

S147



AI TONG SCHOOL

2004 SEMESTRAL ASSESSMENT 1 PRIMARY 5 SCIENCE

DURATION : 1hr 45min

DATE: 18th May 2004

INSTRUCTIONS

Do not open the booklet until you are told to do so.

Follow all instructions.

Answer all questions

Booklet A

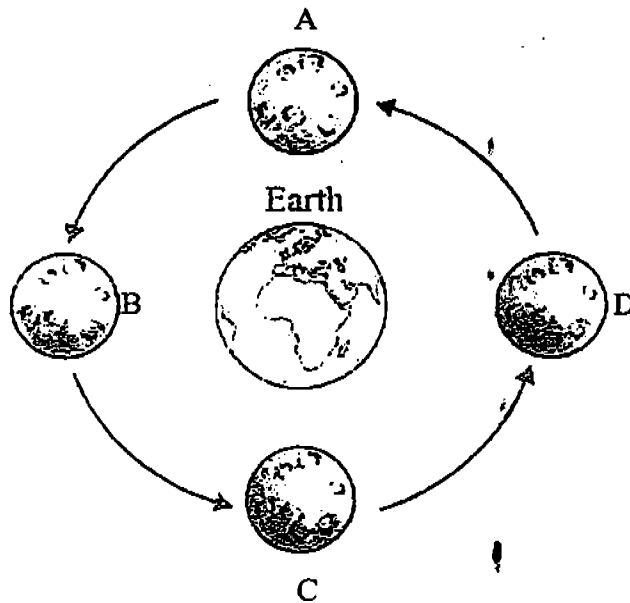
Section A (60 marks)

Questions 1 to 30 carry 2 marks each. For each question, four options are given. Shade the correct oval, (1, 2, 3 or 4 on the Optical Answer Sheet).

1. Which of the following statements is ***incorrect***?

- (1) Stars give out light.
- (2) The Moon is a star.
- (3) The Earth spins on its axis.
- (4) The Moon revolves around the Earth.

2. Study the diagram below and answer the question.

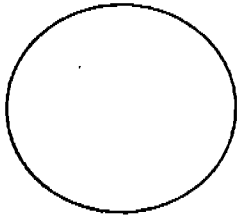


The moon currently is at position A. If 21 days has passed, the moon will be at position _____.

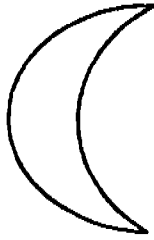
- (1) A
- (2) B
- (3) C
- (4) D

3. The Moon was observed on different nights and a record of what was seen is shown below.

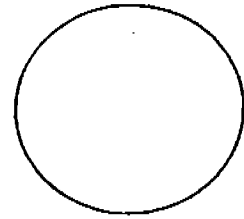
1 November



9 November



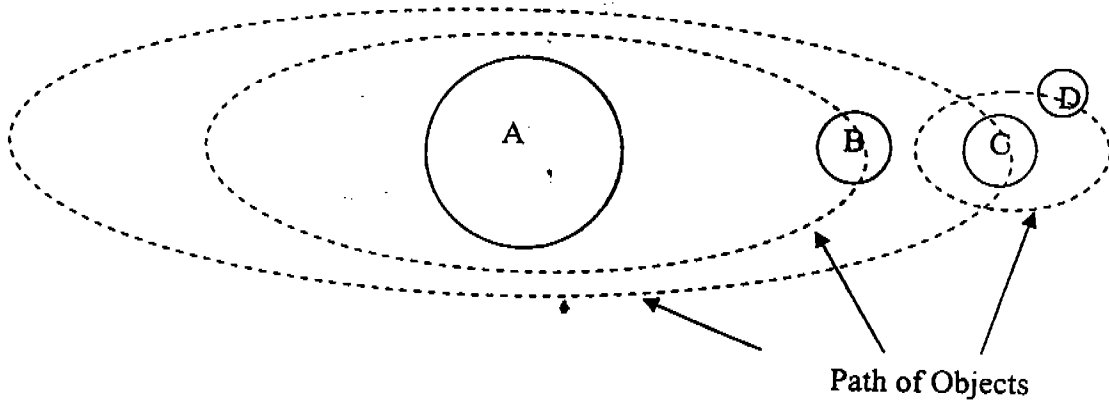
29 November



Probably, the moon could not be seen on _____

- (1) 2 November
- (2) 10 November
- (3) 15 November
- (4) 30 November

4. The diagram below shows objects in the solar system. Descriptions about each object are given below.



- I. Object A is a source of light.
- II. Object B moves around object A
- III. Object C moves around Object A.
- IV. Object D moves around Object C

What could the objects be?

	A	B	C	D
(1)	Sun	Earth	Moon	Mercury
(2)	Sun	Mercury	Earth	Moon
(3)	Moon	Sun	Mercury	Earth
(4)	Moon	Mercury	Sun	Earth

5. Kun Tai made a survey of some family traits and recorded the results in the table shown below.

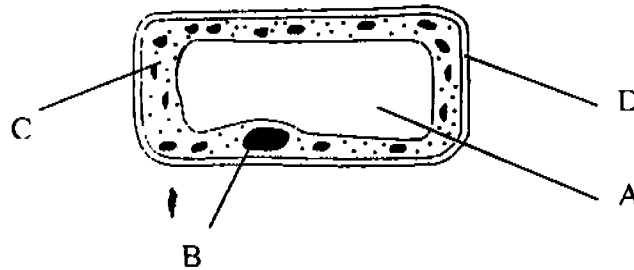
Characteristics	Kun Tai	Father	Mother	Grandfather
Attached earlobe	yes	no	yes	yes
Curly Hair	no	yes	no	yes
Able to roll tongue	yes	yes	no	yes

From the information Kun Tai gathered, we can conclude that _____.

- (1) Everyone in his family have curly hair.
 - (2) Kun Tai and his mother have three similar traits.
 - (3) Kun Tai and his grandfather have detached earlobe.
 - (4) All the male members in his family are able to roll their tongue
6. Which of the following statements about cells is correct?

- (1) All cells are of the same size.
- (2) All cells perform similar functions.
- (3) All the cells in an organism are identical.
- (4) Large animals usually have more cells than smaller ones.

7. Study the diagram of a cell shown below.



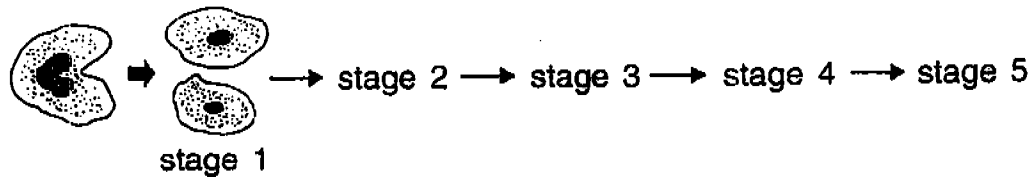
Which part of this cell contains a liquid that keeps the plant firm and helps the plant to stand upright?

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

8. Daphne observed that some of her skin is flaking off. What does this show?

- (1) Her skin was too moist.
- (2) Daphne did not shower.
- (3) Her skin was not soft enough.
- (4) Her skin contained some dead cells.

9. The diagram below shows the amoeba in the process of reproducing itself.



Which of the following shows the correct number of amoeba at each stage?

	Stage 2	Stage 3	Stage 4	Stage 5
1)	4	16	32	64
2)	4	8	12	16
3)	4	6	8	10
4)	4	8	16	32

10. The picture below shows part of a plant bearing fruits. *Based on the picture below*, which of the following statements about the plant is most likely to be true?



- (1) The flowers grow in bunches.
- (2) The flowers need not be pollinated.
- (3) The plant has small needle-like leaves.
- (4) The plant reproduces through suckers.

11. Which of the following statements about plant reproduction are true?

- A. Suckers develop from the stem.
- B. Flowering plants can reproduce naturally from seeds only.
- C. Non-flowering plants can reproduce from both seeds and spores.
- D. Ferns and the begonia reproduce from the spores on the underside of their leaves.

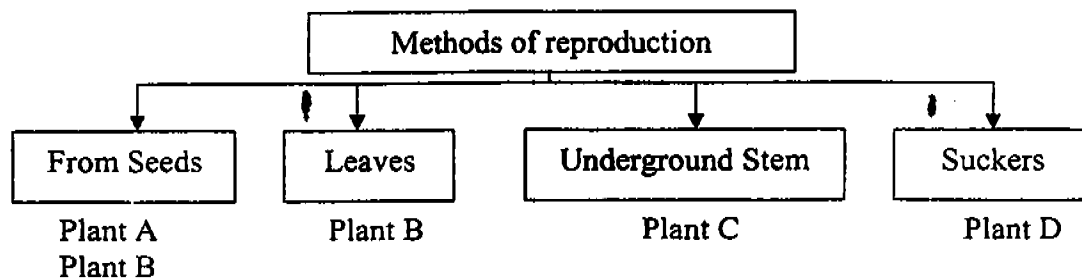
- (1) A only.
- (2) D only.
- (3) B and C only.
- (4) C and D only.

12. Which of these plants reproduce by suckers?

- A. Pineapple
- B. African Violet
- C. Onion
- D. Banana

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

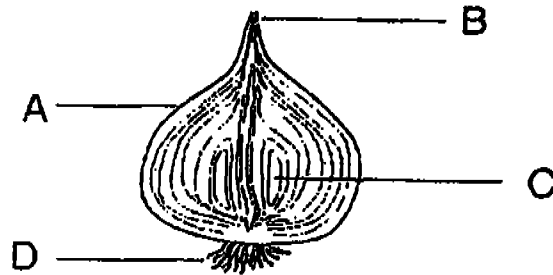
13. Study the diagram and statements below and answer the question.



Which statement is *false*?

- (1) Plant A produces fruits.
- (2) Plant D is a bird's nest fern.
- (3) Plant B can ~~produce~~ reproduce in two different ways.
- (4) Plant C must have at least 1 bud to grow.

14. The figure below shows the cross-section of an onion.



Which part of the plant will develop into the shoot?

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

15. Simon cuts a potato into two parts of different sizes. He then planted both parts in the same areas of his garden and watered them everyday. After a few days, he observed that a young shoot has grown from the smaller part but not from the bigger part. What could be a possible explanation to his observation?

- (1) Potatoes can only grow if they are smaller in size.
- (2) Potato plants need to be planted in the different plots of land.
- (3) The bigger the potato the longer it takes to grow into a young plant.
- (4) The smaller part has buds while the bigger part does not have buds.

16. Study the classification table on the method of reproduction below. What animal could *X* be?

By laying eggs	By giving birth to young
House lizard	Deer
<i>X</i>	Ape

- (1) Salmon
- (2) Guppy
- (3) Dog
- (4) Elephant

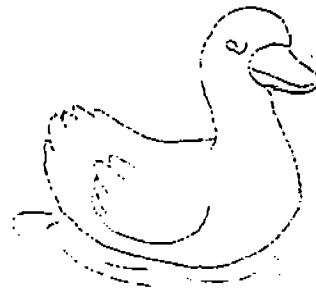
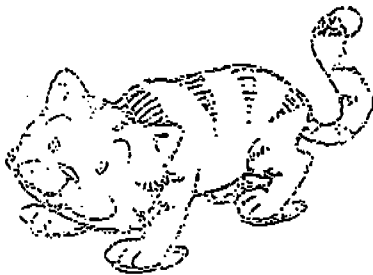
17. The foetus develops in the _____ of the mother before it is born.

- (1) umbilical cord
- (2) ovary
- (3) stomach
- (4) womb

18. Which of the following about fertilisation in humans is true?

- (1) Fertilisation is the joining of two eggs.
- (2) Fertilisation takes place outside the body.
- (3) Pollination takes place before fertilisation.
- (4) Fertilisation is the fusion of an egg with a sperm.

19. What are the similarities in the reproduction between a cat and a duck?



- (A) They produce eggs with hard shells.
- (B) The fertilised cells undergo cell division.
- (C) They reproduce from the fusion of an egg and a sperm.
- (D) They require two parents for sexual reproduction.

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

20. Greta cannot roll her tongue like Vincent. How can you explain this?

- (1) Greta does not practise rolling her tongue.
- (2) Girls cannot roll their tongue but boys can.
- (3) Vincent is better at rolling his tongue than Greta.
- (4) Vincent inherited this characteristic from one of his parents.

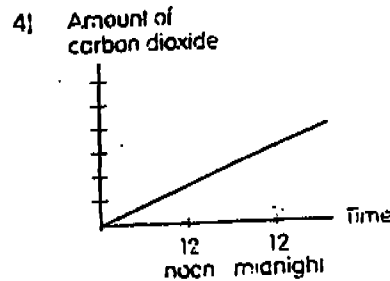
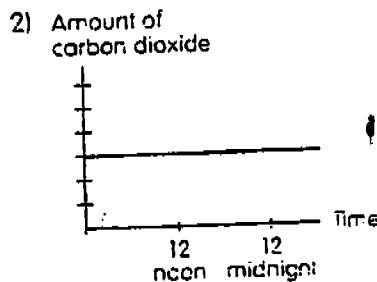
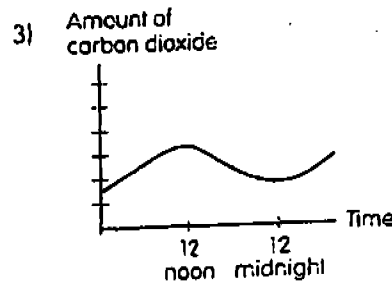
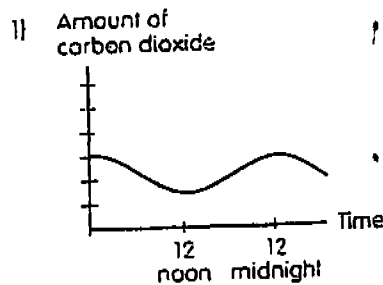
21. Which of the following trait could Sam's parents pass to him?

- (1) Long hair
- (2) Long fingernails
- (3) Straight hair
- (4) Likes chocolates

22. Our body's glucose is converted into energy as it reacts with _____.

- (1) oxygen
- (2) nitrogen
- (3) water vapour
- (4) carbon dioxide

23. Venus places a potted balsam plant under a large bell jar. She drew a graph to show that the amount of carbon dioxide inside the bell jar changes from day to night. Which of the following graphs shows the correct change in the amount of carbon dioxide in the jar?



24. When plant parts are eaten by an animal, the _____.

- (1) animal loses energy through digestion
- (2) energy stored in the plant parts is transferred to the animal
- (3) animal increases the energy that was stored in the plant
- (4) energy is lost to the surrounding environment

25. Below is a table which shows the water consumption of 2 households in a day.

Households	Amount of water used (<i>litres</i>)			
	Washing clothes	Watering Plants in the garden	Washing dishes	Bathing
Tan	95	69	35	50
Wong	78	75	40	65

What can you conclude about the consumption of water in the 2 households?

- (1) They use the least amount of water in watering plants in the garden.
- (2) They use the same amount of water in bathing.
- (3) They use the most amount of water in washing dishes.
- (4) They use the most amount of water in washing clothes.

26. We can get more oxygen into our body if we _____.

- (1) sit quietly
- (2) eat more food
- (3) breathe deeply
- (4) hold our breathe

27. Which of the following enables the water cycle to go on?

- (1) Light
- (2) Wind
- (3) Heat
- (4) Air

28. Plants cannot make food at night because there is no _____.

- (1) oxygen
- (2) carbon dioxide
- (3) heat
- (4) light

29. Which one of the following allows light to pass through?

- (1) Aluminium foil
- (2) A metal pot
- (3) A glass window
- (4) A mirror

30. The _____ gets energy from plants only.

- (1) frog
- (2) duck
- (3) snail
- (4) lizard

End of Booklet A

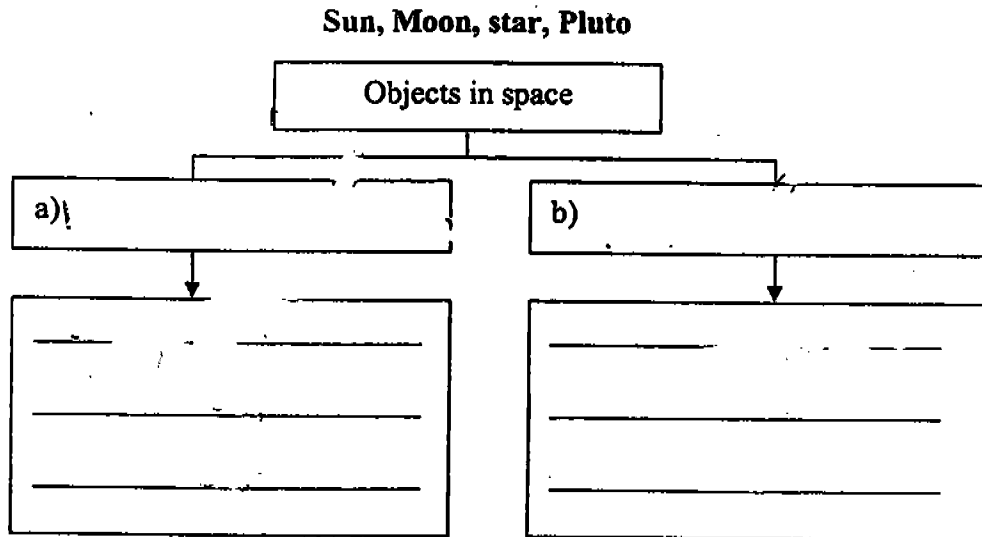
Name: _____ ()
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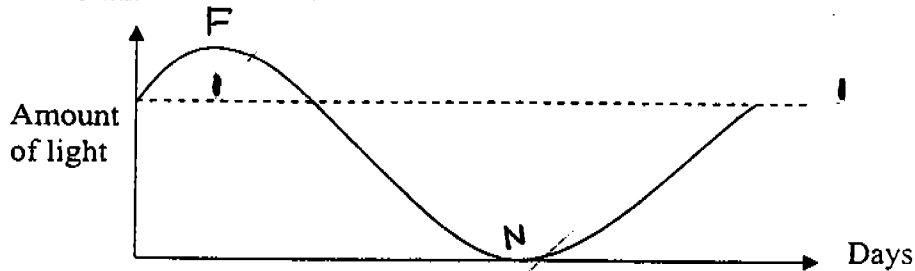
Booklet B

Answer all the questions in this booklet. Marks for each question are stated in the brackets.

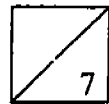
31. Below is a list of objects that can be found in space. Classify the objects according to similar characteristics that they have and write down suitable headings for a) and b). [4]



32. The diagram below shows a graph of the amount of light received from the Moon at night from one position in the sky. The measurements were taken over a period of one month.



- a) Put an F on the graph to show when there was a full moon. [1]
- b) Put an N on the graph to show when there was a new moon. [1]
- c) From the highest point to the lowest point of the graph, how many days has passed? [1]



1

33. a) State 2 similarities between a plant cell and an animal cell? [1]

i) _____

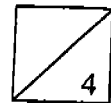
ii) _____

b) When John looked at some cells of a part of an onion plant, he discovered that the cell does not have a certain part. John concluded that the part of the onion where the cells were taken from cannot produce food. What part was missing from the cell? [1]

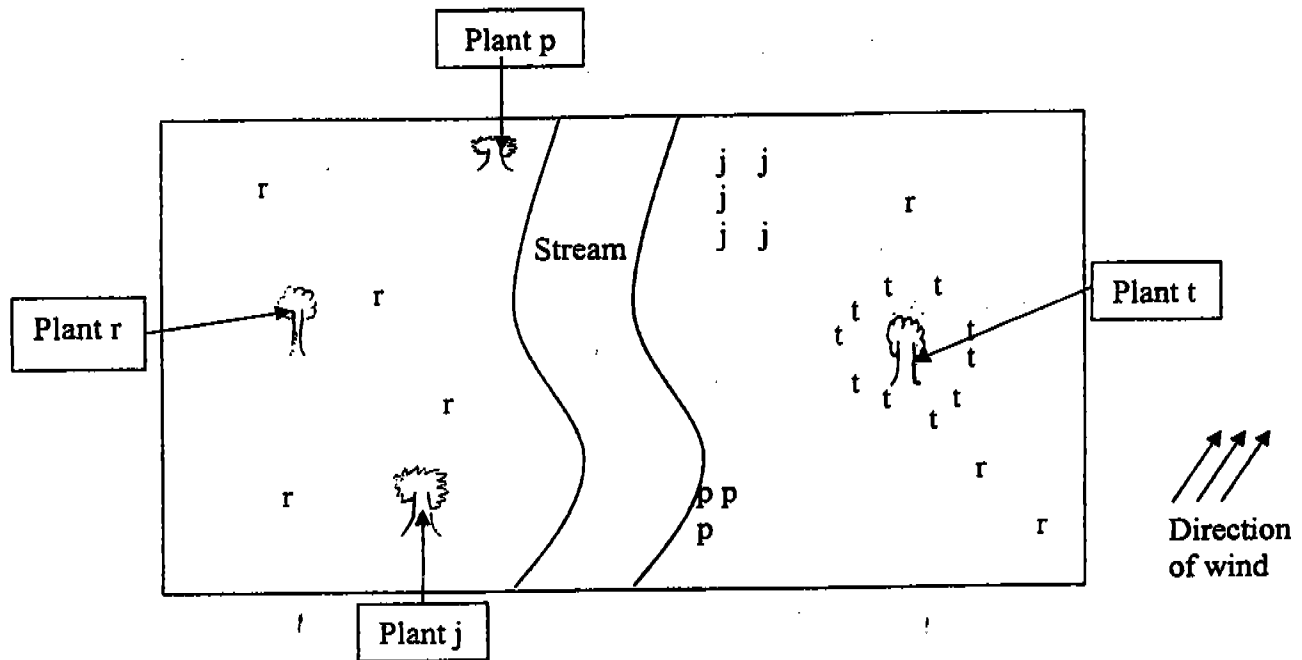
34. Alan wanted to germinate some seeds. He placed some seeds in a cotton wool soaked with water and put some of them in the freezer and the rest in his garden. After a few days, he noticed that the seeds in the freezer did not grow into a shoot. The seeds placed in the garden started to germinate.

a) Why did the seeds placed in the freezer not germinate? [1]

b) What part of the garden seeds will develop first? [1]



35. Minah found seeds of different plants scattered around her farm one day and she drew a diagram to show where the seeds were. The diagram she drew is shown below. The letters j, p, r, t represent different types of seeds. The direction of the wind for that day is shown on the right of the diagram.



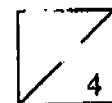
a) Which plant is dispersed by wind? [1]

b) Name 2 examples of plants which disperse their seeds by wind. [2]

i) _____

ii) _____

c) State one characteristic that enable these seeds to be dispersed by wind? [1]

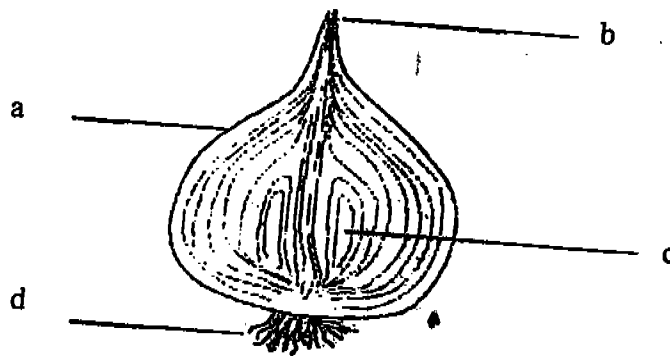


36. The plants in the box may be grouped according to the way they reproduce. Write their names under the appropriate headings. [3]

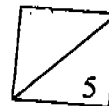
Banana, Pineapple, Water chestnut,
Ginger, Heliconia plant, Begonia

Leaves	Suckers	Underground Stem

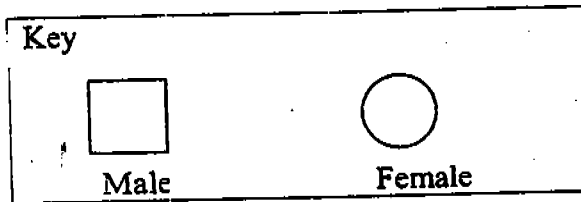
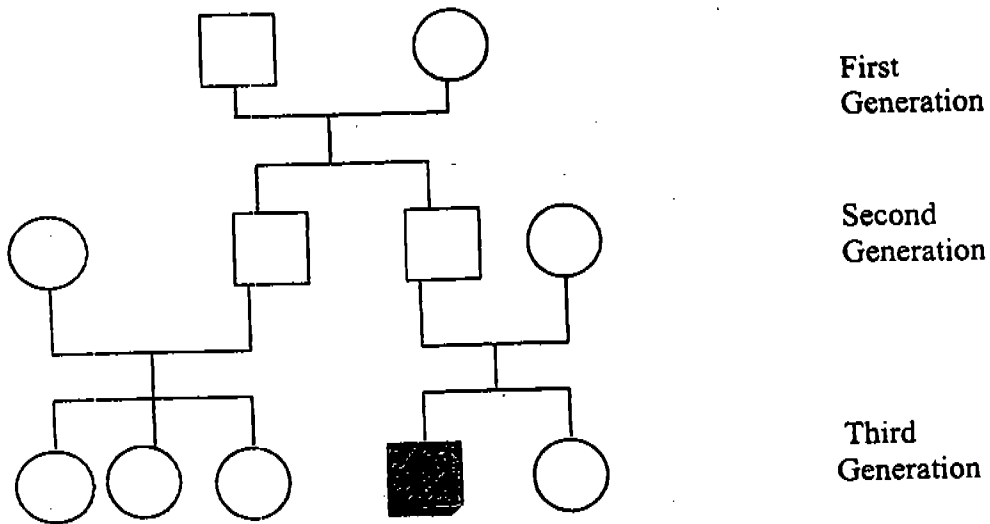
37. a, b, c and d are parts of an onion. Write their names in the boxes provided. [2]



- a)
- b)
- c)
- d)

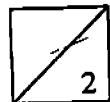


38.

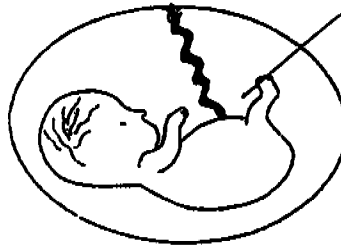


The diagram above shows the family tree of Mr Wong's pedigree dog.

- a) Mr Wong's dog is male and in the third generation. Shade the dog in the family tree. [1]
- b) How many of the offsprings in the second and third generations produced by the dog are female? [1]

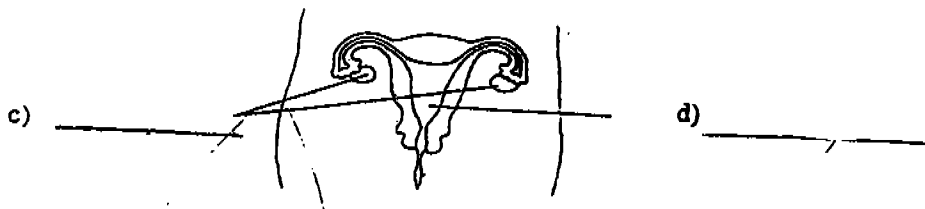
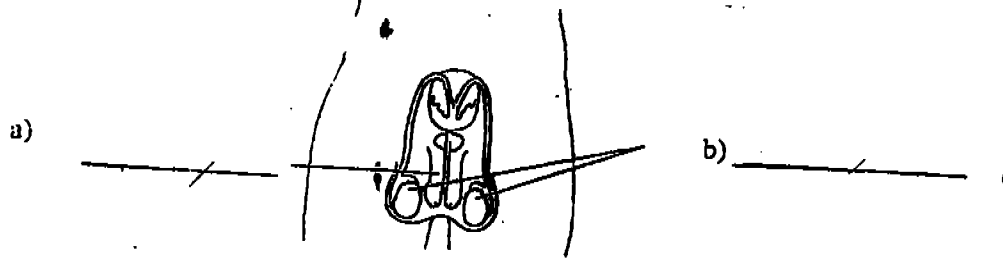


39. The picture shows a foetus.



- a) Shade the umbilical cord in the picture. [1]
- b) How long does the foetus take to develop in the mother's womb before it is born? [1]
-
- c) What is one of the functions of the umbilical cord? [1]
-

40. Label the parts of the reproductive systems. [2]



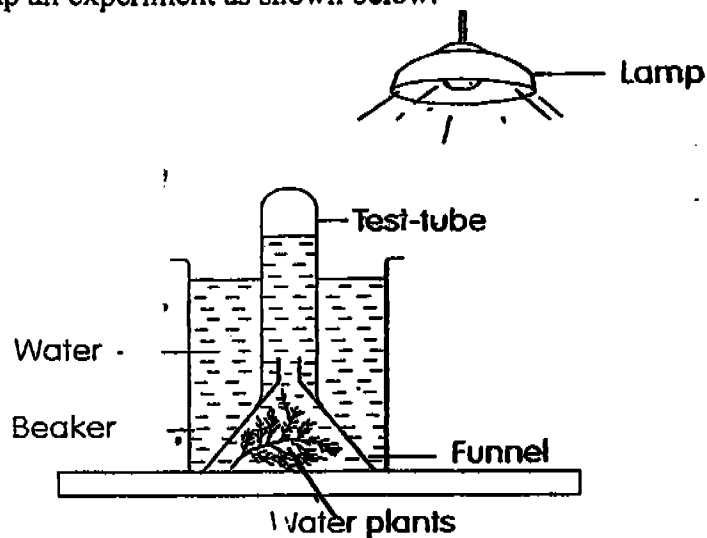
41. Fill in the blanks with the words below. [2]

carbon dioxide

oxygen

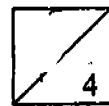
a)Photosynthesis	b)Respiration
i) _____ is taken in.	_____ is taken in.
ii) _____ is given out.	_____ is given out.

42. Jasmine set up an experiment as shown below.



a) What will she observe after a few minutes? [1]

b) Explain her observation. [1]

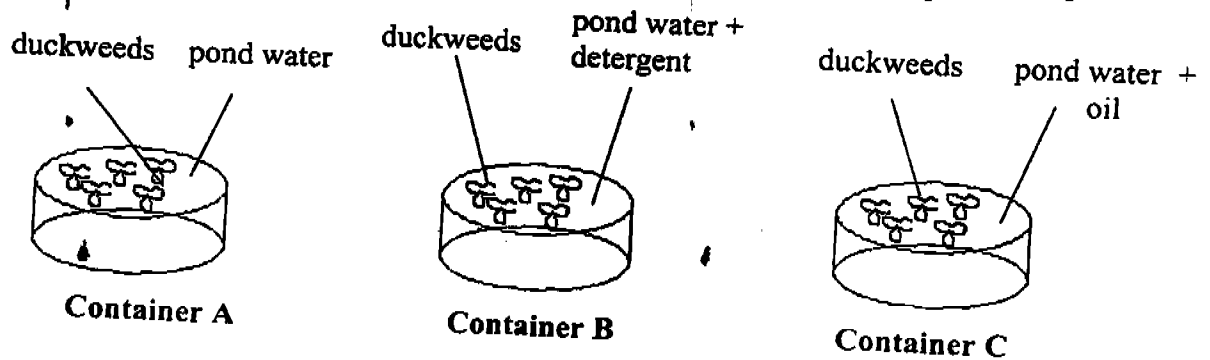


43. Classify the following organisms into 2 groups. [2]

goat sea turtle	eagle hippopotamus	vulture snake
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Plant eaters	Animal eaters

44. Jenny collected some duckweeds and some pond water to conduct an experiment as shown below.



After 5 days, she obtained the following result.

	Container A	Container B	Container C
Number of duckweeds	15	8	3

a) What was the aim of Jenny's experiment? [1]

b) What does the result show? [2]

i) Pond water :

ii) Oily pond water:

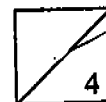
45. The organisms shown in the 4 food chains are in the wrong order. Rearrange and rewrite the correct food chain on the line provided. [2]

a) bird → grasshopper → grass → praying mantis

b) fish → algae → polar bear

c) mouse → maize → snake → American Bald Eagle

d) toad → caterpillar → python → leaf



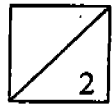
46. State 2 ways how a bigger shadow of the star can be formed on the screen. [2]



- a. _____

- b. _____

End of Paper



- 44) a) To find out what kind of pond water is most suitable for duckweeds to grow in.
- b) i) The pond water is suitable for duckweeds to grow in.
- ii) The oily pond water is not suitable for duckweeds to grow in.
- 45) a) grass --- grasshopper ---- praying mantis ----bird
- b) algae ---- fish ---- polar bear
- c) maize ---- mouse ----- snake ----- American Bald Eagle
- d) leaf ---- caterpillar ---- toad ----- python
- 46) a) The star could be moved further away from the screen.
- b) The light bulb could be moved nearer to the star.