



MARIS STELLA HIGH SCHOOL (PRIMARY)

SA2 EXAMINATION

SCIENCE

31 OCTOBER 2019

BOOKLET A

NAME: _____ ()

CLASS: Primary 3 ()

24 questions

48 marks

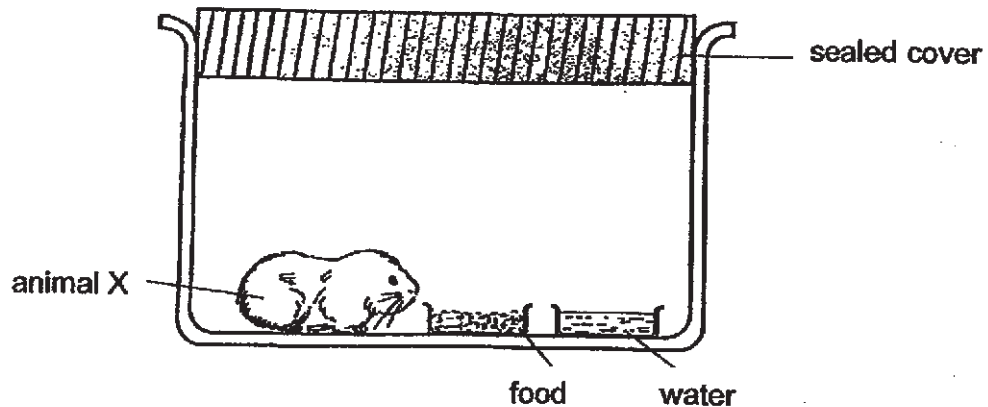
Total Time for Booklets A & B: 1 h 30 min

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 The diagram below shows animal X in a container.



Animal X died after 3 days.

Which of the following characteristics of living things does the observation show?

- (1) Living things grow.
 - (2) Living things reproduce.
 - (3) Living things need air to survive.
 - (4) Living things need food and water to survive.
- 2 Which one of the following characteristics allows you to confirm that a fish is a living thing?
- (1) It moves.
 - (2) It lays eggs.
 - (3) It is found in water.
 - (4) It responds to changes.

3 The statements below describe the characteristics of organism Y.

- It has lungs.
- It lays eggs on land.
- It has scales on its body.

Which animal group does organism Y belong to?

- (1) fish
- (2) bird
- (3) reptile
- (4) amphibian

4 The pictures below show two organisms.



mushroom



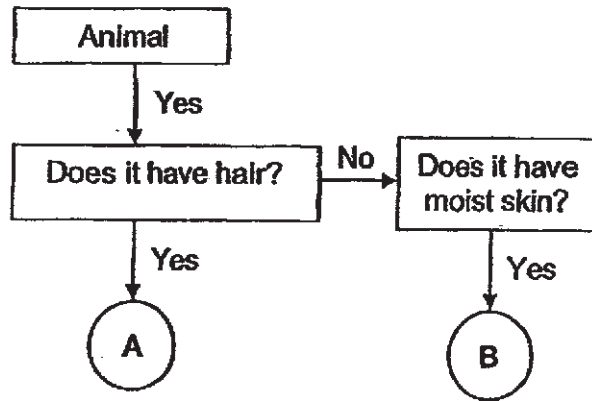
bird's nest fern

What do the two organisms have in common?

- (1) Both produce flowers.
- (2) Both cannot make food.
- (3) Both need light to survive.
- (4) Both reproduce from spores.

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5 Study the flowchart below.



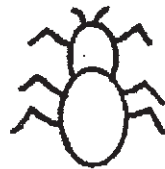
Which of the following correctly identifies A and B?

	A	B
(1)	insect	amphibian
(2)	mammal	amphibian
(3)	mammal	fish
(4)	amphibian	reptile

6 Which of the following is an insect?



(1)



(2)



(3)



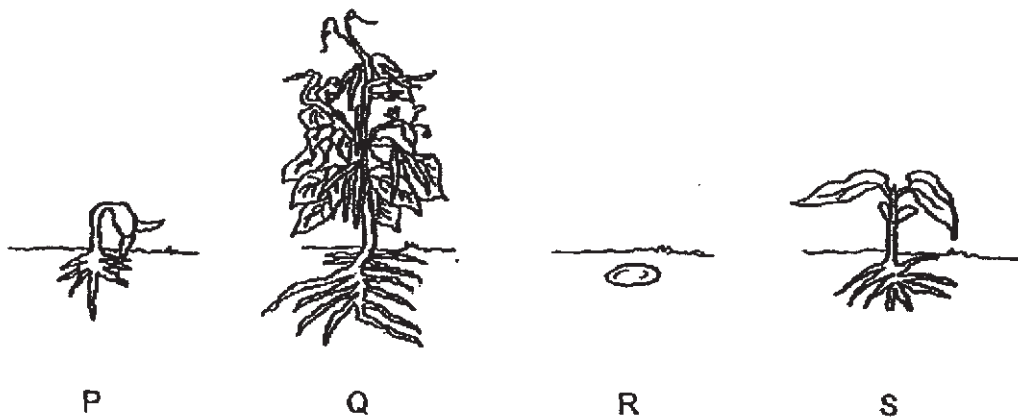
(4)

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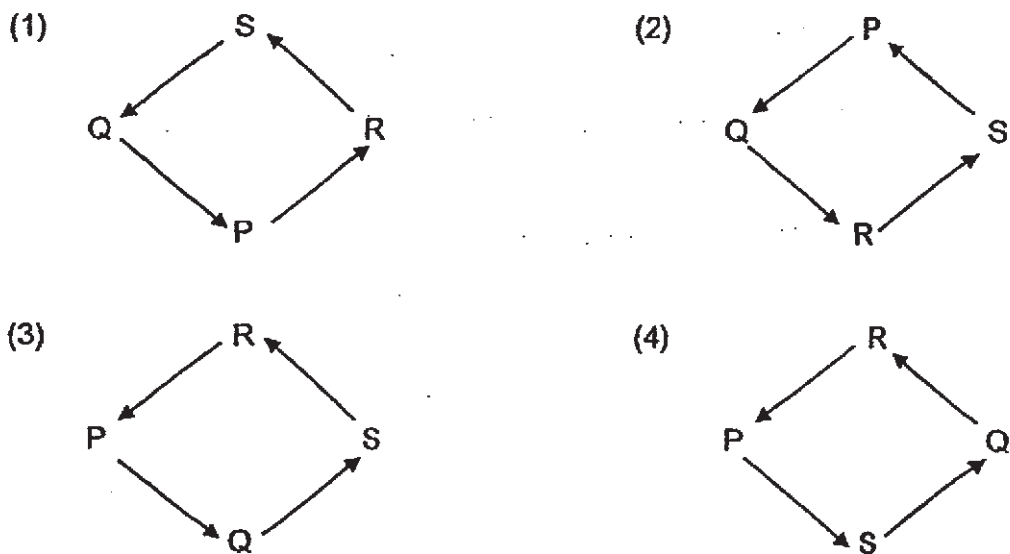
7 Which of the statements is true about bacteria?

- (1) Bacteria will not die.
- (2) Bacteria cannot reproduce.
- (3) Some bacteria are useful to human beings.
- (4) All bacteria can be seen without the microscope.

8 P, Q, R and S represent different stages in a life cycle of plant P.

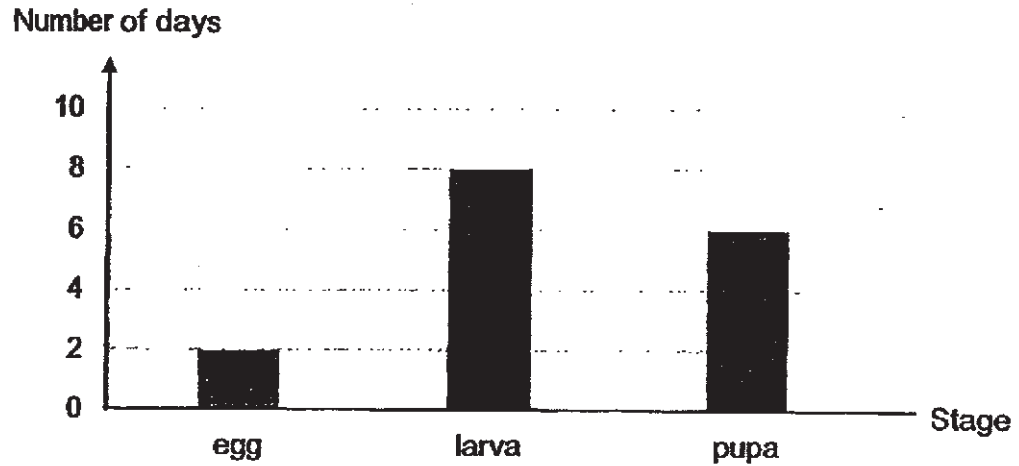


Which of the following life cycles shows the correct order of stages for plant P?



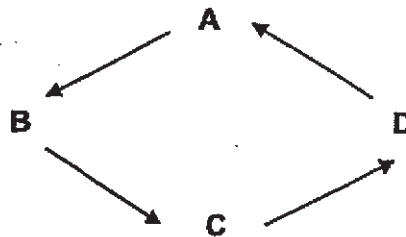
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- 9 Jack studied the duration of three stages in the life cycle of insect X. He recorded his observations in the graph below.



Based on the graph, how many days did it take for insect X's egg to hatch?

- (1) 0
 (2) 2
 (3) 6
 (4) 8
- 10 A, B, C and D represent the different stages in the life cycle of a butterfly.

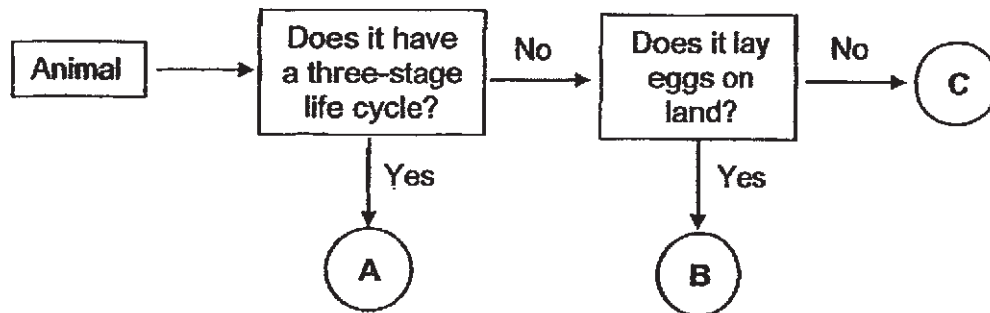


If B represents the adult stage, what stage does D represent?

- (1) egg
 (2) larva
 (3) pupa
 (4) nymph

(Go on to next page)

11 Study the flow chart below.



Which of the following correctly identifies animals A, B and C?

	A	B	C
(1)	grasshopper	beetle	mosquito
(2)	frog	mosquito	beetle
(3)	beetle	mosquito	grasshopper
(4)	grasshopper	beetle	frog

12 Jane studied four animals, E, F, G and H. She recorded her observation of the animals in the table below.

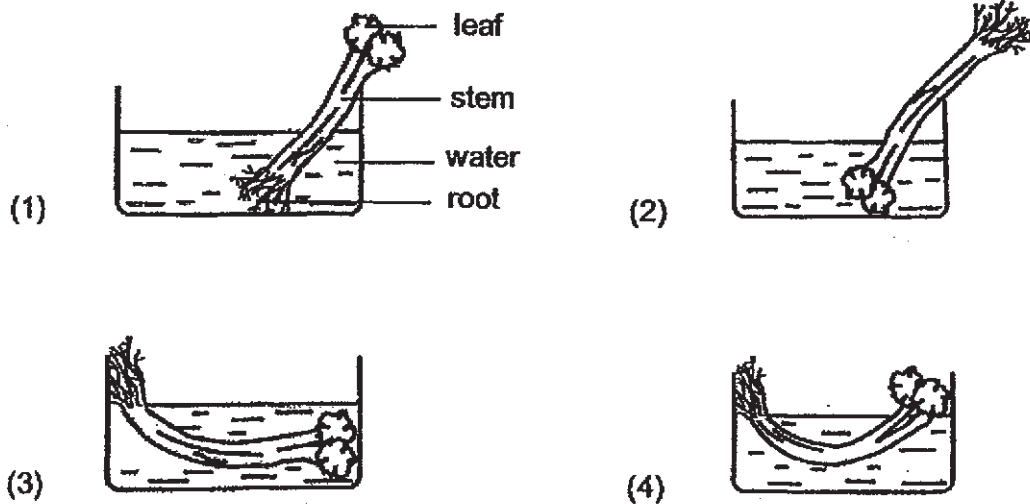
	E	F	G	H
lays eggs in water	✓			✓
young looks like its adult		✓	✓	
four-stage life cycle	✓		✓	

Which of the following animal is most likely a chicken?

- (1) E
- (2) F
- (3) G
- (4) H

- 13 Ho Jing told his friend that placing a wilted stalk of celery plant in water would make it 'fresh' again as the celery plant will take in water.

Which of the following set-ups would make the wilted celery plant 'fresh' again?



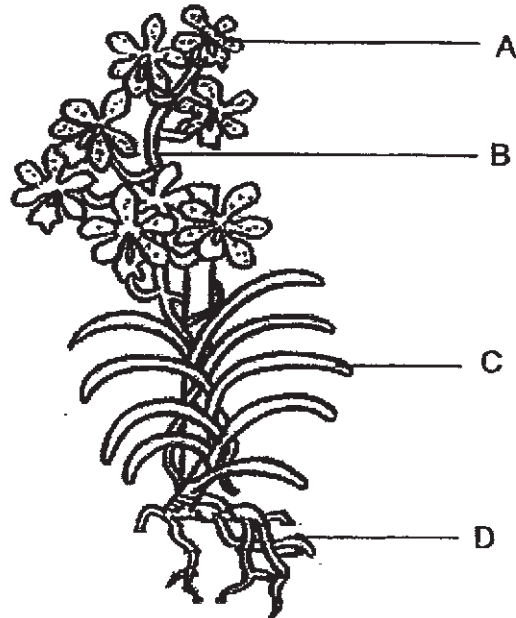
- 14 In which of the following parts are digestive juices produced?

- A gullet
- B mouth
- C stomach
- D large intestine

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

(Go on to next page)

15 The picture below shows a plant.



What of the following correctly identifies the different parts of the plant?

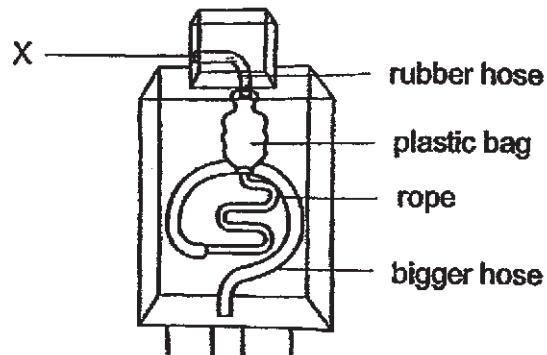
	A	B	C	D
(1)	flower	leaf	stem	root
(2)	flower	stem	leaf	root
(3)	root	leaf	stem	flower
(4)	leaf	root	flower	stem

16 Which one of the following systems gives shape to the human body?

- (1) skeletal system
- (2) muscular system
- (3) circulatory system
- (4) respiratory system

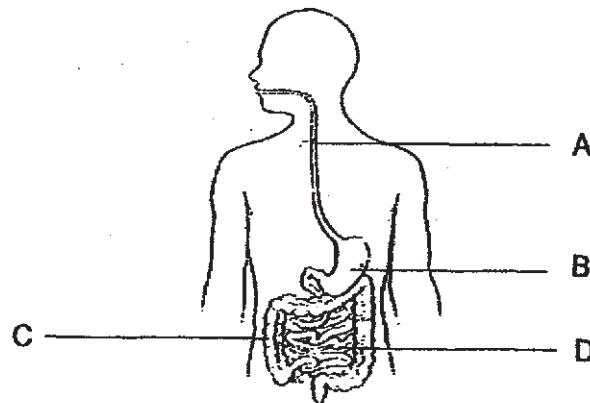
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- 17 The diagram below shows a model of the human digestive system.
X represents the mouth.



Which of the following represents the part of the digestive system where digested food is absorbed into the bloodstream?

- (1) rope
 - (2) plastic bag
 - (3) rubber hose
 - (4) bigger hose
- 18 The diagram below shows the human digestive system.

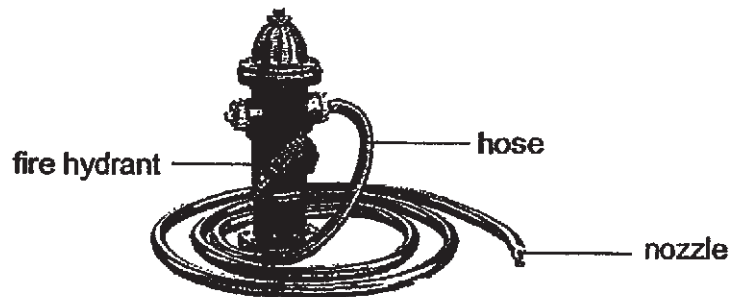


Which part of the system, A, B, C or D, absorbs water from undigested food?

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

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- 19 The picture below shows a hose that is connected to a fire hydrant. Water from the fire hydrant moves through the hose and comes out through the nozzle.



Which of the following properties of the hose allows it to help put out fire?

- A It is flexible.
 - B It is waterproof.
 - C It floats on water.
- (1) A only
- (2) B only
- (3) A and B only
- (4) A, B, and C
- 20 Some items are classified into groups X and Y.

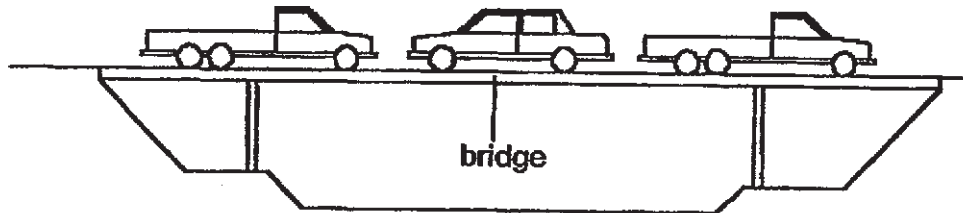
X	Y
plastic bag rubber band cotton blouse	glass tank steel ruler ceramic cup

Which of the following shows the headings represented by X and Y?

	X	Y
(1)	flexible	stiff
(2)	absorbent	waterproof
(3)	floats on water	sinks in water
(4)	allows light to pass through	does not allow light to pass through

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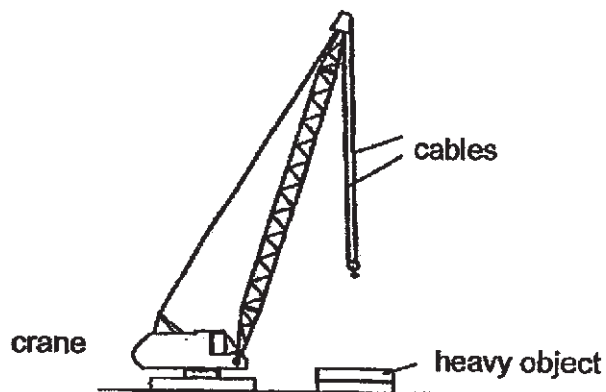
- 21 The diagram shows a bridge.



Iron is used to make the bridge because iron is _____.

- (1) shiny
- (2) strong
- (3) flexible
- (4) transparent

- 22 Cables are used in a crane to lift heavy objects.



Which of the following shows the material the cables are most likely made of and the reason why the material is suitable?

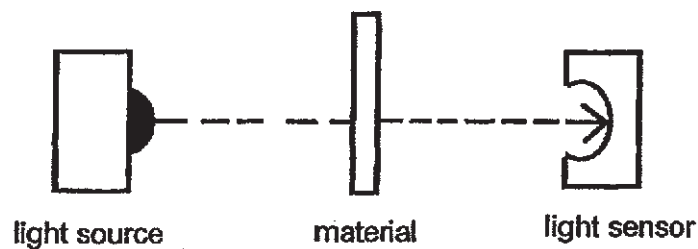
	Material of cable	Reason
(1)	metal	strong to withstand heavy weight
(2)	rubber	able to stretch to reach the object
(3)	wood	stiff to prevent object from swinging
(4)	plastic	light to prevent the crane from falling over

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- 23 Maggie wanted to find out which material, K, L, M or N, is most suitable to make part X of the light bulb as shown below.



She sets up her experiment as shown below.



The table below records the amount of light detected by the light sensor when the different materials were placed between the light source and light sensor.

Material	Amount of light detected (units)
None	500
K	9
L	120
M	0
N	490

Which material is most suitable to make part X of the light bulb?

- (1) K
- (2) L
- (3) M
- (4) N

(Go on to next page)

- 24 Four solid objects made of materials, A, B, C and D, are placed in a container of water. Diagram 1 shows the observation made.

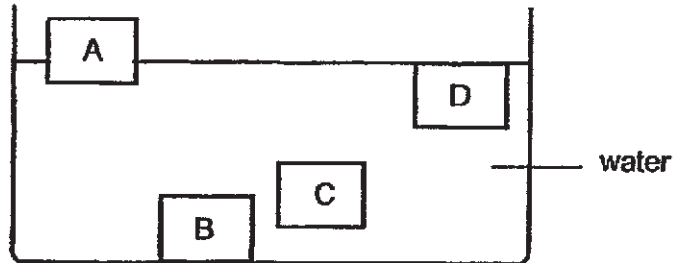


Diagram 1

Which material is most suitable for making the swimming board in Diagram 2?

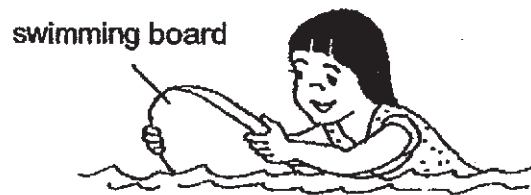


Diagram 2

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

END OF BOOKLET A

Go on to Booklet B



MARIS STELLA HIGH SCHOOL (PRIMARY)

SA2 EXAMINATION

SCIENCE

31 OCTOBER 2019

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

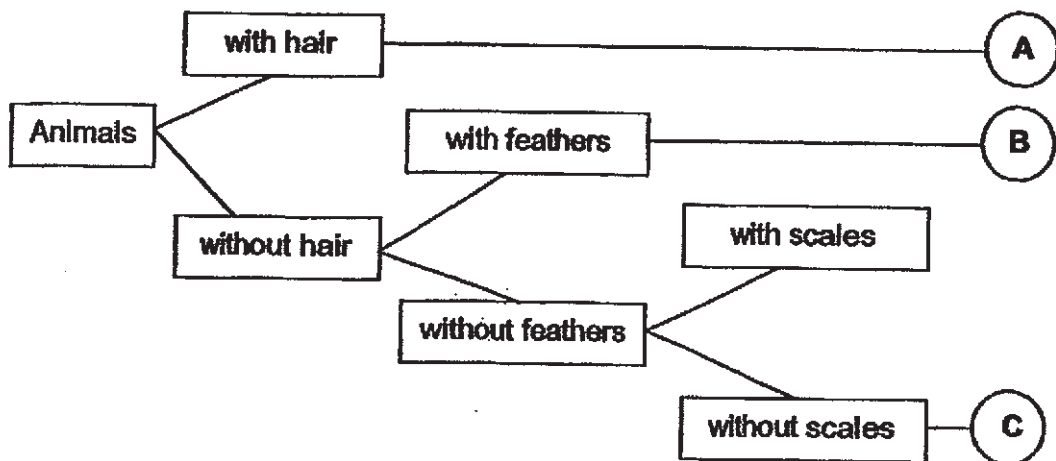
Booklet B: _____ / 32

Grand Total: _____ / 80

Parent's Signature: _____

For questions 25 to 34, 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)**

25 Study the chart below.



- (a) Other than the characteristic mentioned in the chart above, state another characteristic of animal A. [1]

- (b) Which animal group do animals B and C belong to? [2]

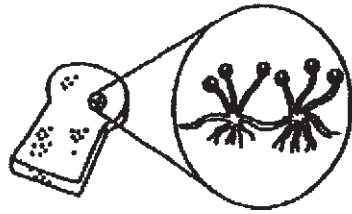
B : _____

C : _____

	3
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26 The pictures below show two living things, X and Y.



X



Y

(a) Which of the following groups should X and Y be classified under? [2]

Flowering plants	Non-flowering plants	Fungi	Bacteria
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X: _____

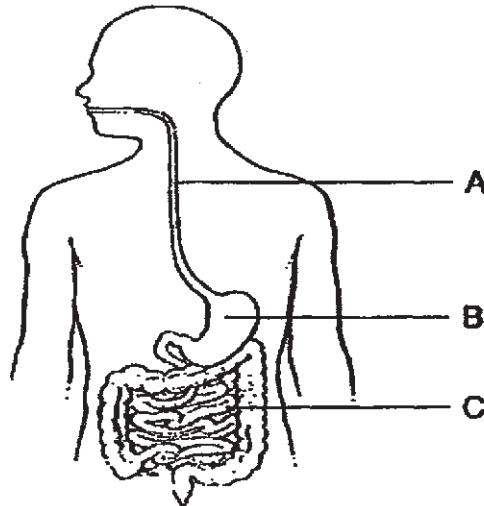
Y: _____

(b) State a difference between X and Y. [1]

	3
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- 27 The diagram below shows the human digestive system.



- (a) Name parts A and B. [2]

A: _____

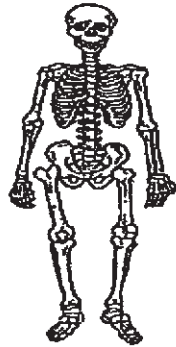
B: _____

- (b) State a common function of parts B and C. [1]

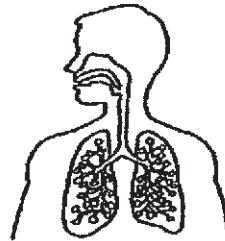


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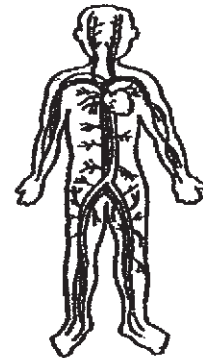
28 The diagrams below show three different systems in the human body.



A



B



C

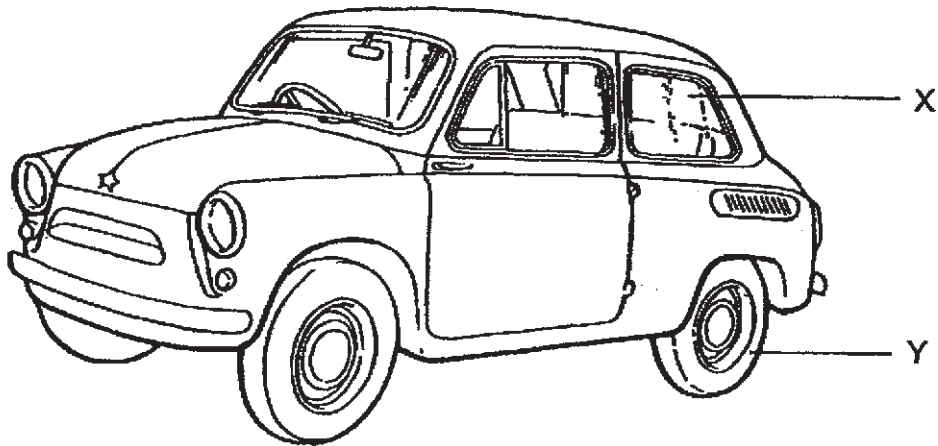
Read the statements carefully. Put a tick (✓) in the appropriate boxes. [3]

	Statements	True	False
(a)	System A supports our body and gives it shape.	☐	☐
(b)	System B breaks down food into simpler substances.	☐	☐
(c)	System C takes in and removes air from the body.	☐	☐

	3
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29 The picture below shows a car.



- (a) Which of the materials listed below are used to make parts X and Y of the car? Match the materials to parts X and Y. [1]

Material	Part
glass	
rubber	

- (b) State two important properties of rubber that makes it suitable to make the part chosen in (a). [2]



(Go on to the next page)

- 30 The table below shows properties of three different materials A, B and C.

Property \ Material	A	B	C
flexible	✓		✓
able to absorb water		✓	✓
allows light to pass through	✓	✓	

- (a) List all the properties of material B. [1]

- (b) State one difference between materials A and B. [1]

- (c) Which material, A, B or C, is most suitable to make a PE t-shirt?
Explain your answer. [2]

	4
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(Go on to the next page)

- 31 The table below shows the characteristics of animals X, Y and Z.

Animal	Number of stages in life cycle	Number of legs
X	3	8
Y	4	6
Z	3	6

- (a) Which animal, X, Y or Z, is most likely a cockroach? [1]

- (b) State the characteristic of the animal that helped you answer (a). [1]

- (c) State one similarity and one difference between animals Y and Z. [2]

Similarity: _____

Difference: _____

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- 32 The arrows ($\longrightarrow$) in the diagram show the movement of a substance in plants.

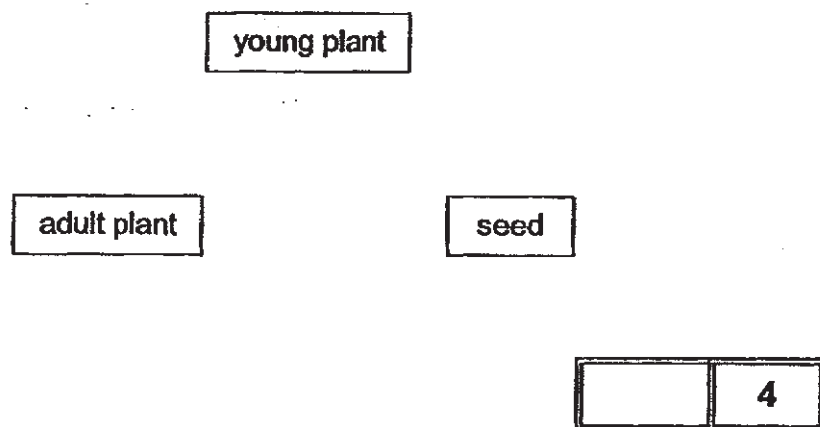
roots $\longrightarrow$ X $\longrightarrow$ leaves

- (a) Name plant part X. [1]

- (b) What is the substance that moves from the roots to the leaves? [1]

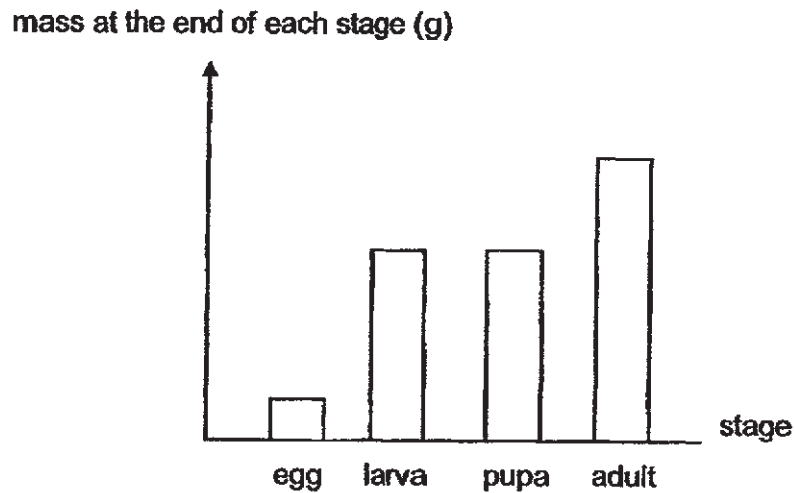
- (c) What do the leaves of the plant make when light is present? [1]

- (d) Draw arrows ($\rightarrow$) in the diagram below to complete the life cycle of a flowering plant. [1]



(Go on to the next page)

- 33 The graph below shows the mass of animal X at the end of each stage of the life cycle.



- (a) At which stage is there no change in the mass of animal X? [1]

- (b) Explain why there is no change in the mass of animal X in the stage named in (a). [1]

- (c) What could animal X be? Tick in the correct box(es). [1]

☐

beetle

☐

mosquito

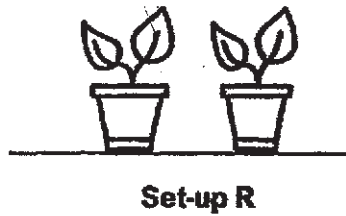
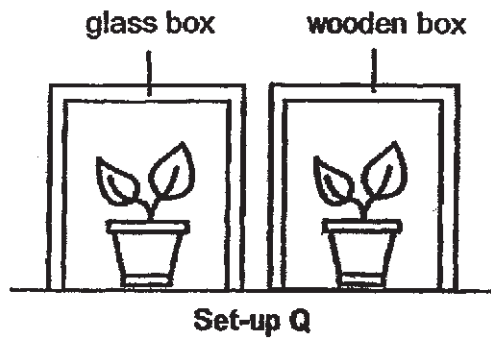
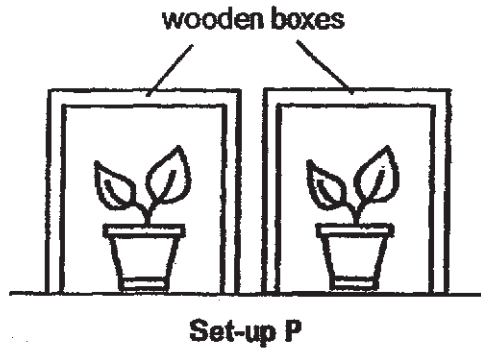
☐

cockroach

	3
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- 34 Melinda wants to find out if plants need light to grow.



Which set-up, P, Q or R, should she use for her experiment? Explain why. [2]

END OF BOOKLET B

	2
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SCHOOL : MARIS STELLA PRIMARY SCHOOL

LEVEL : PRIMARY 3

SUBJECT : SCIENCE

TERM : 2019 SA2

SECTION A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	3	4	2	3	3	4	2	2

Q 11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	2	1	2	2	1	1	3	3	1

Q 21	Q22	Q23	Q24
2	1	4	1

SECTION B

Q25)	a) Give birth to young alive. b) B : birds C : amphibians
Q26)	a) X : Fungi Y : Flowering plants b) Y can make its own food but X cannot make its own food.
Q27)	a) A : gullet B : stomach b) Both parts B and C secrete digestive juices into the food and break down the food into smaller substances.
Q28)	a) True b) False

	c)False
Q29)	a) glass : X rubber : Y b)Flexible, waterproof
Q30)	a)Material B is able to absorb water, allows light to pass through and it is not flexible. b)Material A is flexible but material B is not flexible. c)Material C. Material C is flexible and it is able to absorb water a PE t-shirt must be able to absorb water and it also must be flexible.
Q31)	a)Animal Z b)It has six legs c) Similarity : Both animal Y and Z have six legs. Different : Animal Y has a four stage life cycles but animal Z has three stage life cycles.
Q32)	a)Stem b)Water c)The leaves make food. d) <pre> graph TD seed --> young_plant[young plant] young_plant --> adult_plant[adult plant] adult_plant --> seed </pre>
Q33)	a)pupa b)The pupa stage does not eat. c)beetle
Q34)	Set up Q. Glass allows light to pass through but wood does not.

