

SAT



AI TONG SCHOOL

2005 SEMESTRAL ASSESSMENT (1)

PRIMARY FIVE SCIENCE

DURATION : 1hr 45 min

DATE: 12 MAY 2005

INSTRUCTIONS

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

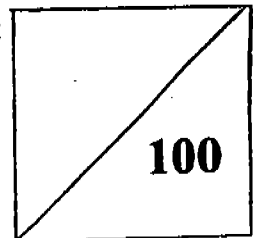
Name : _____ ()

Class : Primary _____

Parent's Signature : _____

Date : _____

Marks :

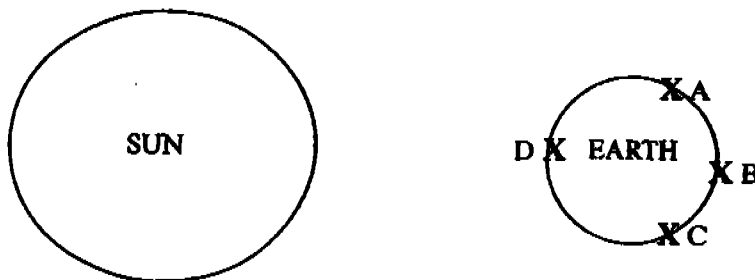


21

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. Four cities A, B, C and D are located on different parts of the Earth as shown in the diagram. One of the cities experienced sunlight 48 hours ago. Which one is it most likely to be?



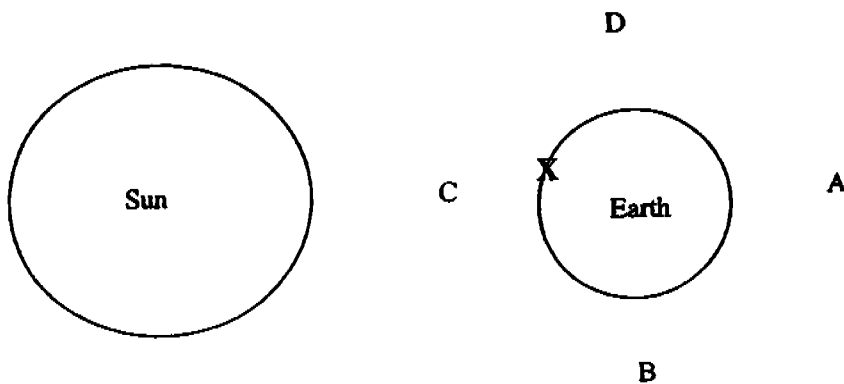
- (1) A
 - (2) B
 - (3) C
 - (4) D
2. The cycle of day and night is caused by the rotation of the _____.
- (1) Earth from east to west
 - (2) Earth from west to east
 - (3) Moon around the Earth
 - (4) Earth around the Sun

3. Which of the following conditions is/ are needed for a seed to germinate?

- A Air
- B Light
- C Water
- D Warmth

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

In the diagram below, A, B, C and D show the various positions of the moon at different nights of the month. Refer to it to answer questions 4 and 5.



4. Alex lives at the place X on Earth, as indicated by the arrow. He will observe the full Moon when the Moon is at position _____.

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

5. How long will it take for the Moon to move from position A to position C?

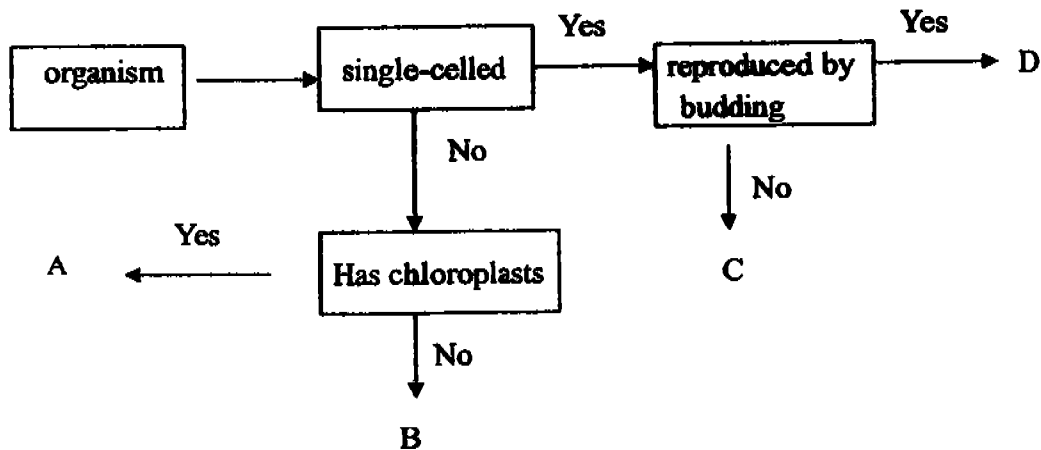
- (1) about 10 days
- (2) about 14 days
- (3) about 21 days
- (4) about 28 days

6. Which one of the following reproduce from spores?

- A Ferns
- B Moss
- C Mould
- D Mushroom

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

7. Study the flowchart below.



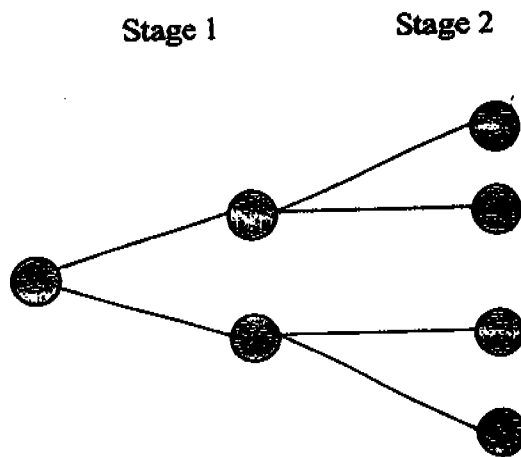
Identify organisms A, B, C and D.

	A	B	C	D
(1)	paramecium	yeast	moss	algae
(2)	algae	bacterium	yeast	amoeba
(3)	fern	mushroom	amoeba	yeast
(4)	paramecium	yeast	bacteria	fern

8. Which one of the statements below about the nucleus of a cell is true?
- A It controls the movement of substances in and out of the cell.
 - B It contains liquid that keeps the cell firm.
 - C It controls all activities within the cell.
 - D It contains heredity information

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

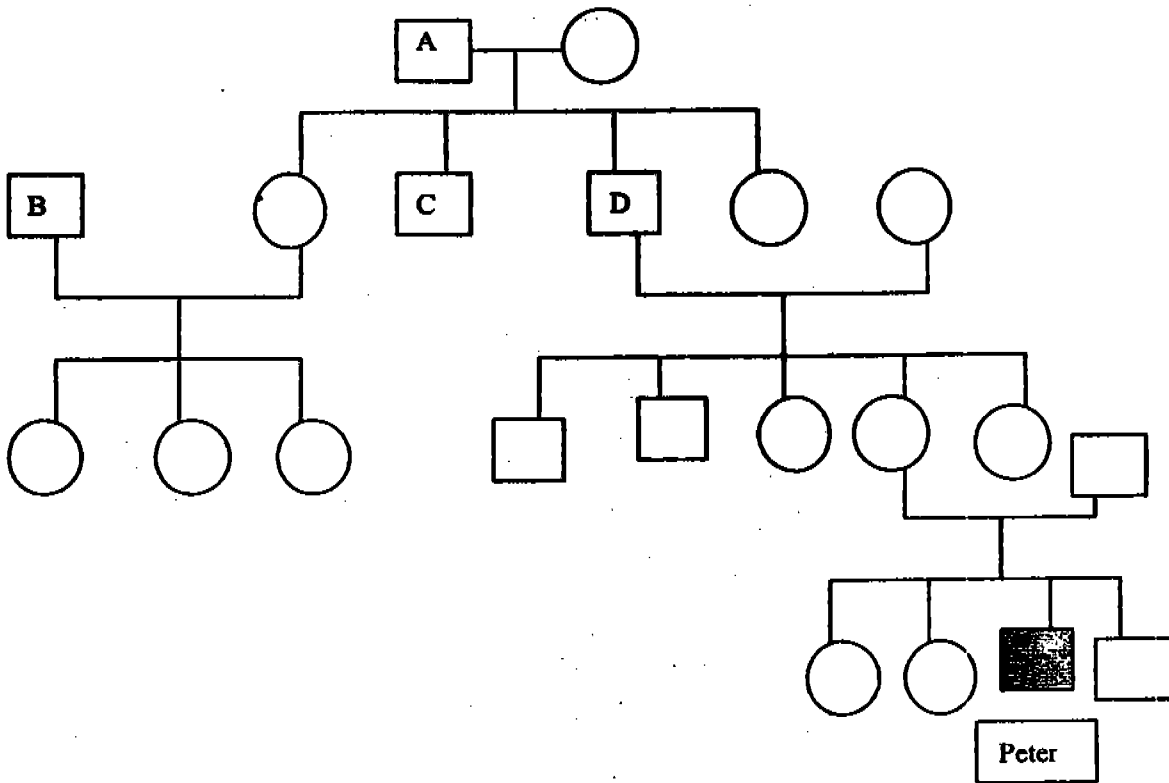
9. The diagram below shows how one cell divides to form more cells.



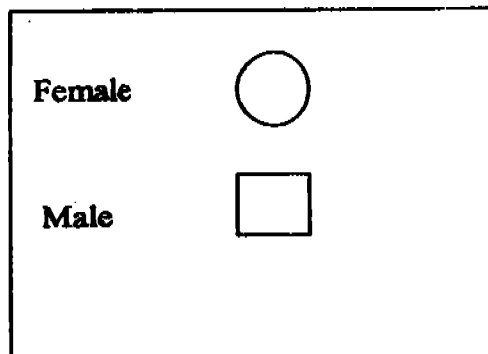
If there are 2 cells at stage 1, how many cells will there be at stage 5?

- (1) 16
- (2) 20
- (3) 32
- (4) 64

Study Peter's family tree shown below and answer questions 10 and 11.



Key:



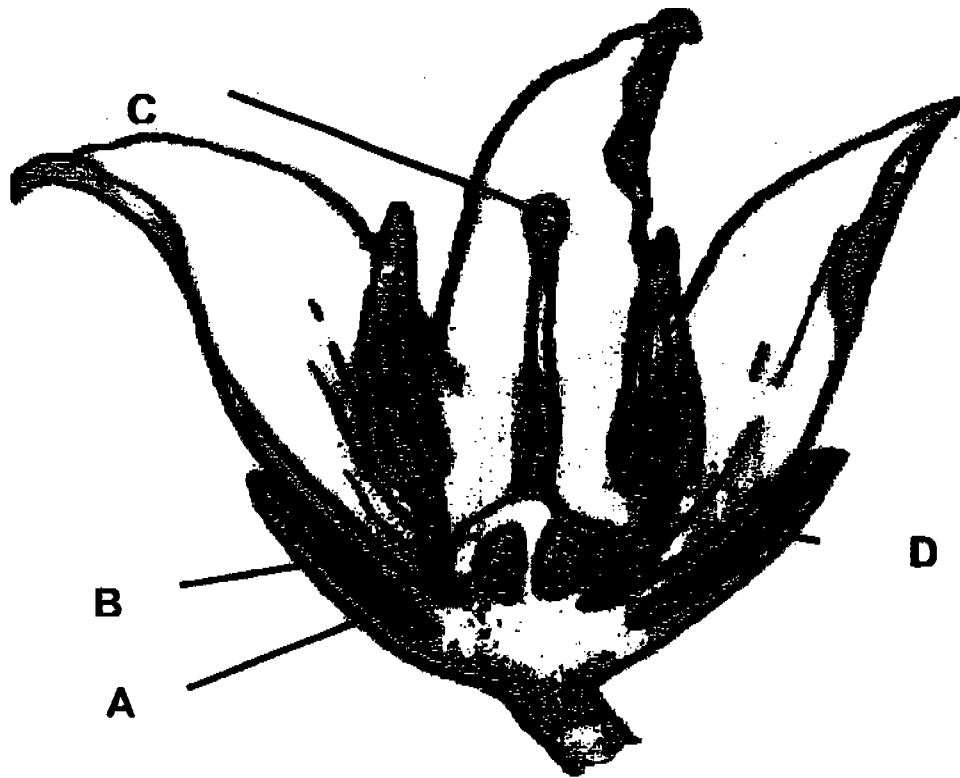
10. Peter has _____ uncles.

- (1) 1
- (2) 2
- (3) 3
- (3) 4

11. _____ has 2 sons and 3 daughters.

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

12. Study the diagram of a flower shown below.



Which one of the following parts will develop into a fruit after fertilization?

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

13. The following plants are classified according to their method of dispersal.

Group A	Group B	Group C
Pong Pong Lotus	Rubber seed Saga	Angsana Lalang

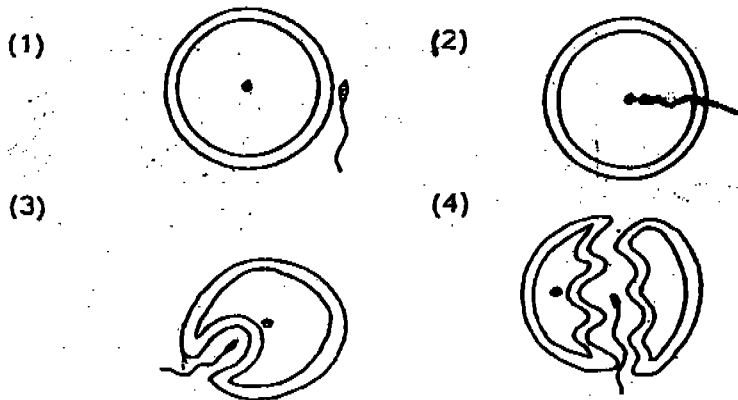
Which one of the following would you put in group C?

- (1) Nipah
 - (2) Tomato
 - (3) Balsam
 - (4) Shorea
14. Which one of the following reproduces in the same way as the heliconia plant?
- (1) Rose
 - (2) Pineapple
 - (3) Begonia
 - (4) Hibiscus
15. Which one of the following statements about reproduction in animals is correct?
- A Sperms are produced in the penis.
 - B Only one sperm fuses with the egg.
 - C The eggs are produced in ovaries.
 - D The eggs travel towards the sperm.
- (1) A and B only
 - (2) B and C only
 - (3) A, B and C only
 - (4) B, C and D only

16. When the characteristics from parents are passed on to their young, it is known as _____.

- (1) character
- (2) resemblance
- (3) heredity
- (4) fertilization

17. Which one of the following diagrams correctly shows that fertilization of a human egg by a sperm has taken place ?



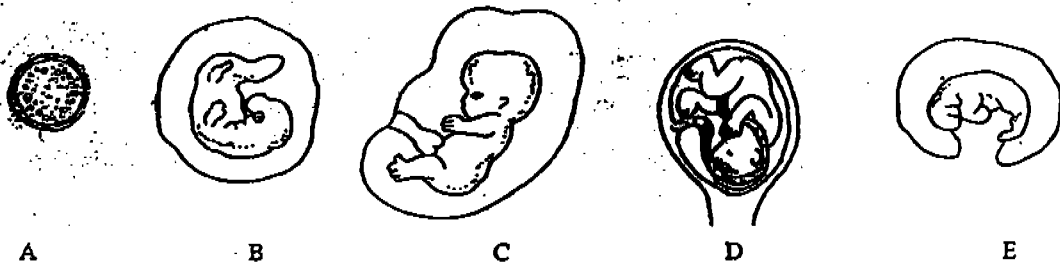
18. Which one of the following descriptions about the sexual organs of humans is correct ?

Testes	Ovaries
(1) They fertilize the ovaries.	They receive the eggs.
(2) They produce sperms.	They produce eggs.
(3) They store a few male sperms.	There is only one egg in each ovary.
(4) There are two testes in each male.	There is only one ovary in each female.

19. The developing baby in a mother's uterus gets its food and oxygen through the _____.

- (1) nose
- (2) mouth
- (3) vocal cord
- (4) umbilical cord.

20. The figures below show the different stages in the development of a foetus.



Which one of the following gives the correct sequence of development?

- (1) ADEBC
- (2) ACEDB
- (3) AEB CD
- (4) ACDEB

21. Animals that have many predators usually produce a large number of offspring. This is most likely because they want to _____.

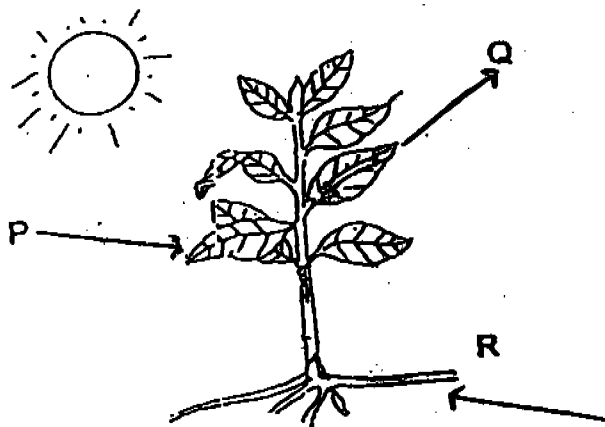
- (1) make sure their young can look after themselves
- (2) produce sufficient food for the predators
- (3) have more male offspring than female offspring
- (4) ensure that some of their offspring will survive

22. Energy from plants is passed on to animals in the form of _____.

- A Water
- B Sugar
- C Starch
- D Oxygen

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

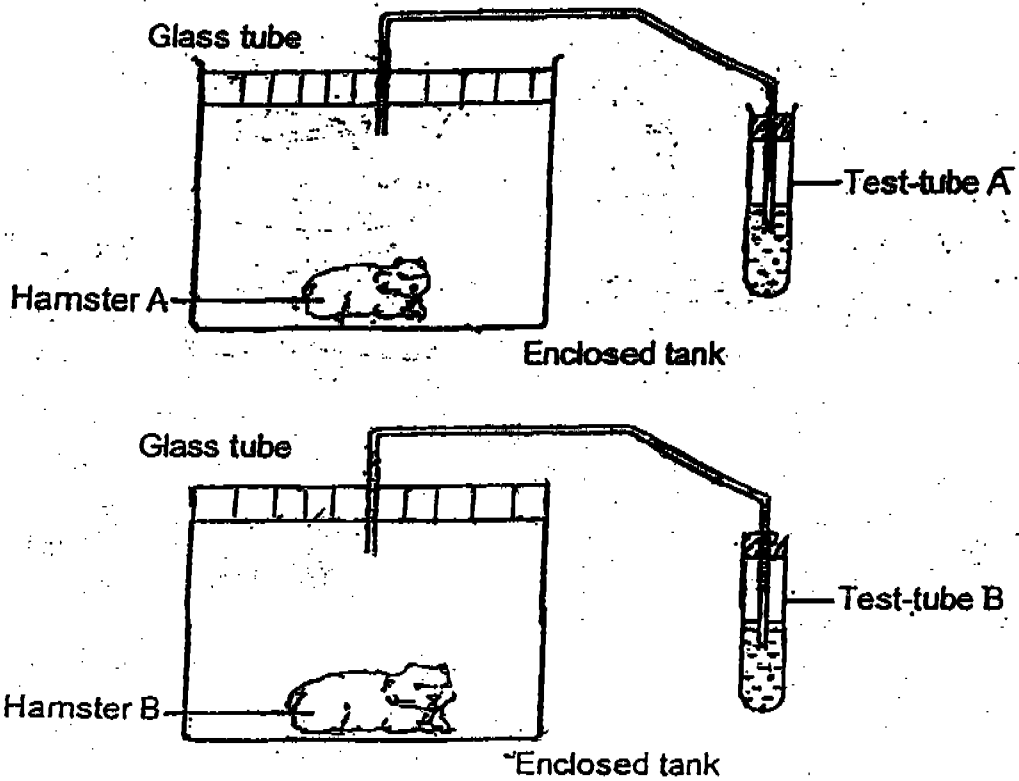
23. Study the diagram carefully. The plant is making food in the presence of sunlight.



Which one of the following lists correctly shows what P, Q and R stand for?

P	Q	R
(1) oxygen	carbon dioxide	water and mineral salts
(2) oxygen	water vapour	carbon dioxide
(3) water vapour	carbon dioxide	fertilizer
(4) carbon dioxide	oxygen	water and mineral salts

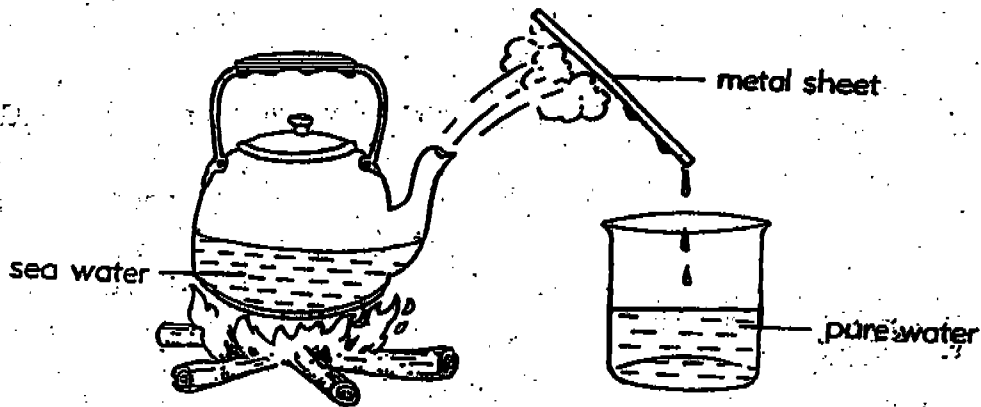
24. Jim set up an experiment to compare the rate of respiration between 2 hamsters as shown below.



He noticed that the lime water in test-tube B turned cloudy faster than that in test-tube A. Which one of the following statements about his experiment is true?

- (1) Both hamsters have the same rate of respiration.
- (2) Hamster A has a lower rate of respiration than hamster B.
- (3) Hamster A has a higher rate of respiration than hamster B.
- (4) The amount of limewater used will affect the rate of respiration.

25. The diagram below shows a way of getting drinking water from seawater.



What changes of state occur in this method?

- A Condensation
- B Melting
- C Evaporation
- D Freezing

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

26. Water collected in reservoirs is sent to the Water Treatment Plant for _____ before it is sent to homes.

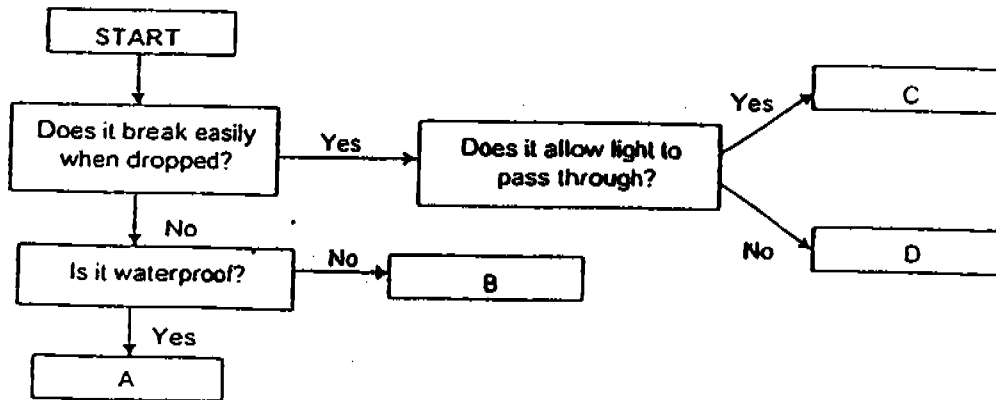
- (1) sterilization
- (2) purification
- (3) recycling
- (4) desalination

27. For the water cycle to take place, _____

- A there must be light
- B there must be heat
- C water must have oxygen
- D water must change its state

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

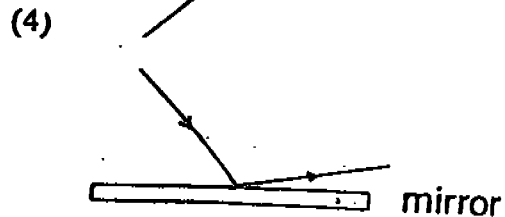
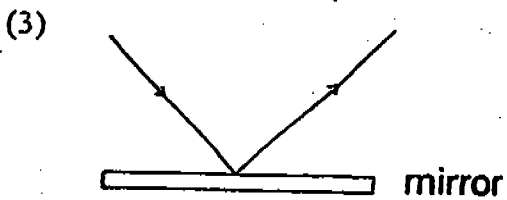
28. The following flowchart shows the characteristics of 4 different objects, A, B, C and D.



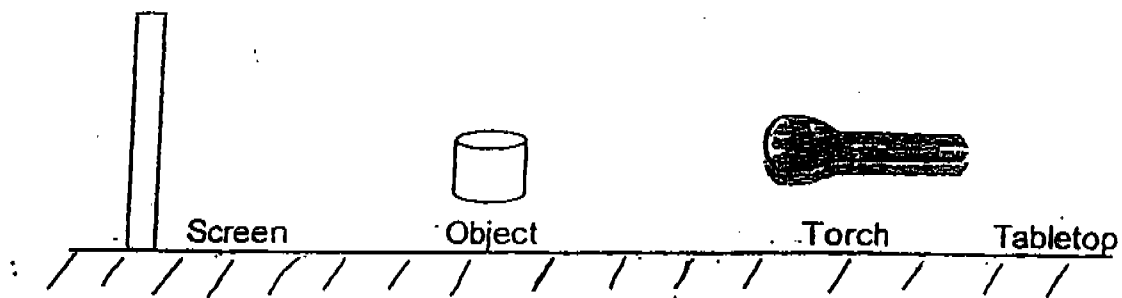
Which object is likely to be a woollen sweater?

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

29. A ray of light from a torch falls on a plane mirror. Which one of the diagrams shows the path taken by this ray?



30. The diagram below shows the positions of a light source, an object and a screen. When the torchlight is shone on the object, a shadow is formed on a screen.



What can be done to obtain a bigger shadow? .

- A Bring the object nearer the screen.
- B Bring the object further away from the screen.
- C Bring the torch nearer to the object.
- D Bring the torch further away from the object.

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

Name _____ ()

Class: _____

Section B (40 marks)**Write your answer in the spaces provided**

31. State two similarities between the Earth and the Moon. [2]

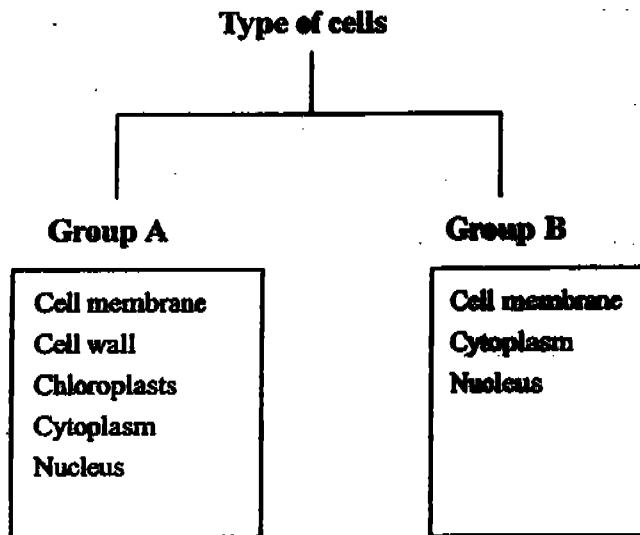
32. Name two types of energy given off by the Sun and explain why they are useful to us. [2]

	Energy	Uses
a		
b		

33. Write "True" or "False" in the box beside. [2]

	Statement	
a	All living things are made up of cells.	
b	Larger animals have larger cells than smaller animals.	
c	A plant cell does not have a cell membrane.	
d	All plant cells contain chloroplasts.	

34. Study the classification table below.



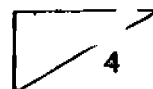
(a) Give suitable sub-headings for Group A and B. [2]

Group A: _____

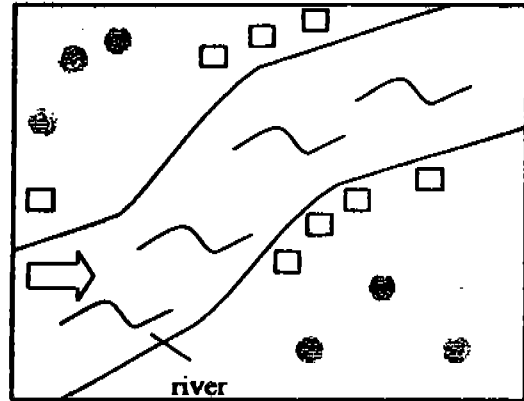
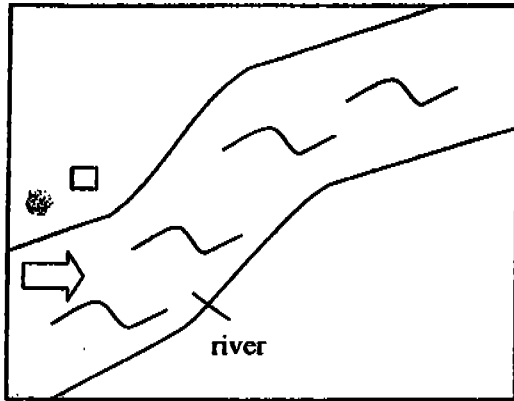
Group B: _____

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

35. Cell division takes place continuously to allow cells to multiply. Why is this process important in an organism? [1]



36. Sally counted the number of wild plants A and B on a piece of land. After a few months she looked at the same piece of land again. Her observations are shown below.



Key

□ Plant A

● Plant B

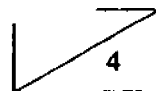
(a) State the method of dispersal for plants A and B. [2]

(i) A: _____

(ii) B: _____

(b) Give a reason for your answer to (a) (i). [1]

(c) Name one characteristic of the fruit of plant A. [1]



37. Study the table below and put the following plants into the correct boxes. [3]

Yam	Garlic	Onion
Potato	Pineapple	Banana

Method of Reproduction

By underground stem

By suckers

3

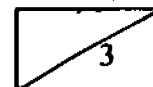
38. Alan and Bob conducted an experiment to find out if overcrowding affects the growth of plants. In order to carry out a fair test, which variables should they change or keep the same?

(a) Place a tick against each variable in the appropriate column of the table. [2]

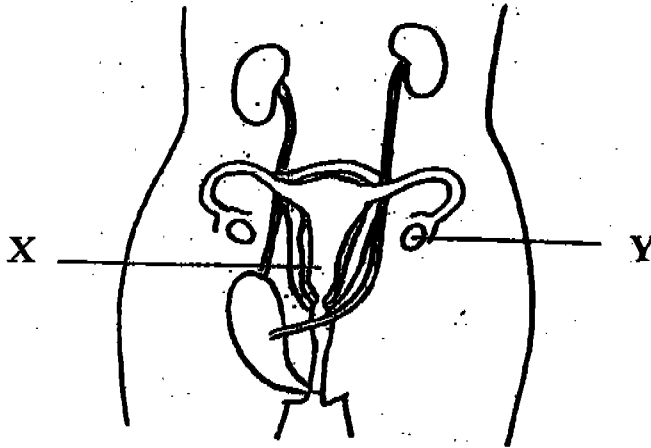
	Variables	Kept the same	Changed
A	Amount of water given		✓
B	Type of soil		
C	Place where pots are put		
D	Number of seeds in each pot		

(b) State one more variable they should keep the same. [1]

(i) _____



39. The female reproductive system is shown in the diagram below.



(a) Identify the parts labelled X and Y. [1]

(i) X: _____

(ii) Y: _____

(b) What is the function of each of the labelled parts? [2]

(i) X: _____

(ii) Y: _____



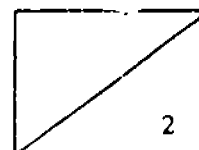
40. The table below shows the gestation periods of 4 animals.

Animals	Average Gestation Period
Elephant	22 months
Rat	21 days
Human	9 months
Dog	9 weeks

Based on the information above, answer the following questions.

(a) What would happen to the embryo during gestation? [1]

(b) What do you notice about the relationship between the animal size and its gestation period? [1]



41. (a) Classify the animals below into 2 groups, A and B, such that there are 3 animals in each group.

[3]

Frog	Python	Eagle	Bat	Walrus	Rattlesnake
------	--------	-------	-----	--------	-------------

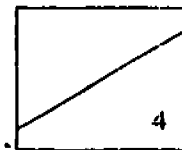
Group A	Group B

(b) Give a suitable heading for Group A and Group B.

[1]

(i) Group A _____

(ii) Group B _____

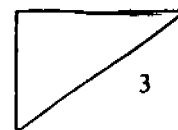
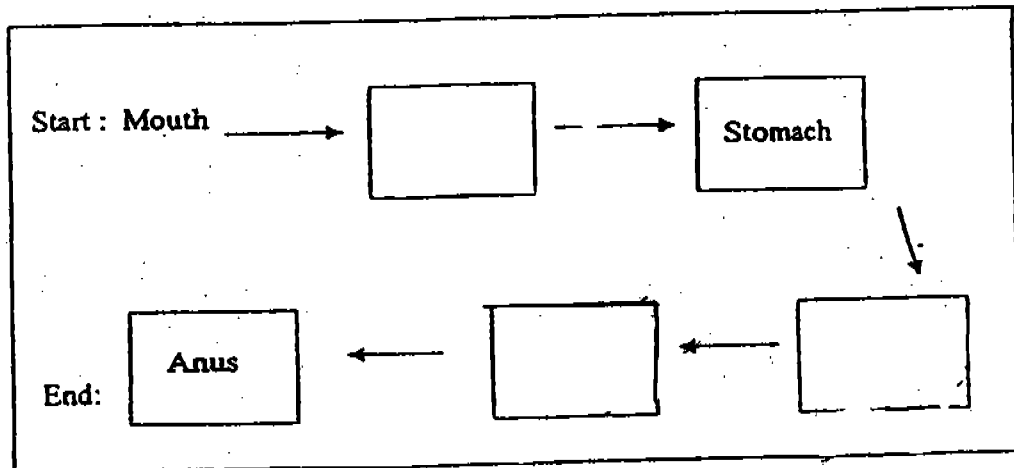


42. (a) Digestion begins at the mouth. The reason why this is possible is due to the presence of the following listed below. Explain how each of them makes digestion possible. [2]

(i) Teeth - _____

(ii) Saliva - _____

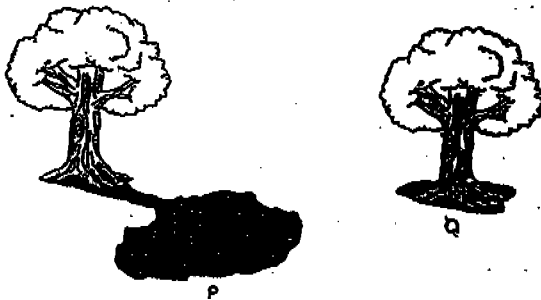
(b) In the boxes below, complete the diagram with parts of the digestive system. [1]



43. The table below shows some statements made by pupils about respiration and photosynthesis in plants. State whether the statements are True, False or Not possible to tell. Put a (✓) in the appropriate box. [2]

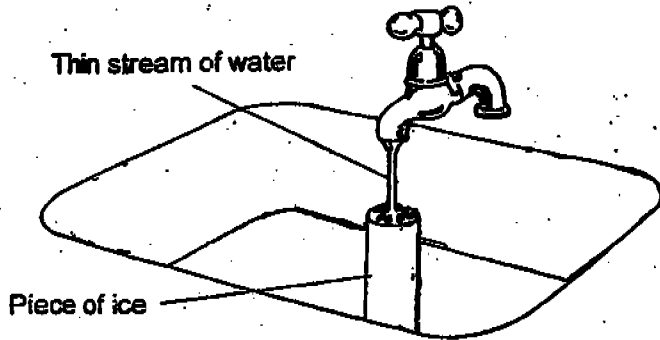
	Statement	True	False	Not possible to tell
(a)	Plants carry out respiration during the day and night.			
(b)	During respiration, plants release carbon dioxide and water into the air.			
(c)	Some plants in a park are undergoing photosynthesis. The rate of photosynthesis of the plants is higher in the morning than in the evening.			
(d)	Photosynthesis takes place only when there is sunlight.			

44. Mary noticed that the length of a shadow in the Sun changes according to the time of the day. She sketched the shadow of her mango tree at two different times of the day.

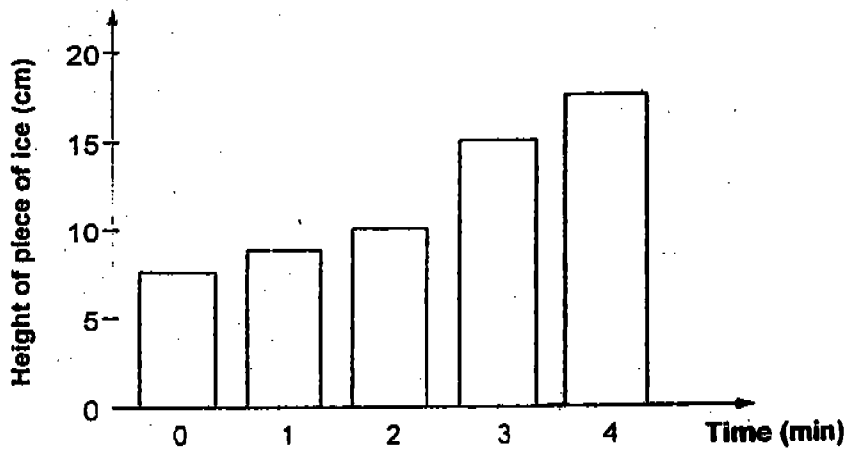


- Which sketch shows the shadow of the mango tree in the early morning? [1]
Explain your answer.

45. Tom wanted to investigate how a piece of ice melted under running water. He placed a long piece of ice in a sink and let a thin stream of water run slowly through it.



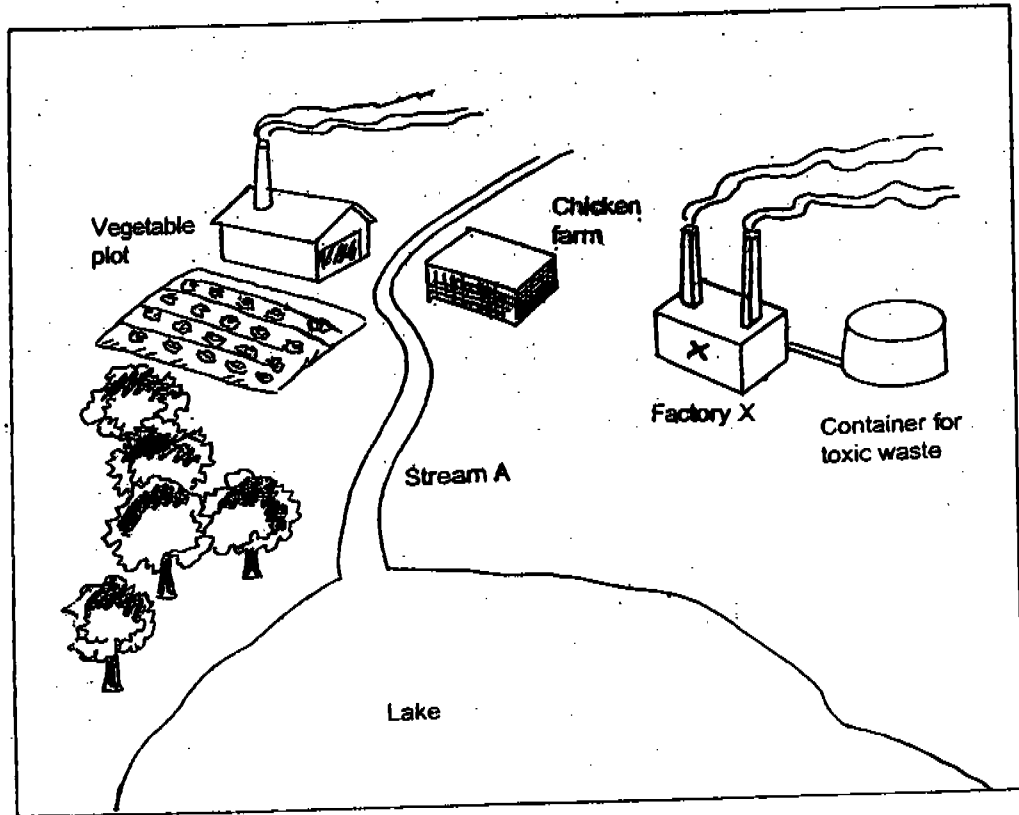
Tom measured the height of the piece of ice and plotted his results in the following graph.



Do you think his results are correct? Why?

[2]

46. The diagram below shows an area around a lake. There had been complaints made by the residents against Factory X for polluting the water in the lake, killing the fish in it.



- (a) Are the complaints justified?

[1]

- (b) Give two reasons to explain your answer in (a).

END OF PAPER



Ai Tong Primary School
Primary 5 Science SA1 (2005)

Exam Section

Answer Sheets

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

31. They are both spherical / move, rotate on their own axis.
- 32a. Light : enables plants to make food
 32b. Heat : enables water to change state.
- 33a. True
 33b. False
 33c. False
 33d. False
- 34a. Plant Cell
 Animal Cell
- 34b. Chloroplasts contain chlorophyll that captures sunlight.
35. It allows the organism to grow and also helps to replace old and damaged cells.
- 36a. (i) By water
 (ii) By animals
- 36b. Plant A is found along the river.
 36c. Fibrous/light/waterproof husks.
37. Yam Pineapple
 Onion Banana
 Potato
 Garlic

38a.

✓	
✓	
✓	
	✓

38b. (i) The amount of light each plant receives. OR
Amount of carbon dioxide / soil OR
Same type of pot / soil / seeds.

39a. (i) womb
(ii) ovaries

39b. (i) Contains the developing baby or a place where the growing foetus develops
(ii) Produces eggs OR
Eggs are produced.

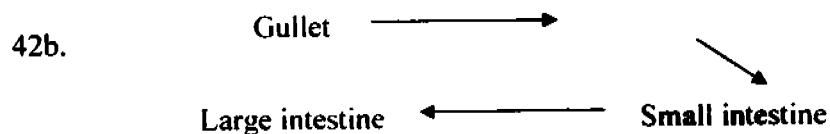
40a. It will slowly develop into the shape of the baby animal.
40b. The bigger the size of the animal, the longer its gestation period.

41a.

Python	Walrus
Frog	Rattlesnake
Eagle	Bat

41b (i) Lay eggs / warm-blooded
(ii) Give birth to young alive/cold blooded.

42a (i) chew food into smaller pieces.
(ii) soften the food.



43a. True
43b. True
43c. Not possible to tell
43d. False.

44. **Shadow P. In the morning, when the sun rises in the east, objects cast longer shadows.**
45. **No. The height of the piece of ice should be decreasing as it melted, not increasing.**
- 46a. **No.**
- 46b. (i) **Factory X cannot be polluting the water as it has its own container for toxic waste and need not throw them into stream A.**
(ii) **The chicken farm is responsible for polluting the lake with its use for insecticides, weed-killers and chicken waste.**
- OR**
- 46a. **Yes**
- 46b. (i) **The toxic waste leaks into the sea.**
(ii) **The factory is near the sea.**