TAO NAN SCHOOL 道南学校

SINCERITY & PERSEVERANCE

2020 PRIMARY 5 WEIGHTED ASSESSMENT (SA1)

Name : _____ ( )

Class : Primary 5 ( )

Time: 8.00 a.m. - 9.25 a.m.

Duration: 1 hour 25 minutes

Date: _____

SCIENCE

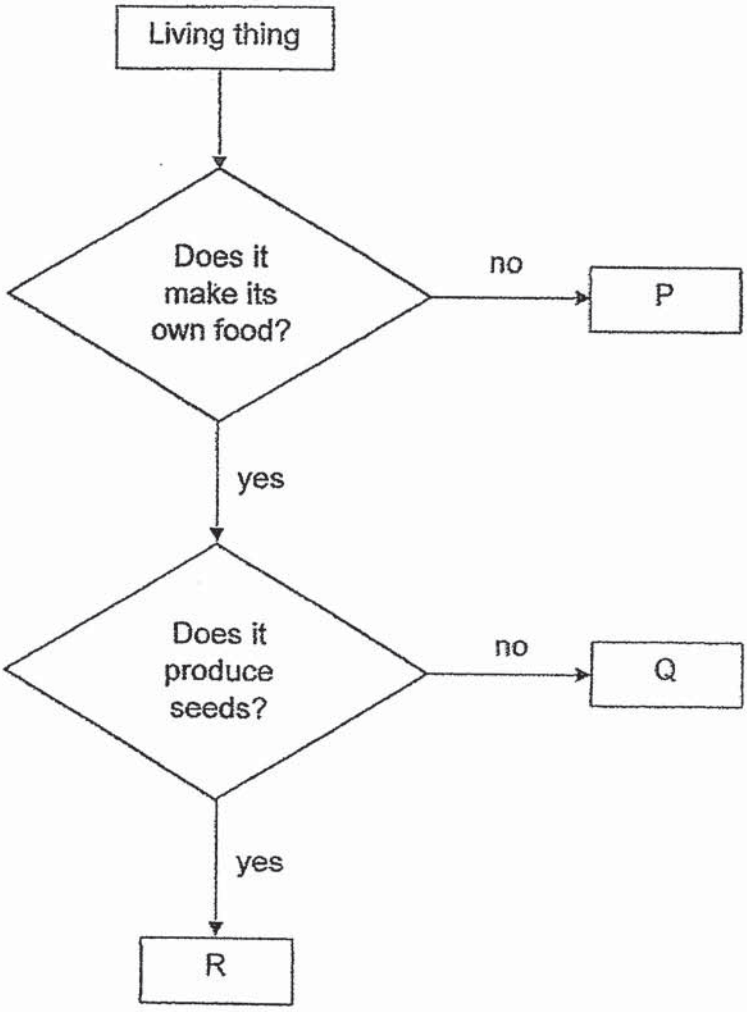
BOOKLET A

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers on the Optical Answer Sheet (OAS) provided.

For each question from 1 to 20, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet. (40 marks)

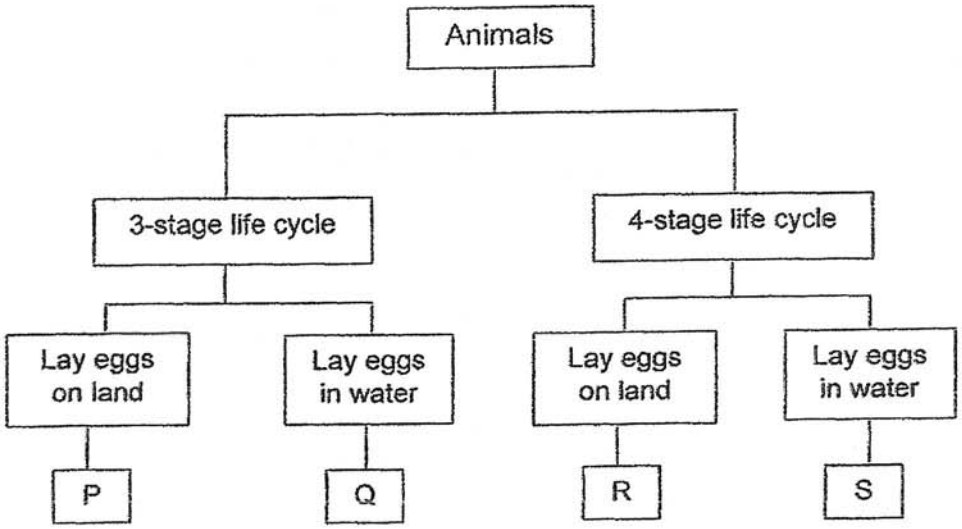
1. Study the chart below.



What could P, Q and R be?

	P	Q	R
(1)	bacteria	mushroom	grass
(2)	fern	bacteria	mushroom
(3)	mushroom	fern	grass
(4)	bacteria	fern	mushroom

2. Study the classification chart below.



Animal A lays eggs that hatch into young. The young of animal A has a breathing tube that enables it to breathe underwater. It eats and moults several times. The young then stops eating and during this period, it slowly changes into an adult.

Which group, P, Q, R or S, does animal A belong to?

(1) P
(2) Q
(3) R
(4) S

3. Why do living things reproduce?

(1) To stay alive.
(2) To grow into an adult.
(3) To ensure the continuity of their species.
(4) To pass down characteristics to their young.

4. A group of students observed the growth of plant A over a few months. The plant did not bear flowers. They observed brown, powdery substance, X, that formed on the underside of the leaves.

plant A

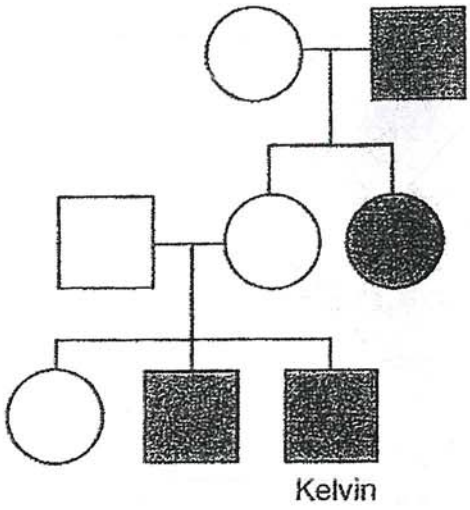
Based on their observations, the students made the following statements. Which of the following statements is correct?

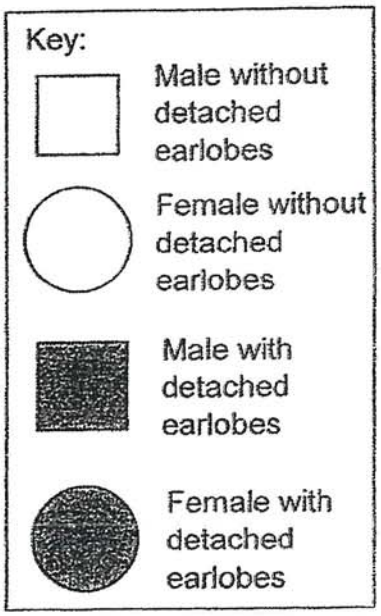
(1) X will attract pollinators.
(2) Plant A is too young to grow flowers.
(3) Plant A will not be able to reproduce.
(4) X ensures that the species of plant A continues to be found on Earth.

5. Which of the following characteristics is not passed down from the parent to their children?

(1) blood type
(2) shape of lips
(3) length of hair
(4) type of earlobe

6. The diagram below shows Kelvin's family tree.

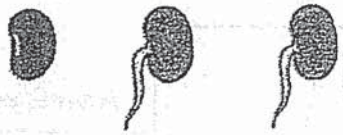
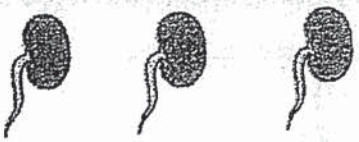




Based on Kelvin's family tree, which statement is true?

(1) Kelvin's father has detached earlobes.
(2) Kelvin's brother has detached earlobes.
(3) Kelvin's grandmother has detached earlobes.
(4) Only males inherit the characteristic of detached earlobes.

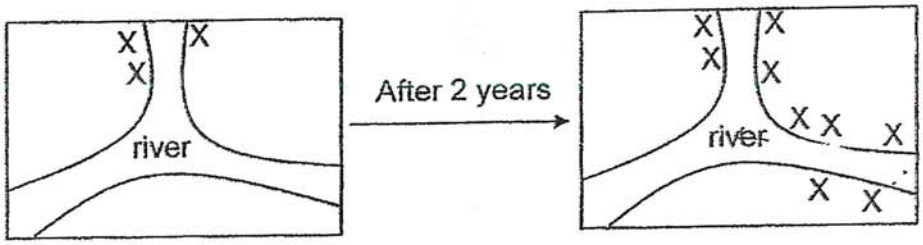
7 Damien grew some seeds of a plant on four trays, A, B, C and D. The experimental conditions and results are shown below.

Tray	Soil	Location	Appearance of seeds on Day 5
A	wet	dark cupboard	
B	dry	dark cupboard	
C	wet	classroom table	
D	dry	classroom table	

Based only on the results shown above, what can be concluded on the condition(s) needed for the germination of the seeds?

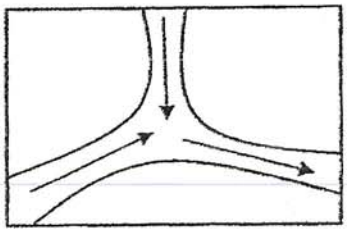
(1) Water is required.
(2) Warmth is required.
(3) Air, water and warmth are required.
(4) Light, water and warmth are required.

8. It was observed that there were only 3 plant X growing along a river. After 2 years, the number of plant X increased to 9 as shown in the diagrams below. The seeds of plant X are dispersed by water only.

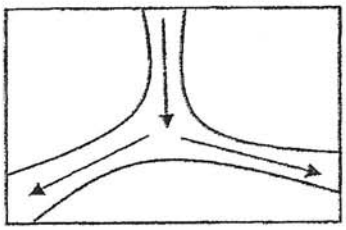


Which of the following shows the direction of the flow of the river?

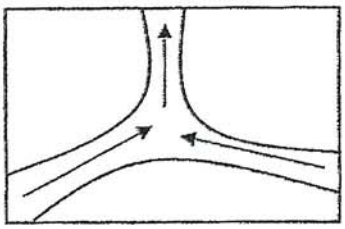
(1)



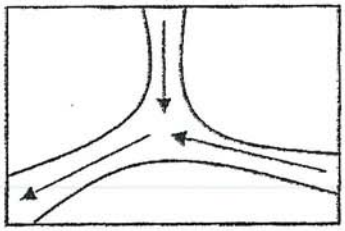
(2)



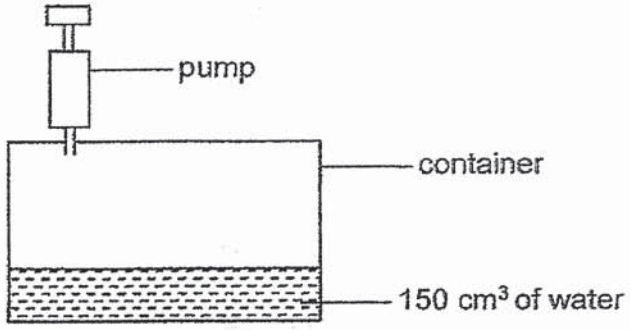
(3)



(4)



9. The diagram below shows a sealed container with a capacity of 500 cm^3 connected to a pump. The container has 150 cm^3 of water.

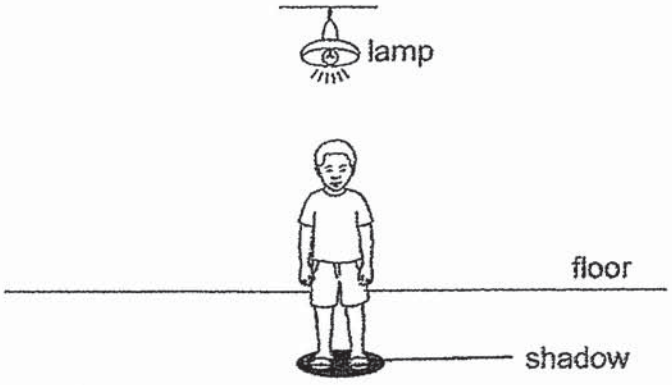


50 cm^3 of water was then pumped into the container followed by 50 cm^3 of air.

What is the final volume of air inside the container?

(1) 250 cm^3
(2) 300 cm^3
(3) 350 cm^3
(4) 400 cm^3

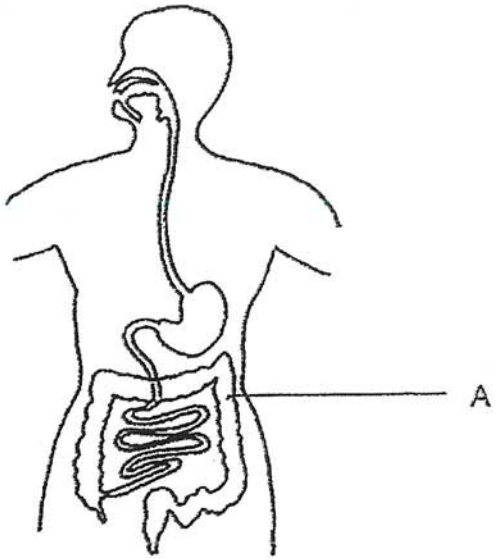
10. A shadow was formed when Josh stood under a lamp as shown below.



Which of the following best explains how the shadow was formed?

(1) The lamp was a source of light.
(2) Light is reflected off Josh's body.
(3) Light was reflected off the floor and into Josh's eyes.
(4) Light travels in a straight line and could not pass through Josh.

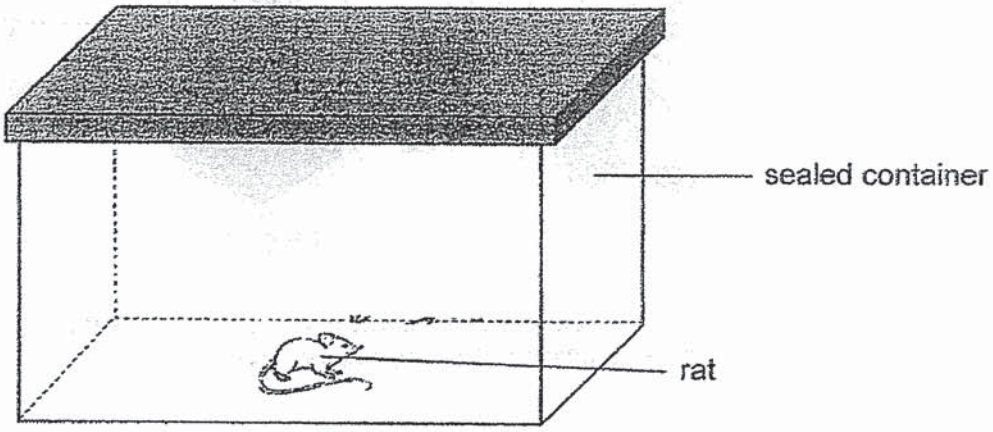
11. The diagram below shows a human digestive system.



What is the function of A?

(1) To digest food.
(2) To break down food into smaller pieces.
(3) To pass digested food into the bloodstream.
(4) To remove water from the undigested food.

12. Amelia caught a rat and kept it in a huge sealed container as shown below.



Which of the following shows a possible change in the composition of air in the container after one day?

	Amount of nitrogen	Amount of oxygen	Amount of carbon dioxide	Amount of water vapour
(1)	remains the same	decreases	increases	remains the same
(2)	remains the same	decreases	increases	increases
(3)	decreases	decreases	increases	increases
(4)	decreases	increases	increases	remains the same

13. Study the human respiratory system in diagram 1 and model in diagram 2.

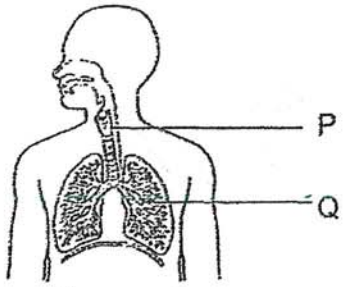


Diagram 1

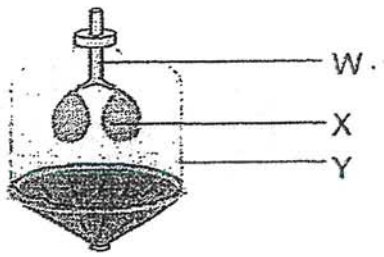
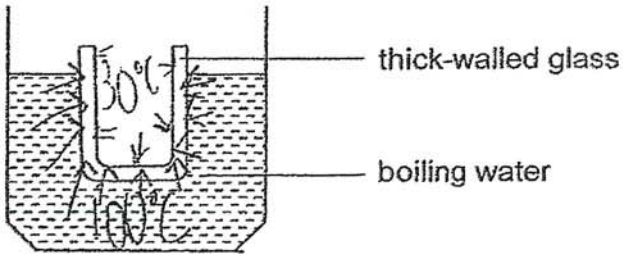


Diagram 2

Which of the following correctly matches the part in Diagram 1 to that in Diagram 2 and to its function in the respiratory system?

	Part	Part	Function
(1)	P	W	becomes smaller to allow air to leave the body
(2)	P	X	warms and moistens the air
(3)	Q	X	allows exchange of gases
(4)	Q	Y	becomes bigger to allow air to enter the body

14. Jonas took a cold thick-walled glass from a refrigerator and placed it in boiling water as shown below. The surrounding temperature of the room was 30°C.



Which of the following best explains why the glass cracked after a few minutes?

(1) The outer glass wall expanded more than the inner glass wall.
(2) Both the inner and outer glass walls gained heat from the boiling water.
(3) The glass lost heat to the refrigerator and gained heat from the boiling water.
(4) The outer glass wall gained heat from the surrounding while the inner glass wall lost heat to the surrounding.

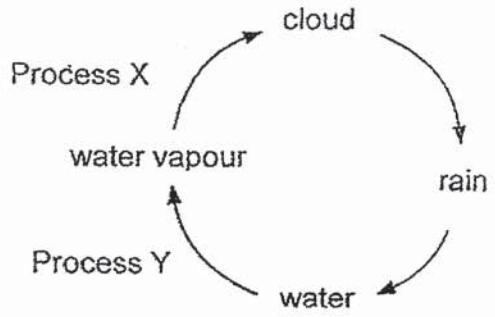
15. The table below shows the melting point and boiling point of four substances.

Substance	Melting point (°C)	Boiling point (°C)
A	0	100
B	44	280
C	63	762
D	179	1 372

Which substance will be a solid at 100°C?

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

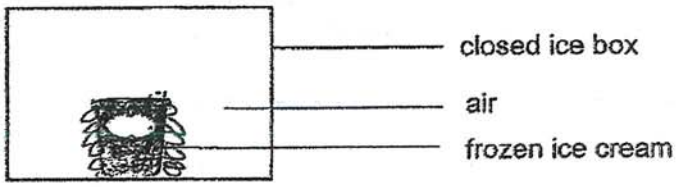
16. The diagram below shows the water cycle.



What is Process X and is it a heat gain or heat loss for Process Y?

	Process X	Is it a heat gain or heat loss for Process Y?
(1)	evaporation	heat loss
(2)	evaporation	heat gain
(3)	condensation	heat loss
(4)	condensation	heat gain

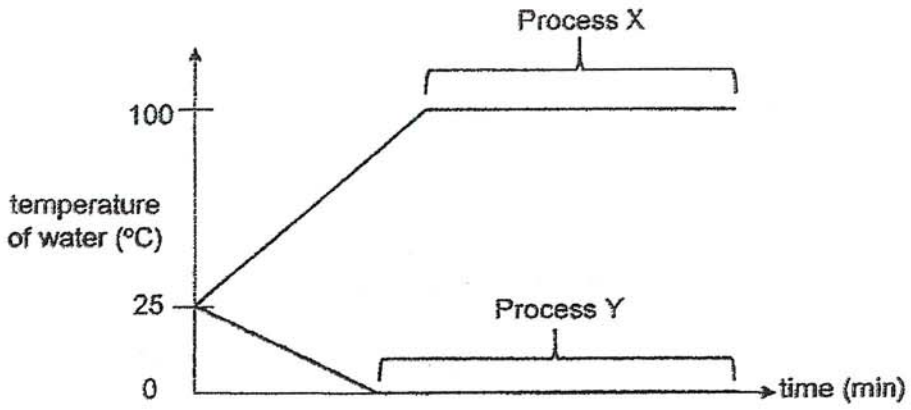
17. A pint of frozen ice-cream is placed in an ice box as shown below.



What will happen to the temperature of the air and the amount of water vapour in the air within the ice box after ten minutes?

	Temperature of air	Amount of water vapour in the air
(1)	increase	increase
(2)	increase	decrease
(3)	decrease	increase
(4)	decrease	decrease

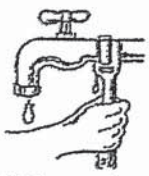
18. The graph below shows water going through two processes, X and Y.



Which of the following statements about the two processes, X and Y, is correct?

(1) Both processes, X and Y, involve heat gain.
(2) Both processes, X and Y, occur at fixed temperatures.
(3) Process X involves a change in state while Process Y does not.
(4) Process X involves heat loss while Process Y involves heat gain.

19. Which of the following actions shows water being conserved?

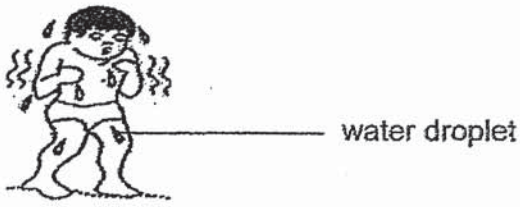
(1) 
fixing a leaking tap

(2) 
playing with a water gun

(3) 
washing face with a running tap

(4) 
watering plants with a running hose

20. Bryan went for a swim on a hot afternoon. When he came out of the cool water, he felt cold.



Why did he feel cold?

(1) He gained heat from the hot sun.
(2) Water gained heat from his body to evaporate.
(3) The surrounding air was colder than the water.
(4) Water vapour in the surrounding air condensed on him.

End of Booklet A

TAO NAN SCHOOL 道南学校

SINCERITY & PERSEVERANCE

2020 PRIMARY 5 WEIGHTED ASSESSMENT

Name : _____ ( )

Class : Primary 5 (

Parent's Signature : _____

Time: 8.00 a.m. – 9.25 a.m.

Duration: 1 hour 25 minutes

Date: _____

SCIENCE

BOOKLET B

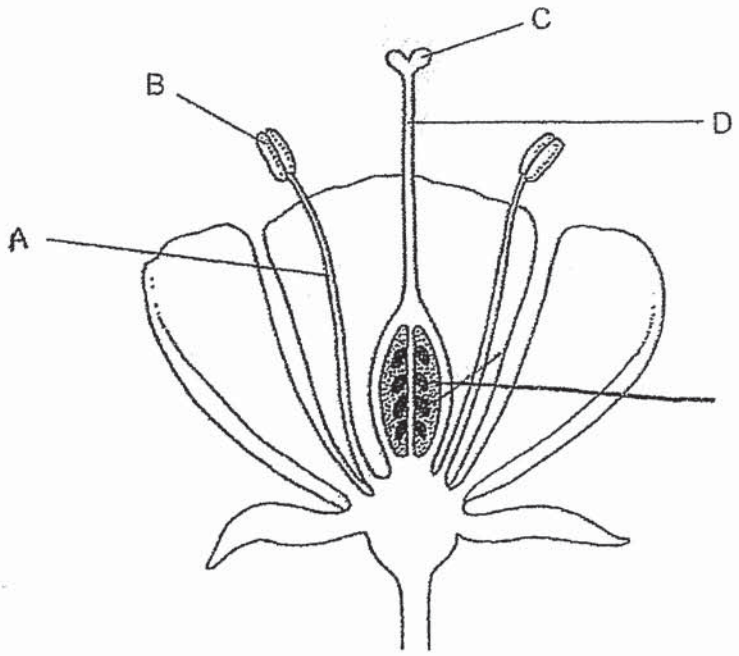
INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in the booklet.

Booklet A	40
Booklet B	30
Total	70

For questions 21 to 29, write your answers in this booklet.
The number of marks available is shown in brackets [ ] at the end of each question or part question. (30 marks)

21. The diagram below shows the cross section of a flower.



(a) Name the parts labelled A, B, C and D. [2]

A: _____

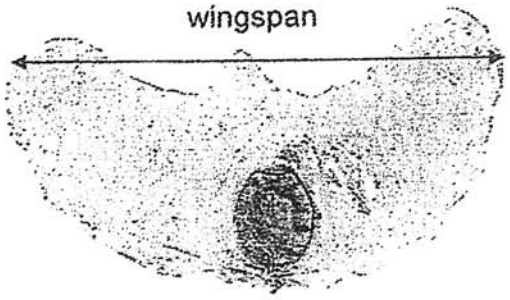
B: _____

C: _____

D: _____

(b) In the above diagram, identify the part that will develop into a seed after fertilisation. Label and name that part in the diagram. [1]

22. On a windy day, Dylan observed the seeds from plant T fluttering in the air. He collected 3 seeds, A, B and C, with different wingspans and dropped them from a height of 8 m.



Seed of plant T

He measured the time taken for each seed to reach the ground. The results of his experiment are shown in the table below.

Seed	Wingspan (cm)	Time taken to reach the ground (s)
A	8	4
B	10	8
C	13	12

(a) What is the relationship between the wingspan of the seed and the time taken for the seed to reach the ground? [1]

_____

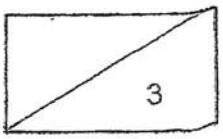
_____

(b) Explain how having seeds with a longer wingspan would be advantageous to the reproduction of plant T. [2]

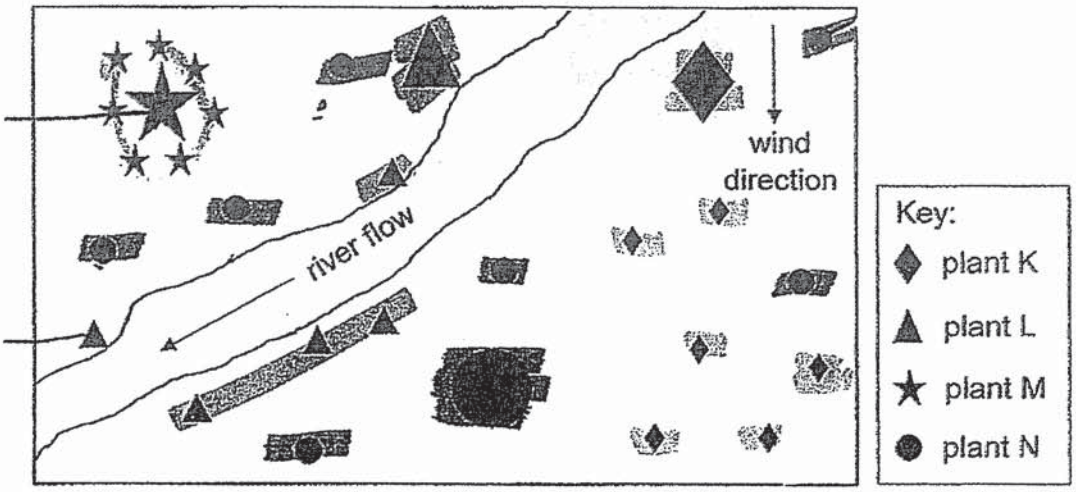
_____

_____

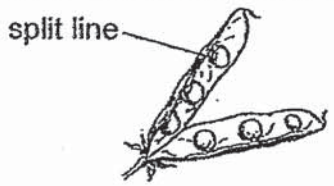
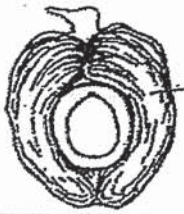
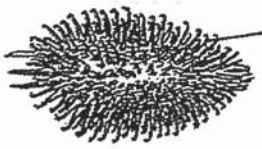
_____



23. The diagram below shows the locations of 4 types of plants, K, L, M, and N. The larger symbols indicate the parent plants and the smaller symbols indicate the young plants.

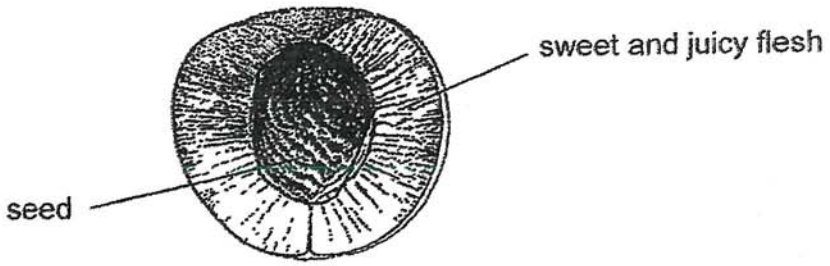


(a) Based on the above diagram, identify the fruit/seed of plants K, L, M and N in the table below. [2]

	Seed/ Fruit	Plant
(i)		
(ii)		
(iii)		
(iv)		

2

Study the picture of the fruit of plant X below.

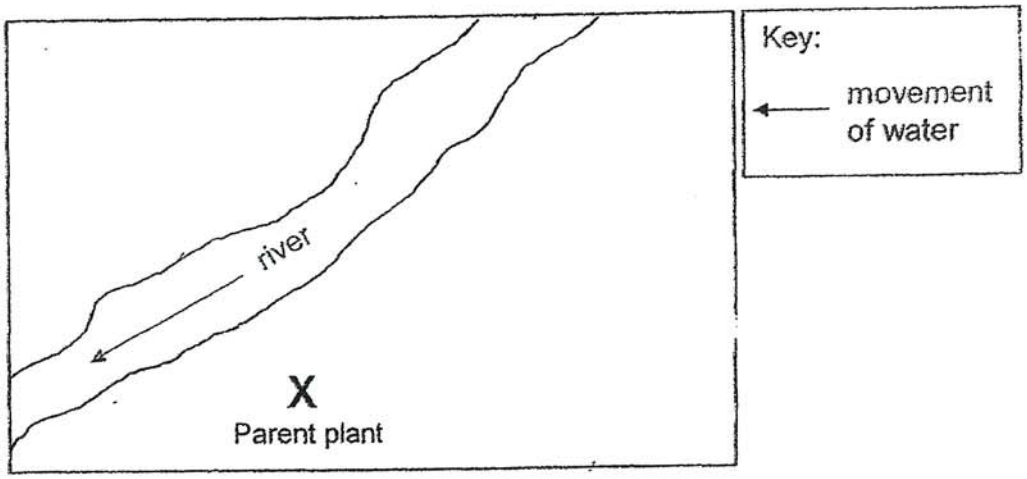


Fruit of plant X

The seed of plant X is dispersed by animal T. Animal T cannot swim or fly.

Parent plant X is grown a distance from a river as shown below. After a few years, young plants of X were seen.

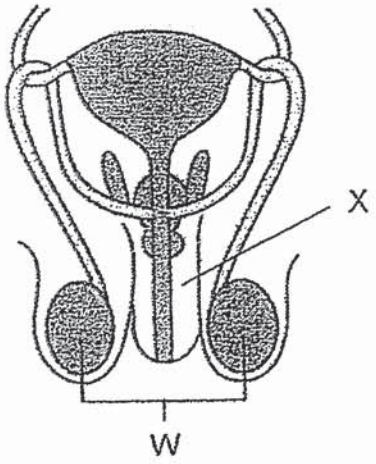
(b) A parent plant X is shown in the map below. Draw five more "X"s on the same map to show the possible locations of five young plants X where the seeds could be dispersed to. [1]



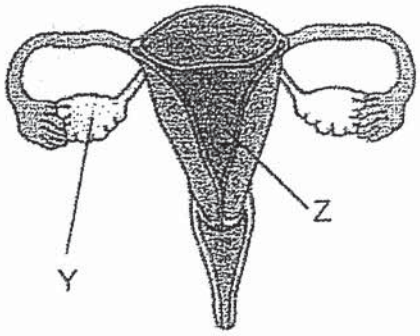
(c) Describe how the young plants reached these new locations. [1]

2

24. The diagrams below show the male and female reproductive systems.



male reproductive system



female reproductive system

(a) Name part Y. [1]

_____

(b) What is the function of part W? [1]

_____

_____

(c) At which part, W, X, Y or Z, will an unborn baby develop? [1]

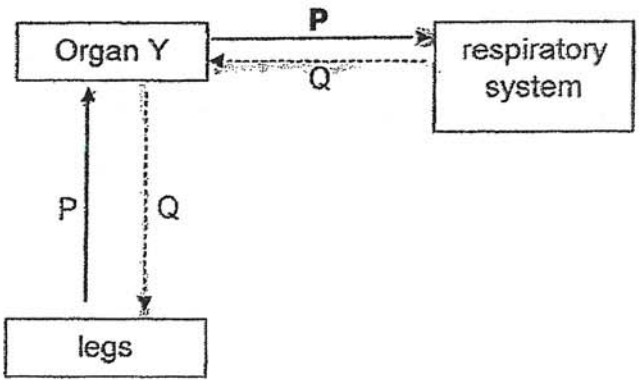
_____

(d) Which part of a flower has the same function as part W? [1]

_____

4

25. The diagram below shows how gas P and gas Q are transported in the human body.



(a) Identify gas P and gas Q. [1]

Gas P : _____

Gas Q : _____

(b) Identify organ Y. [1]

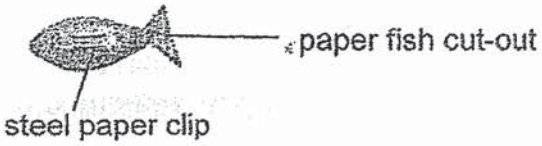
Organ Y : _____

(c) A man started running and noticed his breathing rate and heart rate increase. Describe how the increased rates affected the amount of gas Q reaching his legs. [2]

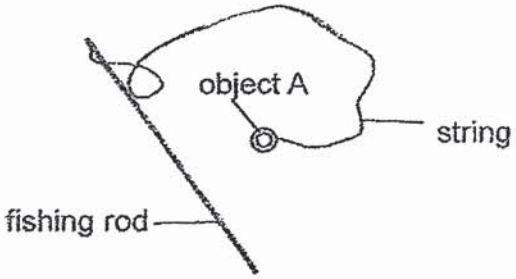
Rate	How the rates affected the amount of gas Q reaching his legs
Breathing rate	_____ _____ _____
Heart rate	_____ _____ _____

4

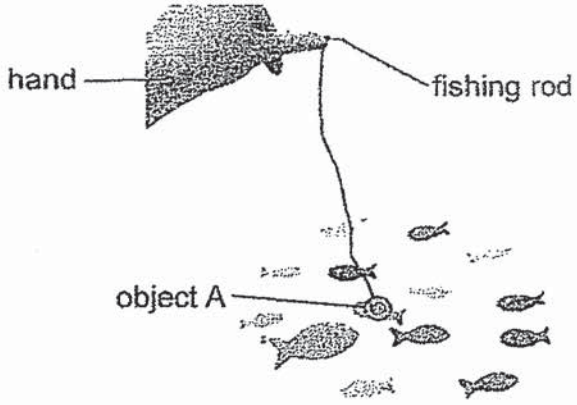
26. Jenny fixed a steel paper clip onto each paper fish cut-out she made.



She also tied object A to the end of the string of a fishing rod.



She brought object A close to the fish cut-outs as shown below.



Jenny observed a fish cut-out moved towards object A and was stuck to object A when she lifted up the fishing rod.

(a) State what object A is. [1]

_____

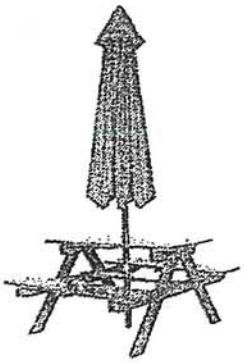
(b) Explain why the fish cut-out moved towards object A. [1]

_____

_____

2

27. Stacy rested at a picnic table shown below. Whenever it was sunny or rainy, she opened the umbrella that was attached to the table.



picnic table with closed umbrella

picnic table with opened umbrella

Based on the above information, fill in the blanks below with the correct property or reason a material must have in order to make part X of the umbrella. [2]

	Property	Reason
(a)	_____	It keeps the user dry on rainy days.
(b)	Does not allow light to pass through	_____ _____ _____ _____

2

28. Mara poured substance X into a container as shown in Diagram 1. She then let X freeze as shown in Diagram 2. She took out the container from the freezer after five hours and observed what happened to X when she tried tilting it as shown in Diagram 3.

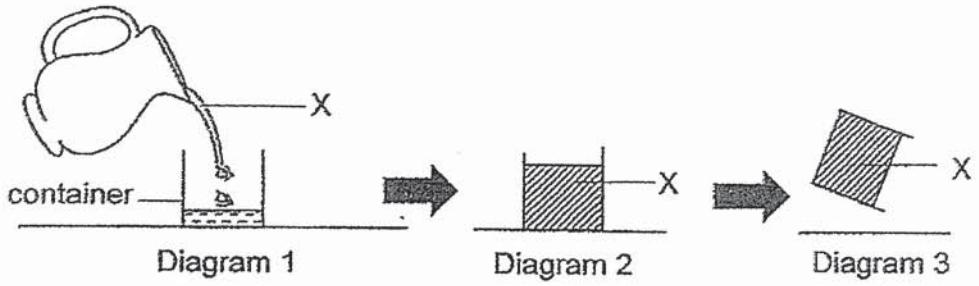


Diagram 1 Diagram 2 Diagram 3

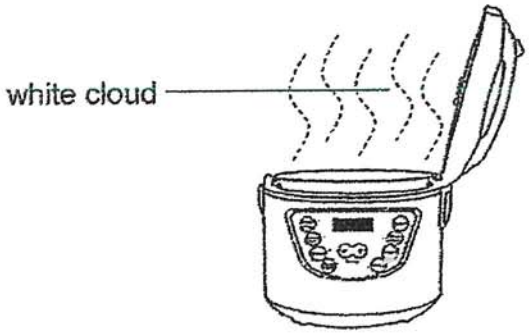
(a) Fill in the boxes to show the change of state in X. [1]

Diagram 1 Diagram 3

(b) Explain how the different properties of X at different states allowed Mara to obtain the shape of X after freezing as shown above. [2]

3

29. Janet wanted to scoop some hot rice for dinner. When she opened the lid of the rice cooker, a "white cloud" formed as shown below.



(a) What is the "white cloud"? [1]

_____

(b) Explain how the "white cloud" was formed. [2]

_____

_____

_____

(c) The "white cloud" disappeared after some time and she was able to scoop the rice. Give a reason why the "white cloud" disappeared. [1]

_____

(d) Once the rice was fully cooked, Janet's mum turned off the switch. She also told Janet to close the lid of the rice cooker once she had finished scooping the rice. Explain how this action helps to keep the rice in the rice cooker warm. [1]

_____

_____

_____

End of Booklet B

5

ANSWER KEY

YEAR: 2020

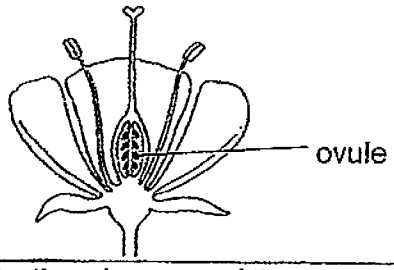
LEVEL: PRIMARY 5

SCHOOL: TAO NAN SCHOOL

SUBJECT: SCIENCE

TERM: WEIGHTED ASSESSMENT(SA1)

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

Qn	Correct Answer
21a	A: filament B: anther C: stigma D: style
21b	
22a	As the wingspan of the seed increases/decreases, the time taken for the seed to reach the ground increases/decreases.
22b	Seeds with longer wingspans can be dispersed further away from plant T thus preventing/reducing overcrowding/ competition for space, sunlight, water or minerals.
23a	i) M ii) K iii) L iv) N
23b	Any 5 'X' marked on the right side of the river
23c	Animal T eats/swallow the fruit/flesh and passes out the seed away/throws the seed away from plant X.
24a	Ovary
24b	Produce/store sperms/male reproductive cells
24c	Part Z
24d	Anther
25a	Gas P : carbon dioxide Gas Q : oxygen
25b	Heart
25c	**More oxygen (from the air/surrounding) is taken in/inhaled** so that more oxygen is absorbed at the lungs, hence **more oxygen/ gas Q reaches the legs.** Heart pumps the blood **faster** so that **more oxygen/ gas Q** (is transported and) **reaches the legs.**

26a	Magnet	
26b	The steel paper clip is a magnetic material hence it was attracted to the magnet/object A.	
27a	Waterproof	
27b	The umbrella can provide shade on a sunny day or The person is cooler when he/she is under the umbrella on a sunny day.	
28a	Liquid state Solid state	
28b	X does not have a definite/fixed shape when it was a liquid, hence it takes the shape of the container. X freezes / solidifies after being cooled and solids have definite/fixed shapes, hence it stays in that shape.	
29a	(Tiny) Water droplets	
29b	Warmer water vapour from the cooked rice/ in rice cooker came into contact with cooler surrounding air, lost heat and condensed into water droplets	
29c	The mist evaporated/turned into water vapour.	
29d	It prevents heat loss from the rice to the surroundings. or Hot water vapour/steam was trapped in the rice cooker.	