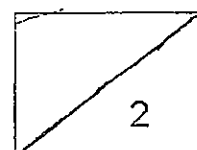
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- (b) Explain your answer in (a). [ 1 ]

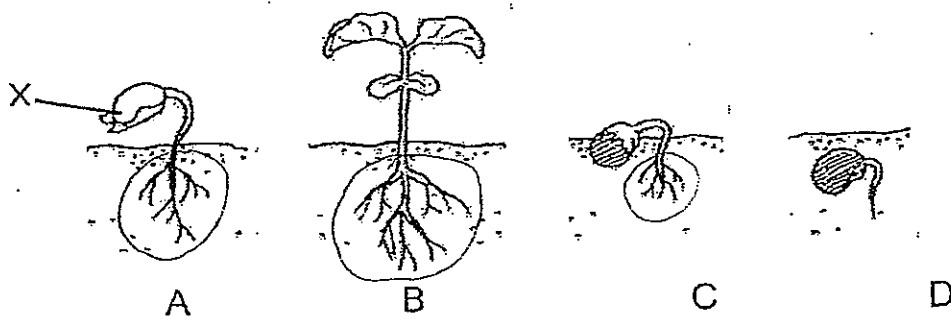
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42. Cathy planted a bean seed in some garden soil and watered it daily. A few days later, she found that the seed had germinated. The pictures below show four stages in the growth of the seed. They are not in the correct order.



- (a) Write down the correct sequence of the growth of the bean seed above. [ 1 ]

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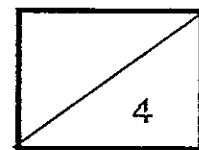
- (b) What will happen to the seedling if 'x' is removed. Explain your answer. [ 2 ]

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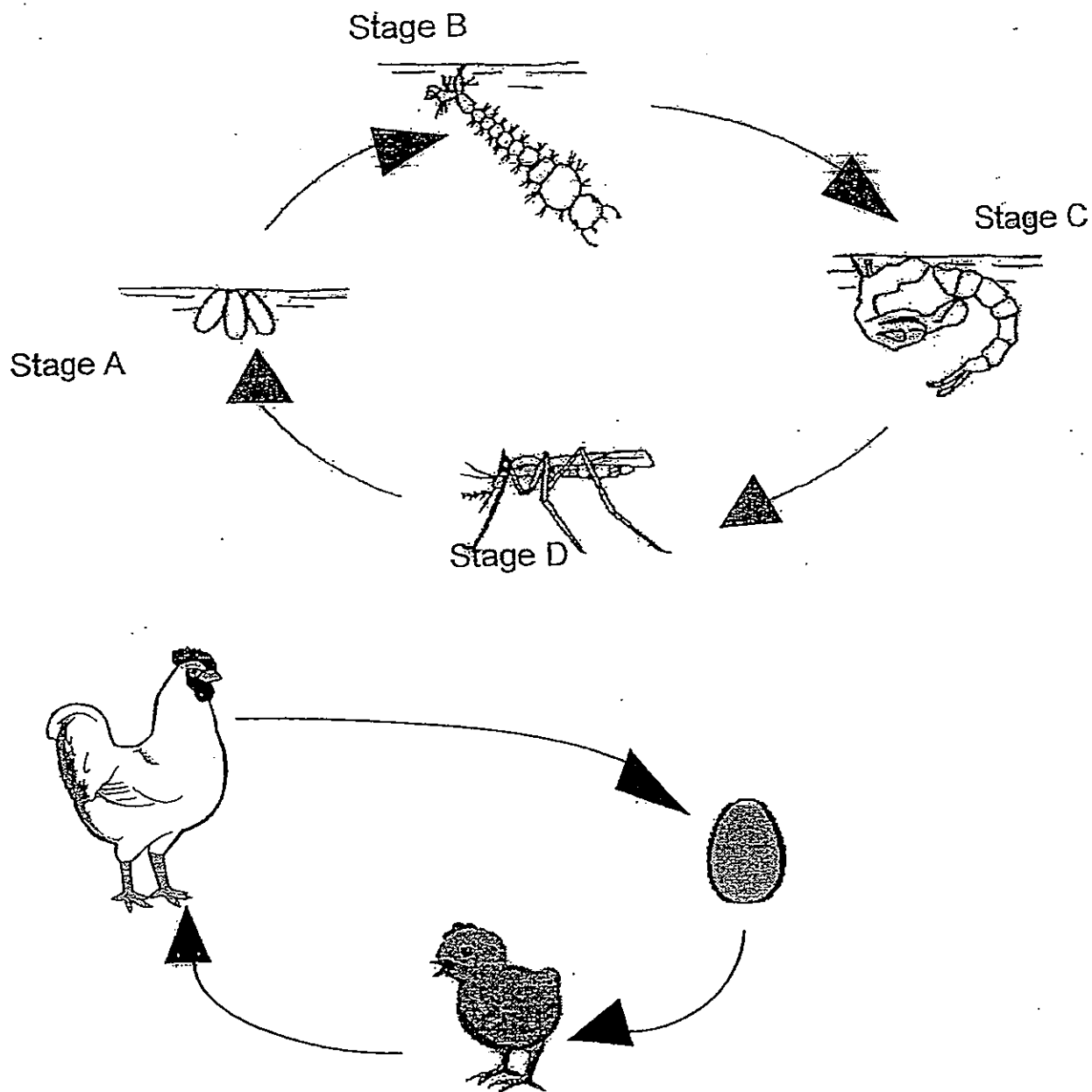


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- (c) On the diagram, circle the part of the seedling that absorbs water and mineral salts from the soil. [ 1 ]



43. The diagram below shows the life cycle of a mosquito and a hen.



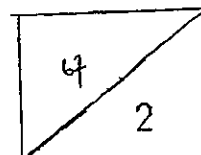
Compare the two life cycles.

(i) Difference : [1]

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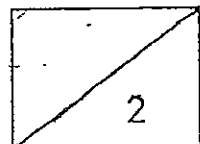
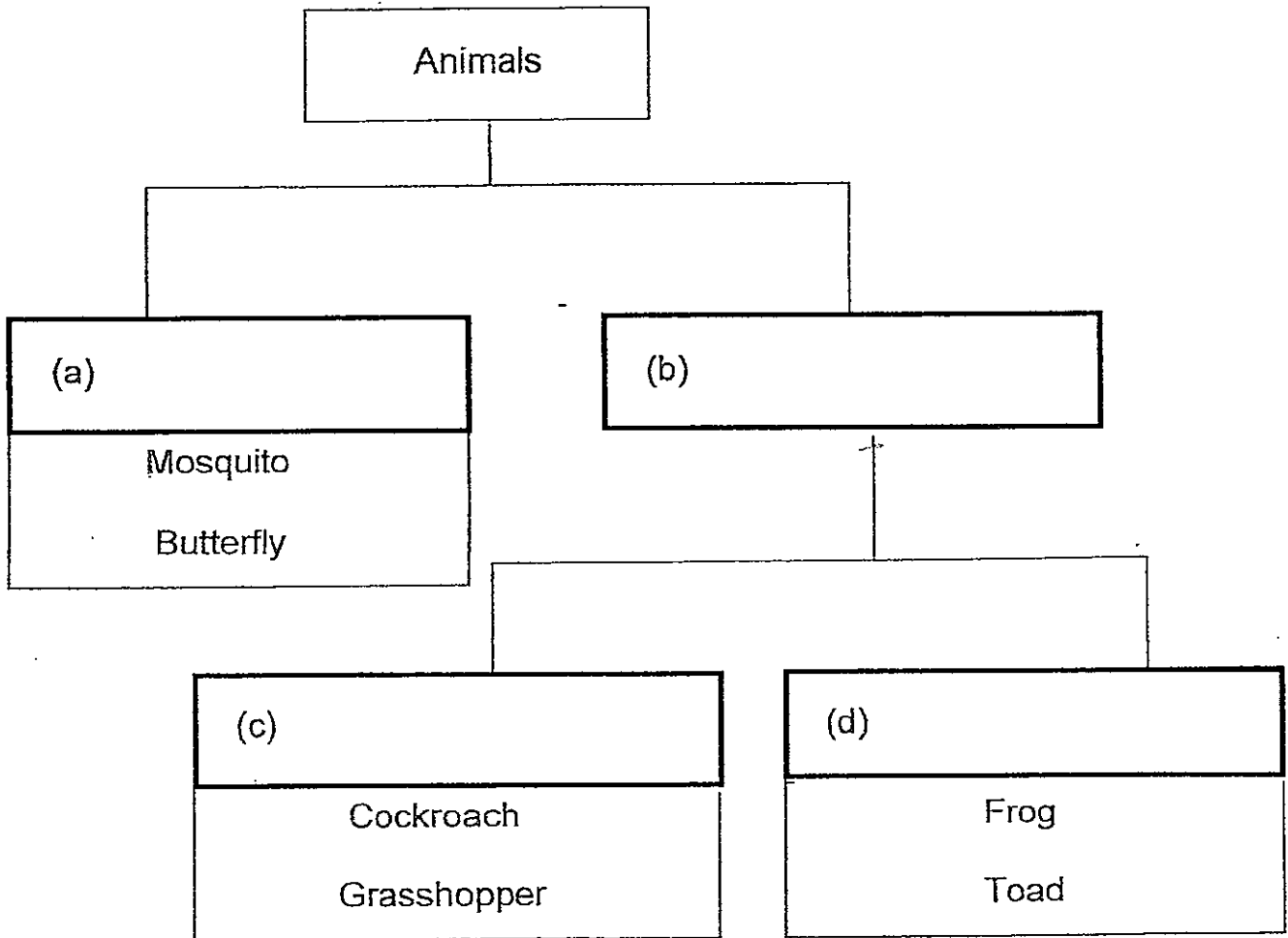
(ii) Similarity: [1]

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44. Lynn drew the classification table below based on the life cycles of animals. Write down suitable headings in the boxes provided below.



End of Paper



# ANSWER SHEET

**EXAM PAPER 2012**

**SCHOOL : AI TONG SCHOOL**

**SUBJECT : PRIMARY 3 - SCIENCE**

**TERM : SA 2**

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Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	1	2	1	4	1	2	1	2	4
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
2	4	3	2	1	2	3	3	4	3
Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
3	2	2	4	2	2	4	4	3	2

31. a)

Living Things	Non-Living Things
Spider Rose plant Mimosa plant	Fur coat Wooden stool Magazine

b) Spider. It is not a plant.

32. a) X does not change in height while Y changes in height.

b) X is a toy while Y is a plant.

33. a) The eagle lays eggs while the cow gives birth to young alive.

b) Gives birth to young alive.

34. a) 3

b) i) On the third week

ii) The number of grasshoppers start to decrease.

c) They will all die.

35. a) The staghorn fern is a plant and reproduces by spores.

b) Plant Q. A lemon plant reproduces by seeds.

36. a) Both plants flower.

b) The morning glory has a weak stem while the sunflower has a strong stem.

37.

Characteristics	True	False
These organisms contain chlorophyll.		✓
These organisms have flowers and bear fruit.		✓
These organisms can only be seen under microscope.	✓	

38. a) The woolen sweater is thick and keeps us warm.

b) i) Material B

ii) It is light and flexible.

39. a) Set up A and set up D.

b) If the seeds needed warmth to survive.

40. a) It is a floating water plant, has green leaves and bears flowers.

b) Water hyacinth

c) A

d) Both have green leaves

41. a) 50 ml of water

b) Number of leaves remain at 36 with 60 ml of water.

42. a) D, C, A, B

b) It will die. It provides food for the plant. c) A, B, C

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