



MARIS STELLA HIGH SCHOOL (PRIMARY)

SEMESTRAL ASSESSMENT 2

SCIENCE

27 OCTOBER 2016

BOOKLET A

NAME: _____ ()

CLASS: Primary 3 ()

24 questions

48 marks

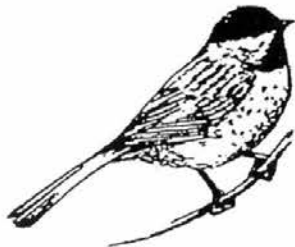
Total Time for Booklets A & B: 1 h 30 min

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

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). (48 marks)

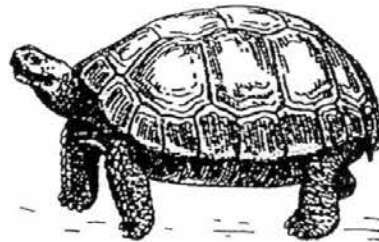
1 Study the animals below.



Animal X



Animal Y

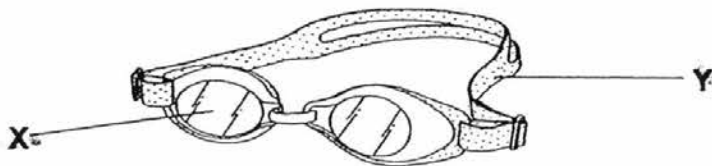


Animal Z

Which of the following shows the correct body covering of animals X, Y and Z?

	Animal X	Animal Y	Animal Z
(1)	Hair	Scales	Feathers
(2)	Feathers	Hair	Scales
(3)	Hair	Shell	Scales
(4)	Feathers	Scales	Hair

2 The diagram below shows a pair of swimming goggles.



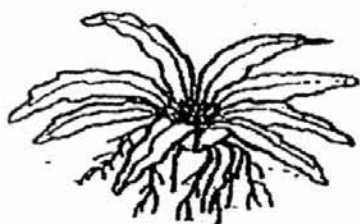
Which materials are suitable to make parts X and Y?

	X	Y
(1)	Plastic	Metal
(2)	Rubber	Fabric
(3)	Metal	Plastic
(4)	Plastic	Rubber

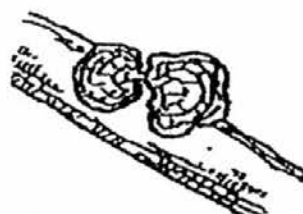
3 Which of the statements is true about bacteria?

- (1) Bacteria will not die.
- (2) Bacteria cannot reproduce.
- (3) All bacteria can be seen by the naked eye.
- (4) Some bacteria are useful to human beings.

4 Study the two organisms shown below.



Bird's nest fern



Bracket fungus

Which of the following states the correct similarity and difference between the two organisms?

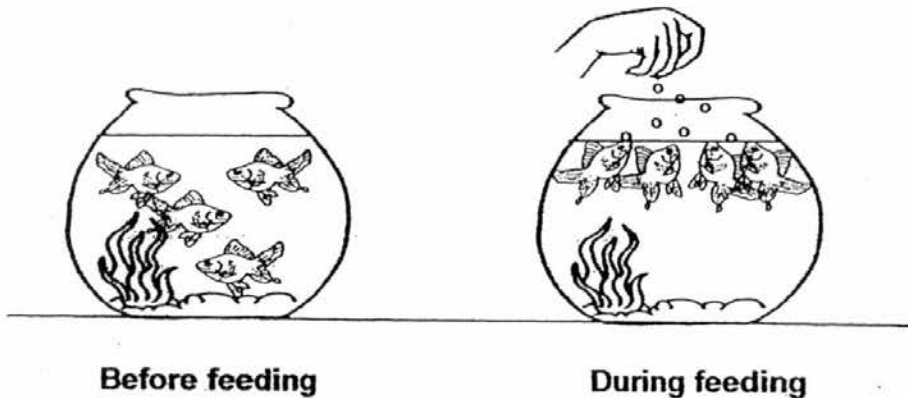
	Similarity	Difference
(1)	Both can make their own food.	The bird's nest fern reproduces by seeds but the bracket fungus reproduces by spores.
(2)	Both can make their own food.	The bird's nest fern produces flowers but the bracket fungus does not produce flowers.
(3)	Both reproduce by spores.	The bird's nest fern can make its own food but the bracket fungus cannot.
(4)	Both can only grow on trees.	The bird's nest fern reproduces by seeds but the bracket fungus reproduces by spores.

5 Which of the following statements about reptile and amphibian are correct?

- A Both reproduce by laying eggs.
- B Both breathe through their skin.
- C Reptile lives on land but amphibian lives only in water
- D Reptile has dry skin covered with scales but the amphibian has moist skin.

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

6 The diagrams below show fishes in the fish bowl before and during feeding.

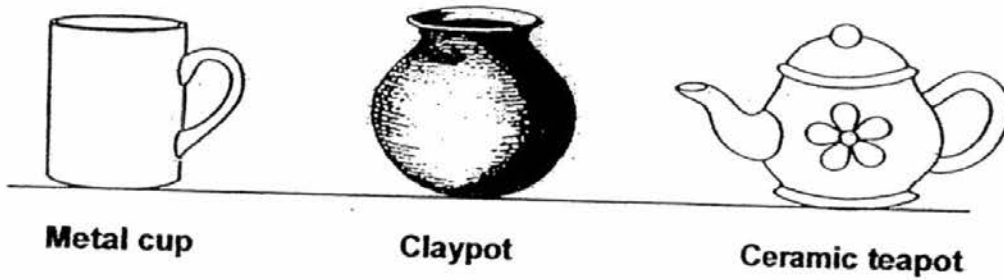


Based on her observation, what can Susan learn about living things?

- A Living things can die.
- B Living things need water to survive.
- C Living things can move on their own.
- D Living things can respond to changes around them.

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

7 Study the objects below.



In what way are the objects shown above similar?

- (1) They are weak.
- (2) They are flexible.
- (3) They are absorbent.
- (4) They do not allow light to pass through.

8 The table below shows the properties of materials A, B, C and D.

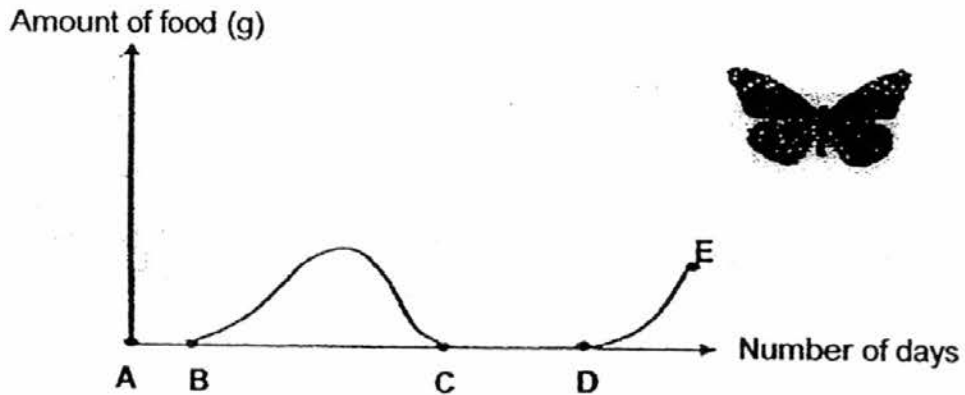
Properties	Material A	Material B	Material C	Material D
Light weight	Yes	No	No	Yes
Flexible	Yes	No	No	Yes
Able to keep things warm	No	Yes	No	Yes
Allows light to pass through	Yes	No	No	No

Mrs Lee wants to choose a material to make a sweater that can be worn in a cold country.

Which material is most suitable?

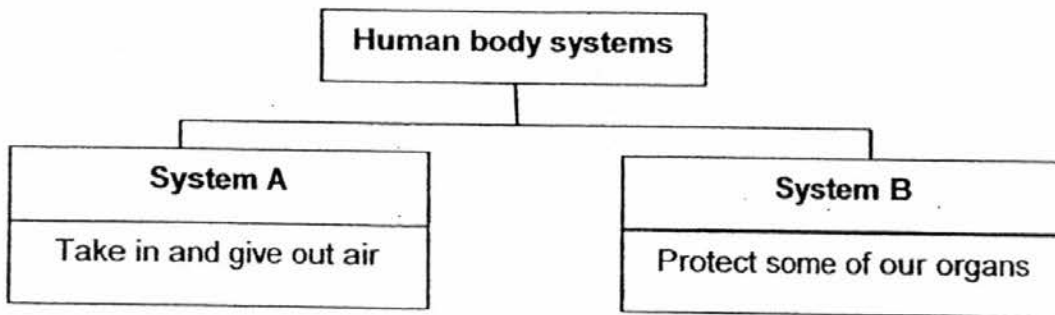
- (1) Material A
- (2) Material B
- (3) Material C
- (4) Material D

- 9 The graph below shows the amount of food that was eaten by a butterfly from its egg stage to adult stage.



Which section shows the butterfly in its pupal stage?

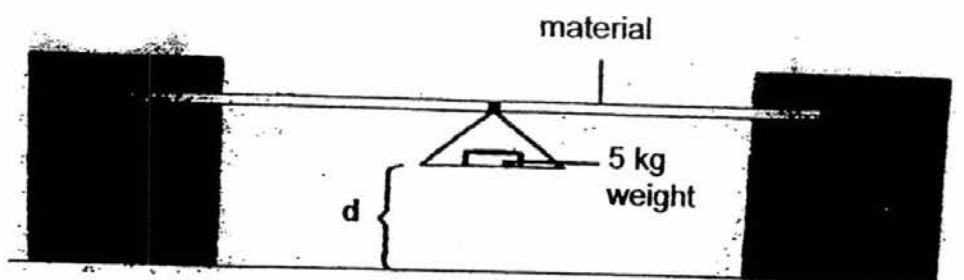
- (1) A to B
 - (2) B to C
 - (3) C to D
 - (4) D to E
- 10 Study the classification chart below.



Which of the following correctly identifies systems A and B?

	System A	System B
(1)	Muscular system	Respiratory system
(2)	Circulatory system	Skeletal system
(3)	Muscular system	Circulatory system
(4)	Respiratory system	Skeletal system

- 11 Paul set up the experiment below. He wanted to find out which material, A, B, C or D is the most flexible. He attached a 5 kg weight to each material and measured distance "d".



The table below shows his results.

Material	d (cm)
A	8
B	3
C	2
D	6

Which material is the most flexible?

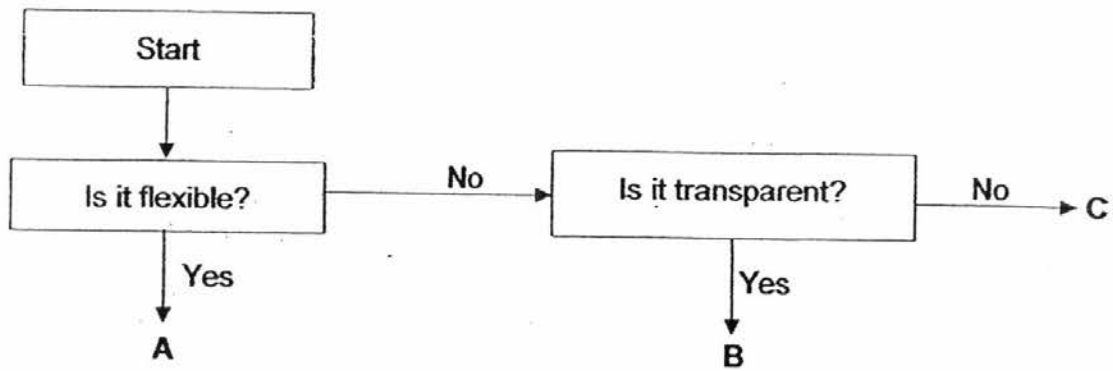
- (1) A
 - (2) B
 - (3) C
 - (4) D
- 12 Study the classification table below.

Plant parts		
Part A	Part B	Part C
Makes food for the plant	Holds the plant firmly to the ground	Transports water and food to all parts of the plant

Which one of the following correctly represents plant parts A, B and C?

	A	B	C
(1)	leaves	stem	roots
(2)	stem	roots	leaves
(3)	seeds	flowers	roots
(4)	leaves	roots	stem

13 Study the flow chart below.



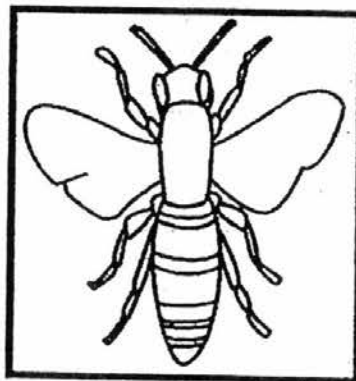
Which one of the following correctly shows what objects A, B, C and D could be?

	A	B	C
(1)	iron rod	ceramic tile	rubber band
(2)	rubber band	spectacle lens	ceramic tile
(3)	iron rod	ceramic tile	fish tank
(4)	rubber band	glass	spectacle lens

14 Study animals P and Q in the diagram below.



Animal P


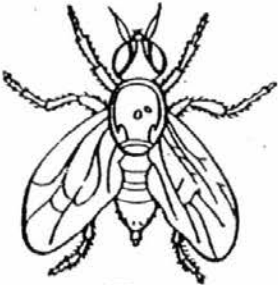




Animal Q

Based on your observation, which of the following statements about animals P and Q is **incorrect**?

- (1) Both have 3 body parts.
- (2) Both have 3 pairs of legs.
- (3) Both have 1 pair of feelers.
- (4) Both have 2 pairs of wings.

15 Study the classification table below.

Group A	Group B
 Fish	 Fly
 Whale	 Bird

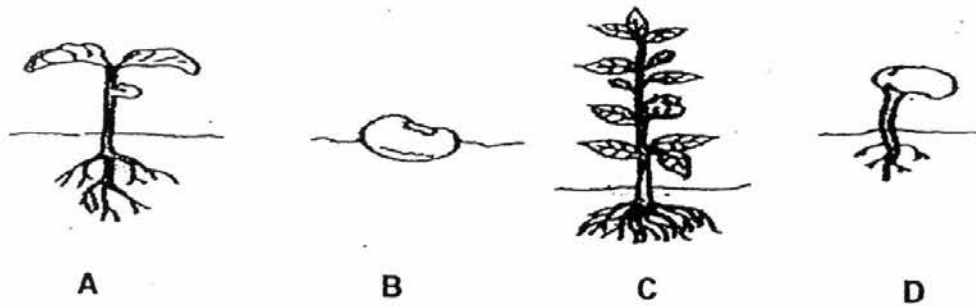
Which one of the following is suitable headings for Group A and Group B?

	Group A	Group B
(1)	Fish	Bird
(2)	Has scales	Has feathers
(3)	Has no wings	Has wings
(4)	Breathe through gills	Breathe through lungs

16 Which one of the following has items **incorrectly** matched to its heading?

	Living things	Non-living things
(1)	Deer	Paper
(2)	Bread mould	Plastic bottle
(3)	Wooden chair	Tea cup
(4)	Rose plant	Pencil

17 The diagram below shows the different stages in the life cycle of a green bean plant.



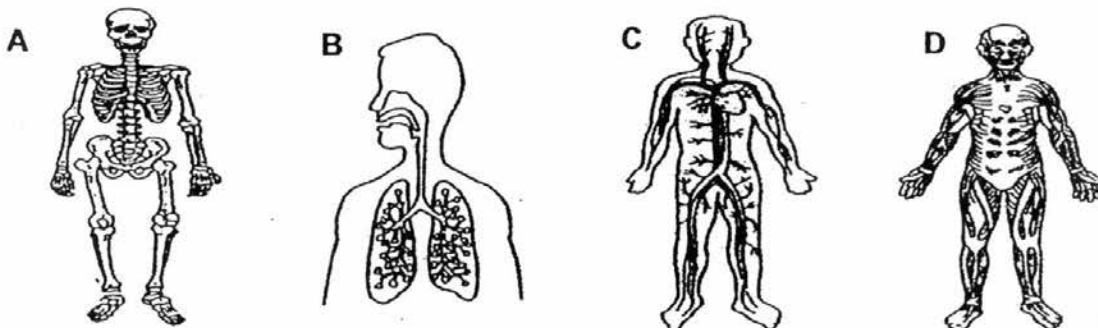
Which of the following shows the correct order of the life cycle of the green bean plant?

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

18 Jerry is dancing. He is swinging and bending his arms and legs.

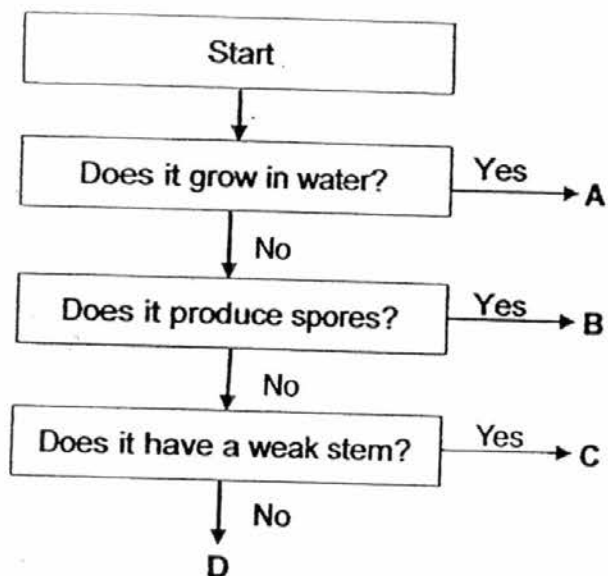


Which of the two body systems below, work together to enable jerry to move his body?



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

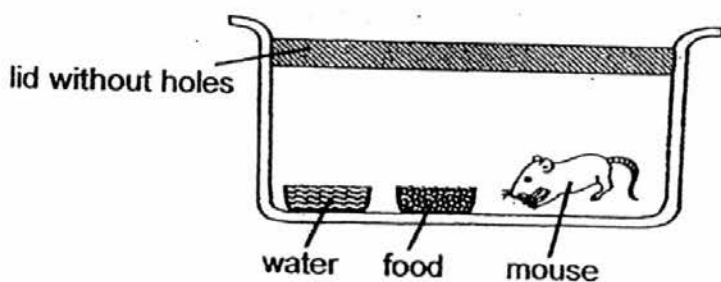
19 Study the flow chart and plant X shown below.



Which of the following most likely represents plant X?

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

20 Jonathan put a mouse in a sealed container as shown below.



A week later, he found that the mouse had died. Which of the following is most likely to have caused the mouse to die?

- (1) There is not enough air in the container.
- (2) There is not enough food in the container.
- (3) There is not enough water in the container.
- (4) There is not enough space in the container.

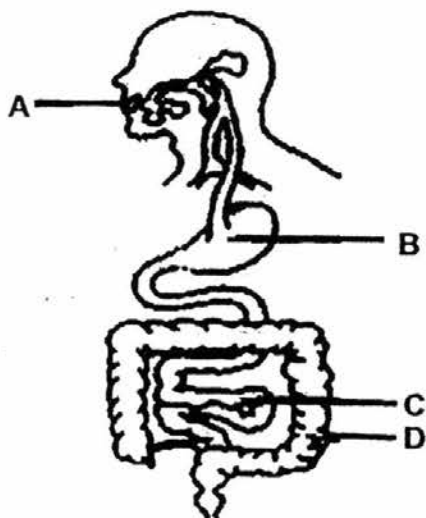
21 The table below shows the characteristics of animals P and Q.

Characteristics	Animal P	Animal Q
Lays eggs	✓	✓
Has a 3-stage life cycle	x	✓

Which of the following would be correct?

	Animal P	Animal Q
(1)	Grasshopper	Chicken
(2)	Grasshopper	Mosquito
(3)	Butterfly	Chicken
(4)	Butterfly	Mosquito

22 The diagram below shows the human digestive system.

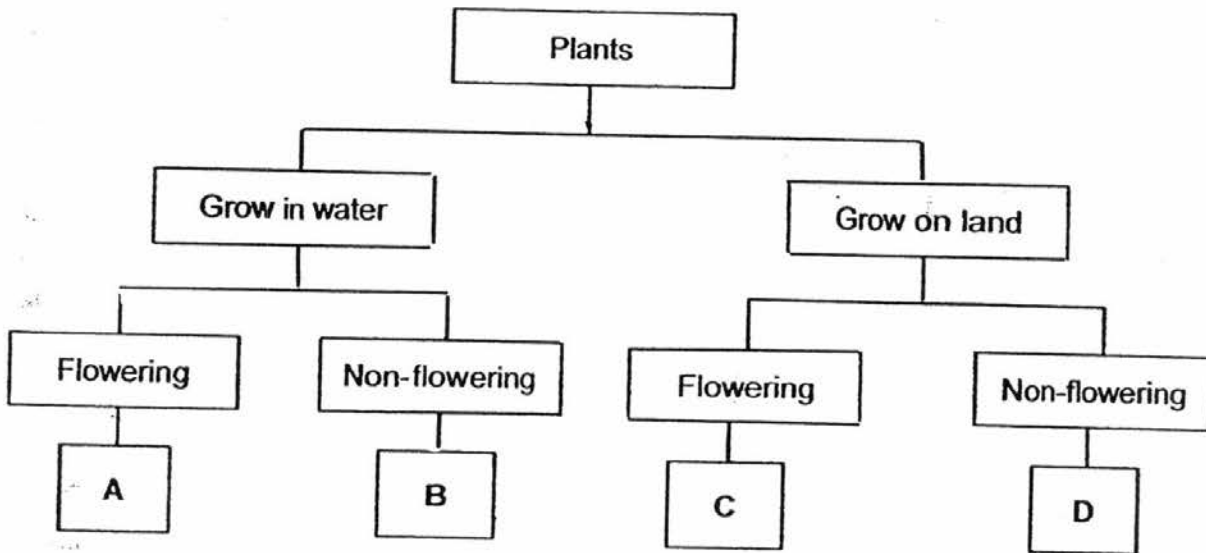


Which one of the following correctly identifies the body parts where digestion begins and ends?

	Digestion begins	Digestion ends
(1)	A	D
(2)	A	C
(3)	B	D
(4)	B	C

23 The following table shows some characteristics of plants X and Y.

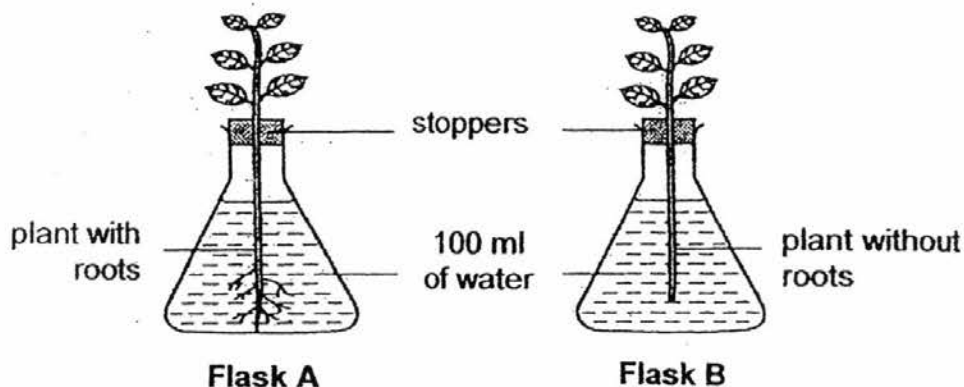
Characteristics	Plant X	Plant Y
Does it grow in water?	Yes	No
Does it have flowers?	No	Yes



Using the information in the table, which of the following letters, A, B, C and D, in the classification chart best represent plants X and Y?

	Plant X	Plant Y
(1)	B	A
(2)	D	C
(3)	A	D
(4)	B	C

24 Shaun had the following set-ups for his experiment.



He left the two set-ups in an open field and recorded the amount of water in the conical flasks every 2 hours. At the end of 4 hours, Shaun noticed that the plant in flask B looked less healthy than the plant in flask A.

Time (h)	Amount of water (ml)	
	Flask A	Flask B
0	100	100
2	60	100
4	25	100

Based on the results of the experiment, which of the following conclusions are correct?

- A Water is taken in by the stem.
 - B Water is taken in by the roots.
 - C Water is transported to the leaf.
 - D Water is needed for the plant to grow well.
- (1) A and B only
 (2) A and C only
 (3) B and D only
 (4) C and D only

END OF BOOKLET A



MARIS STELLA HIGH SCHOOL (PRIMARY)

SEMESTRAL ASSESSMENT 2

SCIENCE

27 OCTOBER 2016

BOOKLET B

NAME: _____ ()

CLASS: Primary 3 ()

10 questions

32 marks

Total Time for Booklets A & B: 1 h 30 min

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

BOOKLET A: _____ / 48

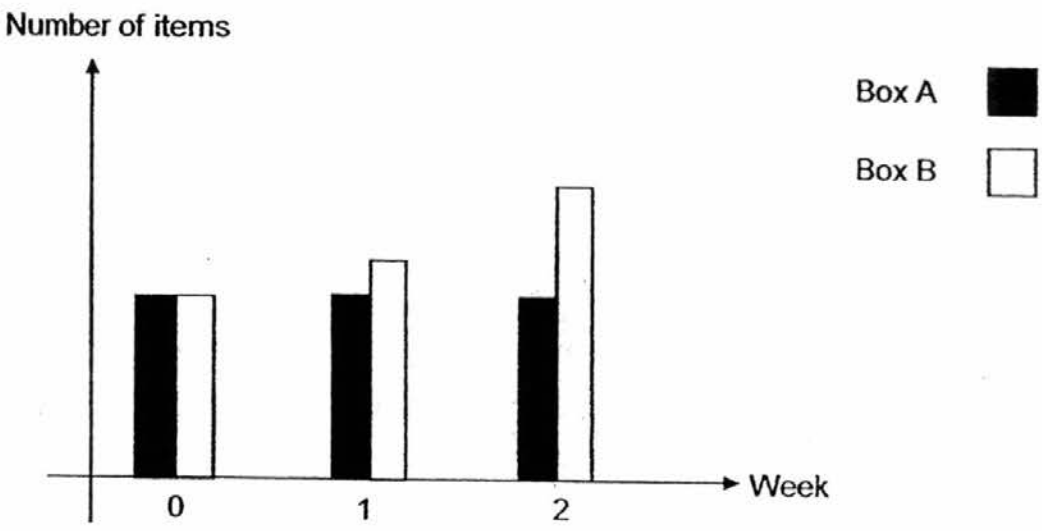
BOOKLET B: _____ / 32

TOTAL: _____ / 80

PARENT'S SIGNATURE: _____

For questions 31 to 40, write your answers in this booklet. The number of marks available is shown in brackets [] at the end of each question or part question. (32 marks)

31
25. Ben set up two boxes, A and B. He placed some living things in one box and an equal number of non-living things in another box. Both boxes were provided with air, water and food. Every week, Ben counted the number of items in both boxes and drew the graph as shown below.



(a) Based on the graph above, which box (A or B) contained the living things and the non-living things? [1]

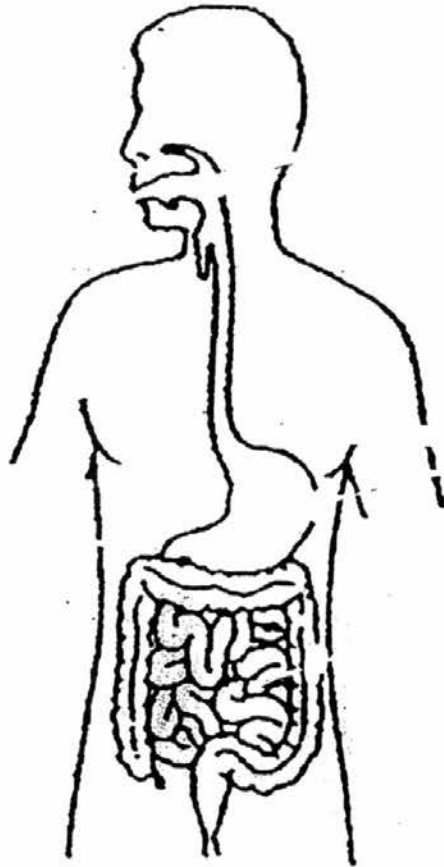
Living things: Box _____

Non-living things: Box _____

(b) Based on the graph, state one characteristic of non-living things. [1]

(c) Give a reason for your answer in (b). [1]

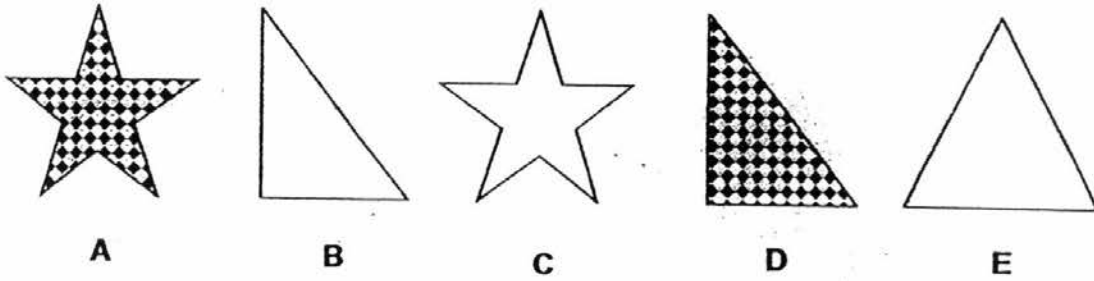
32 The diagram below shows the human digestive system.
26



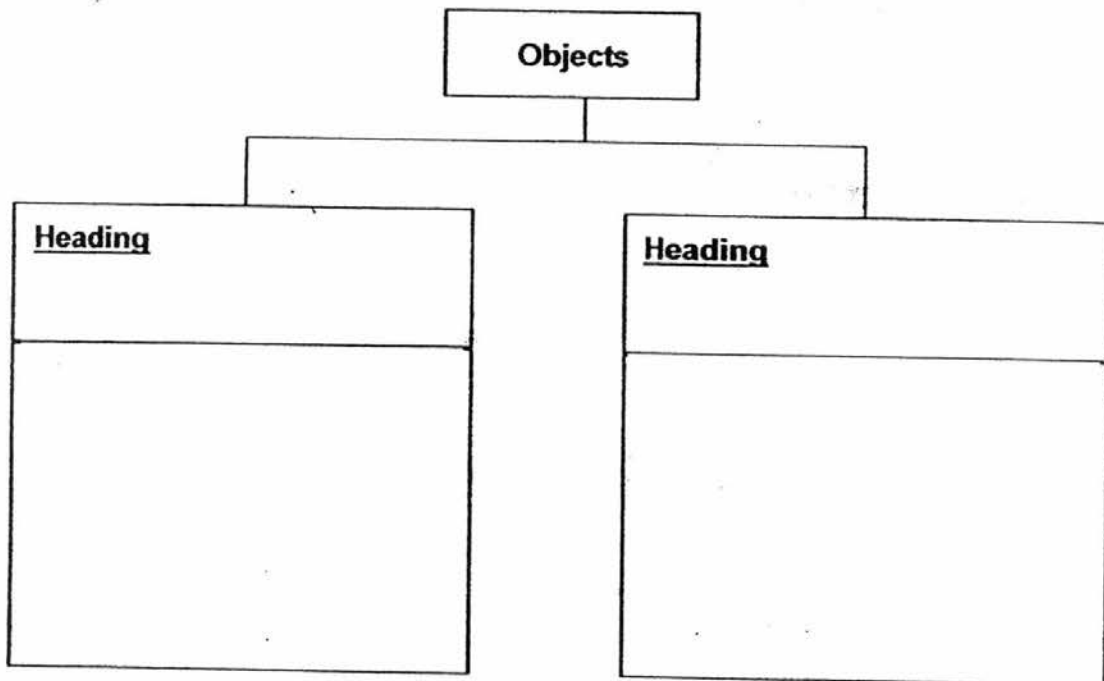
In the diagram above, only name and label the parts where digestion takes place. [3]

	3
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33 Ken was given five objects, A, B, C, D and E, of the same size.
27

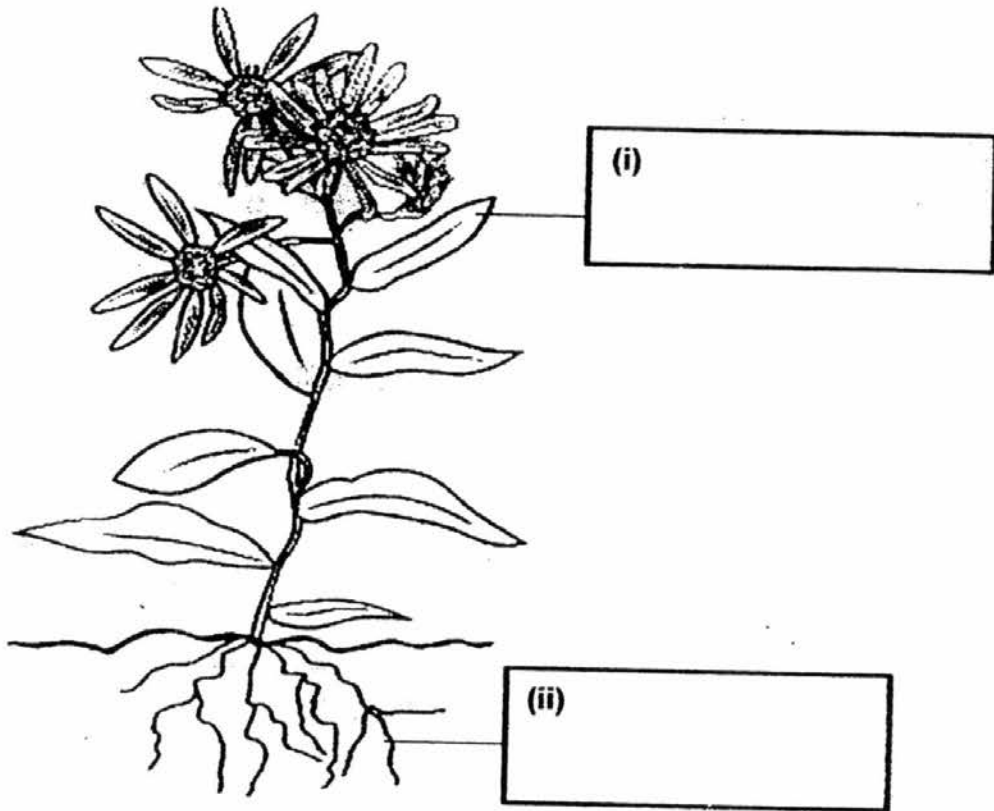


(a) Classify the objects A, B, C, D and E using the classification chart below. [2]



(b) State another method to classify objects A, B, C, D and E into two groups. [1]

34 Study the plant below.
28.



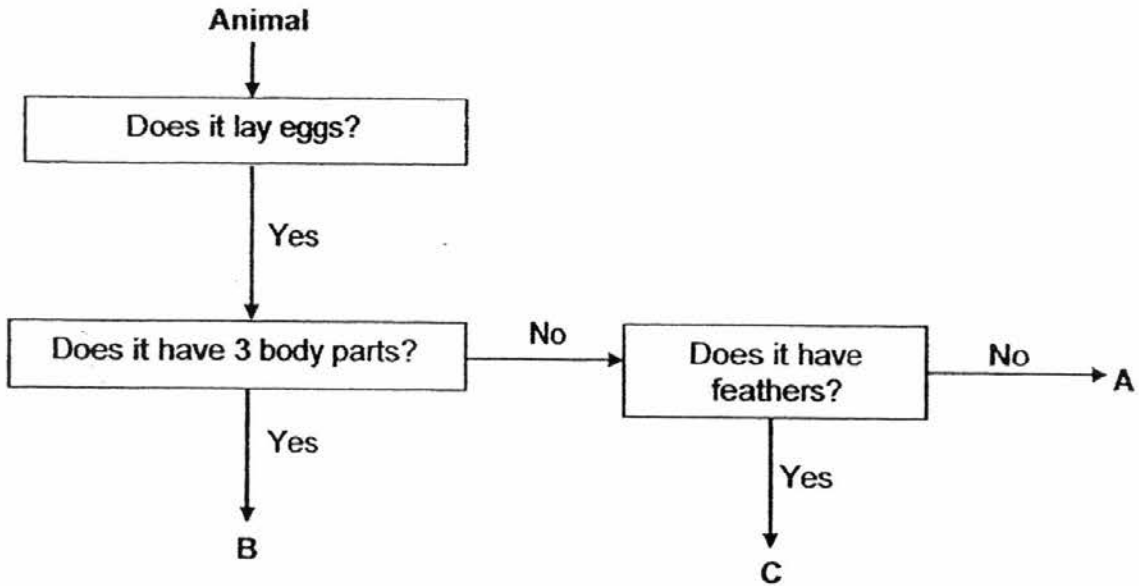
(a) Label the parts of the plant in the boxes provided above. [2]

(b) Read the statements below.

Write "True" in the box for a true statement and "False" in the box for a false statement. [2]

	Statements	True / False
(i)	Yeast is a type of fungi.	
(ii)	Ferns reproduce by spores.	
(iii)	Mushroom is a non-flowering plant.	
(iv)	Mould will grow best in cold and dry places.	

35 Study the flow chart below.
29.



(a) State the animal groups for animals B and C. [2]

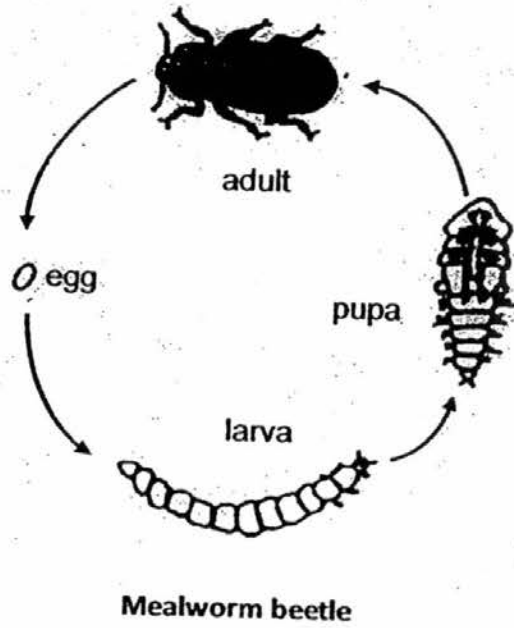
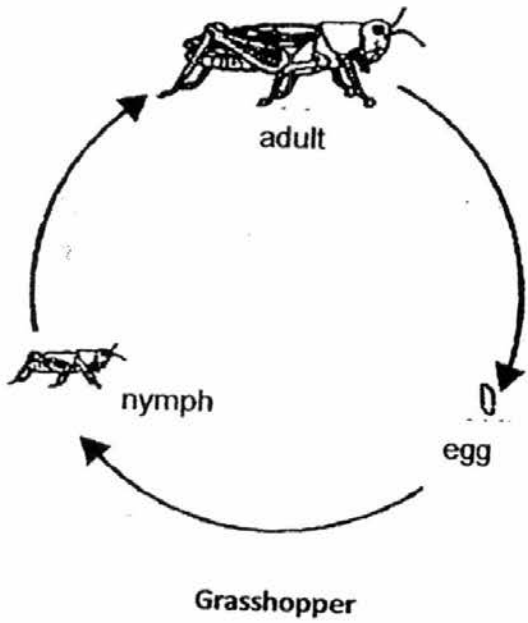
(i) Animal B: _____

(ii) Animal C: _____

(b) Based on the flow chart, state one similarity between animals B and C. [1]

(c) Based on the flow chart, state one difference between animals A and B. [1]

The life cycles of a grasshopper and mealworm beetle is shown below.

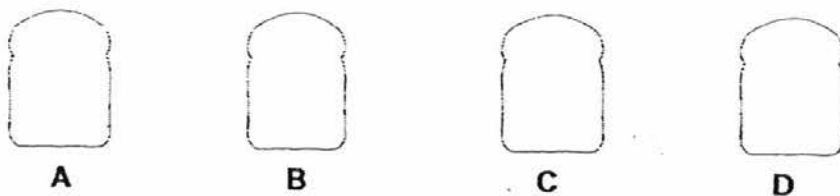


- (a) State one similarity between the life cycle of the grasshopper and the mealworm beetle. [1]

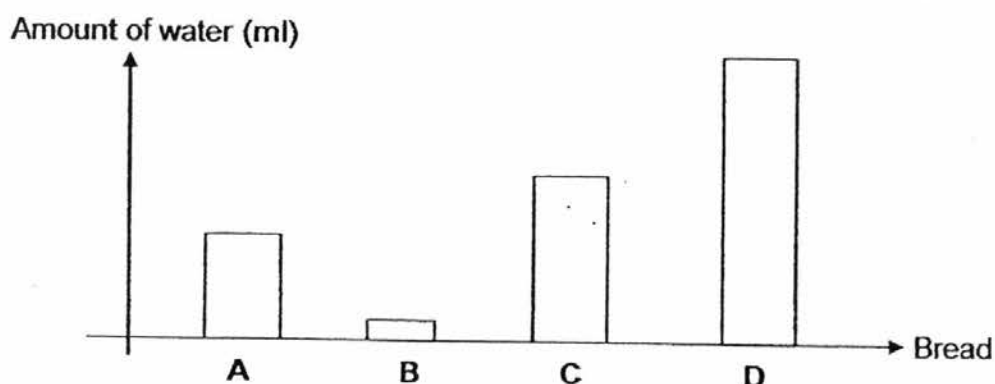
- (b) State one difference between the life cycle of the grasshopper and the mealworm beetle. [1]

- (c) Why is life cycle important to living things? [1]

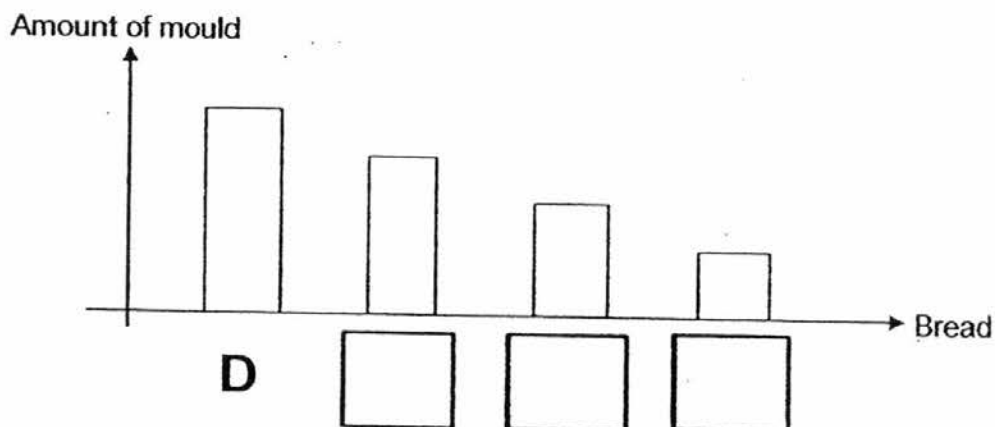
37 Thomas had 4 identical slices of bread A, B, C and D.
31.



He added different amount of water onto bread A, B, C and D as shown in the graph below. None of the bread was soaking wet even when the most amount of water was added onto it. The 4 slices of bread were then placed in an exposed area in the kitchen.



(a) 3 days later, Thomas observed mould growing on all 4 slices of bread. In the graph below, identify the amount of mould found on bread A, B and C. Write A, B and C in the boxes provided. [1]



(b) Other than water, state two other conditions needed for the mould to grow. [2]

	3
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38 The diagram below shows animals X and Y.
32.



Animal X



Animal Y

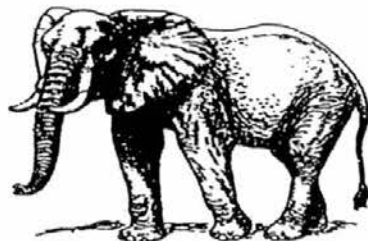
(a) State one difference between these two animals in terms of their body covering.

[1]

(b) State one difference between these two animals in terms of their breathing method.

[1]

Study animal Z below.

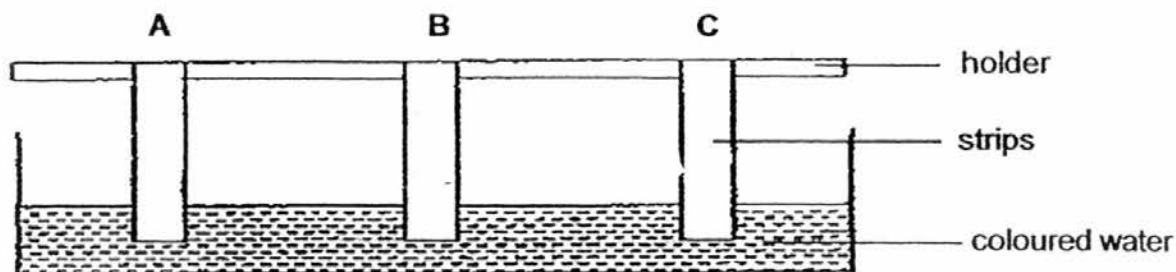


Animal Z

(c) Which animal (X or Y) belongs to the same group as Animal Z? _____ [1]

	3
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- 39 3 similar strips made of different materials, A, B and C, were used in an experiment as shown below.



After 10 minutes, the height of the water level on the strips were measured and recorded as shown below.

Strip	Height of water level on the material (cm)	
	Before	After
A	0	6
B	0	1
C	0	4

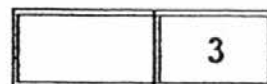
- (a) What property of material was tested in the above experiment? [1]

- (b) The picture below shows a mop.



Based on the result, which material (A, B or C) is most suitable to make part X? [1]

- (c) Give a reason for your answer in (b). [1]

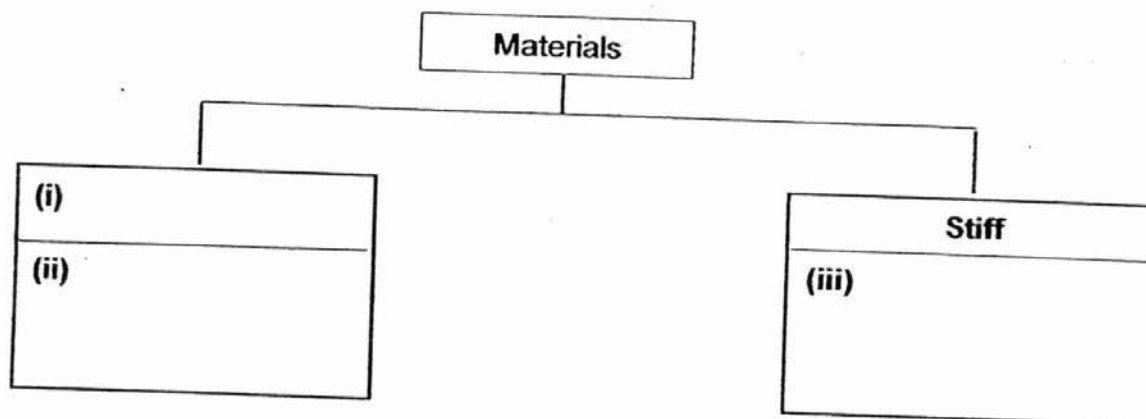


40 The table below shows the characteristics of four materials, A, B, C and D.
34.

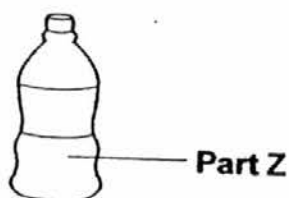
A tick (✓) shows that the material has the characteristics.

Characteristics	Materials			
	A	B	C	D
It is flexible.	✓			✓
It is waterproof.		✓	✓	
It is transparent.	✓	✓		✓

(a) Using the information above, complete the classification chart by placing materials A, B, C and D into the chart. [2]



(b) The picture below shows a bottle.



Based on the information above, which material(s) is/are suitable for making part Z?
Give a reason.

[1]

END OF BOOKLET B

YEAR : 2016
 LEVEL : PRIMARY 3
 SCHOOL : MARIS STELLA HIGH
 SUBJECT : SCIENCE
 TERM : SA2

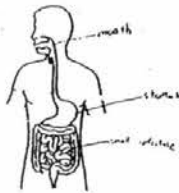
Booklet A

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

Booklet B

- Q25 (a) Living things : Box B
 Non-living things : Box A
- (b) Non-living things cannot reproduce.
- (c) Because the amount of items in Box A did not change but the amount of items in Box B increased.

Q26



Q27

- (a)
- | Heading |
|---------|
| Stars |
| A and C |
- | Heading |
|------------|
| Triangles |
| D, B and E |

- (b) We could classify them by patterns in the shape and no patterns in the shape.

Q28

- (a) (i) Leaf
(ii) Roots

(b)

	Statements	True / False
(i)	Yeast is a type of fungi.	True
(ii)	Ferns reproduce by spores.	True
(iii)	Mushroom is a non-flowering plant.	False
(iv)	Mould will grow best in cold and dry places.	False

Q29

- (a) (i) Animal B : Insects
(ii) Animal C : Birds
- (b) Both Animal B and C lay eggs.
- (c) Animal B has three body parts but animal A does not.

Q30

- (a) Both life cycles have the adult stage.
- (b) The grasshopper has three stages in its life cycle but the mealworm beetle has four stage in its life cycle.
- (c) It is important to living things because we need life cycle to continue the type of our species.

Q31

- (a)

D

C

A

B

- (b) Warmth
The more water added to the bread, the more the mould will grow.

- Q32
- (a) Animal X has scales as its outer body covering but animal Y has hair as its outer body covering.
 - (b) Animal X breathe through gills but animal Y breathe through lungs.
 - (c) Animal Y.

- Q33
- (a) Absorbency
 - (b) Material A.
 - (c) It can absorb the most amount of water.

- Q34
- (a)

(i) Flexible
(ii) A and D

Stiff
(iii) B and C
 - (b) Material B and C. Both are waterproof.

