

SA1

METHODIST GIRLS' SCHOOL (Primary)
Semestral Assessment 1 2004
Primary 5

Science

Thursday, May 13, 2004

Booklet A

Name: ____

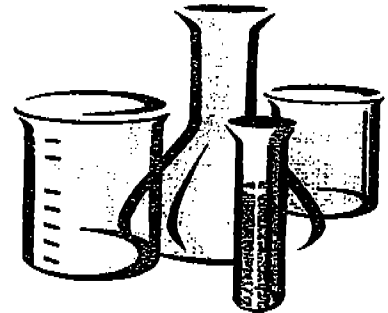
Class: P 5. ____

Total time for Booklets A and B: 1h 45 min

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

FOLLOW THE INSTRUCTIONS CAREFULLY.

ANSWER ALL QUESTIONS.



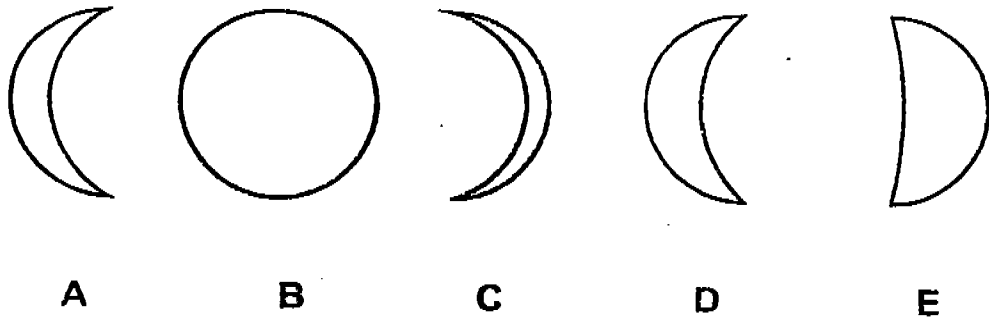
Section A (60 marks)

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.

3028 1000 1000 1000

1. The following pictures show the shapes of the moon on different nights. Which of the following sequences best describe how the moon appears to be ?



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

2. Which of the following statements are correct ?

- A. The Earth revolves once round the Sun in a year.
B. The Earth spins on its own axis from east to west.
C. The rotation of the Earth causes the four seasons.
D. The axis of the Earth always points in the same direction as the Earth moves in its orbit.

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

3. When the entire side of the Moon facing the Earth is also facing the Sun, we see a _____.

- (1) Gibbous
- (2) Crescent
- (3) Full Moon
- (4) New Moon

4. Besides the cell wall, a plant cell also has _____.

- A. a nucleus
- B. cytoplasm
- C. chloroplasts
- D. a cell membrane

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

5. Baby Leela had a mass of 3.1 kg when she was born. She had a mass of 4.2 kg when she was 4 weeks old.
Which of the following would have caused the increase in mass ?

- A. cell growth
- B. cell damage
- C. cell division

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

6. Some pupils saw a plant with red leaves in the school garden. Their observations are as follows :

Agnes : The plant does not have chlorophyll because the leaves are not green.

Brenda : The cell walls bond to form the structure of the plant.

Cindy : It is a multi-cellular organism.

Dolly : The roots support the plant by holding it firmly to the ground.

Who has likely made the wrong observation ?

- (1) Agnes
- (2) Brenda
- (3) Cindy
- (4) Dolly

7. Which of the following best describe the cell membrane ?

- A. It is a thin layer of tissue.
- B. It is only found in plant cells.
- C. It controls all the activities of the cell.
- D. It controls the movement of materials in and out of the cell.

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

8. The table below shows two groups of animals.
Which two headings would best describe these animals ?

A	B
cat	toad
dolphin	turtle
guppies	grasshopper

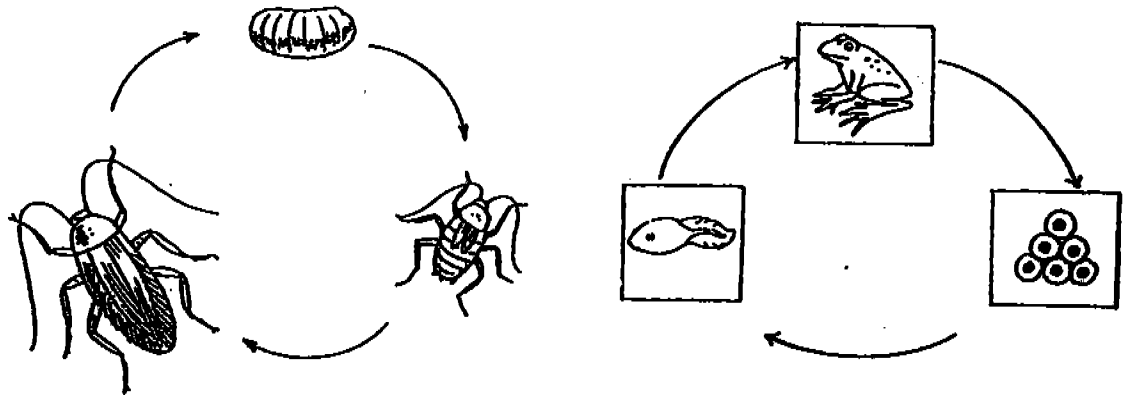
	A	B
1	Sperm fertilises the egg outside the body	Sperm fertilises the egg inside the body
2	Fertilised eggs develop in the body	Fertilised eggs develop outside the body
3	2 stages in the life cycle	4 stages in the life cycle
4	Hard shells protect the eggs	Jelly-like substance protects the eggs

9. Which of these traits are hereditary ?

- A: dimples
 B: dyed hair
 C: blood disease
 D: long finger nails

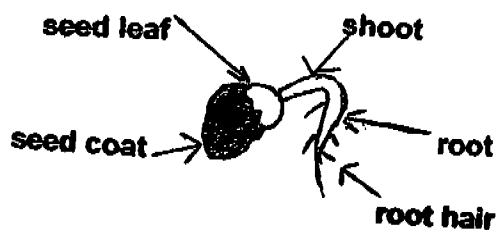
- (1) A and B
 (2) A and C
 (3) C and D
 (4) A, B and D

10. The diagram shows the life cycles of a cockroach and a frog. In what way are both animals similar ?



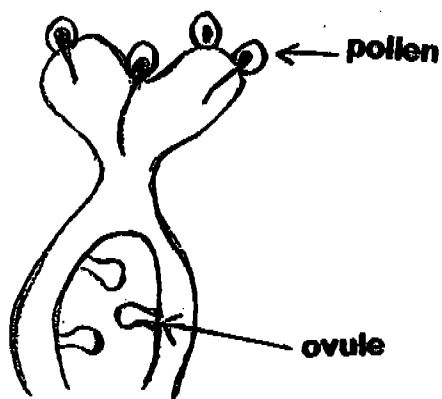
- (1) The eggs are enclosed in a case.
 - (2) The adults lay their eggs in water.
 - (3) The adults pass their characteristics to their young.
 - (4) Both the young resemble their parents immediately after the egg stage.
11. Which one of the following statements about the potato and ginger plants is true?
- (1) They grow from roots.
 - (2) They grow from stems.
 - (3) They grow from leaves.
 - (4) They grow from spores.

12. The diagram shows a germinating seed.



Based on the diagram, what is the change that cannot be observed with our eyes ?

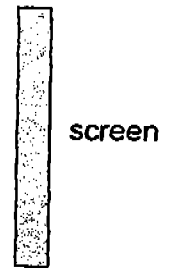
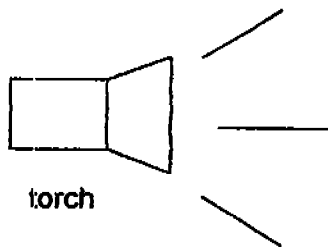
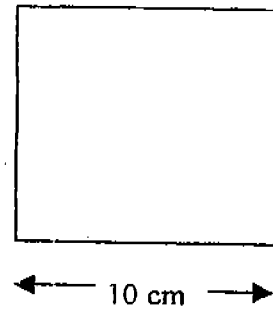
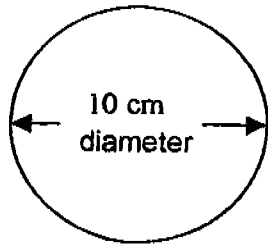
- (1) Root hair growing
 - (2) Seed coat drying out
 - (3) New leaves developing
 - (4) Seed leaf becoming smaller
13. The diagram shows a section of a female flower.



What process is about to take place ?

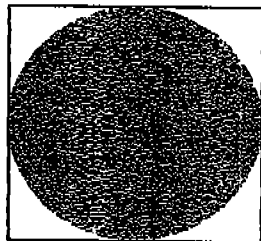
- (1) Splitting
- (2) Pollination
- (3) Fertilisation
- (4) Germination

14. Two pieces of cardboard, a circle and a square are pasted one against another. They are then placed between a torch and a screen as shown below.
The diagrams are not drawn to scale.

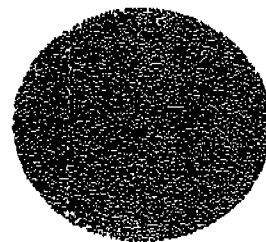


Which one of the following shadows is possible ?

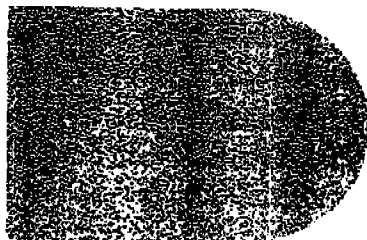
(1)



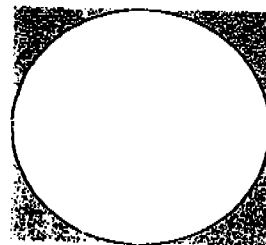
(2)



(3)



(4)

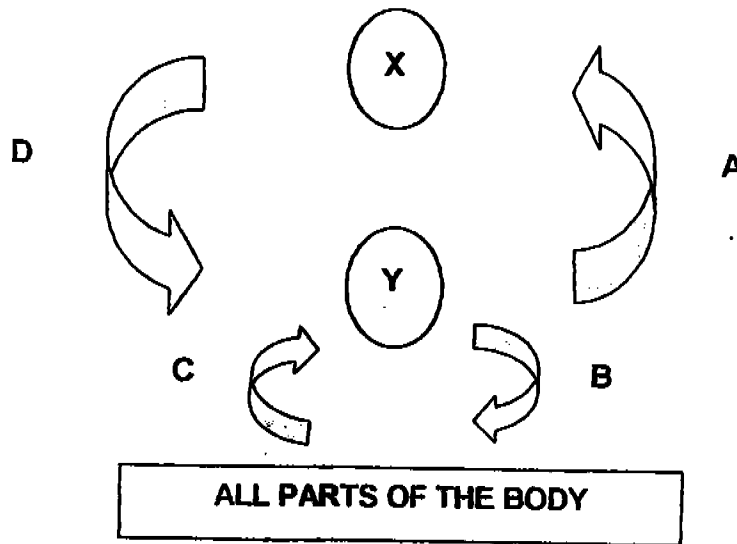


For questions 15 and 16, use the diagram below.

The diagram below shows a simplified way of showing how our blood travels in the body.

Arrows A, B, C and D represent the movement of blood.

Boxes X and Y represent two organs.



15. What are the organs that are represented by X and Y ?

	X	Y
1	heart	lungs
2	lungs	heart
3	heart	stomach
4	lungs	stomach

16. Which arrows represent the movement of blood rich in oxygen ?

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

17. Which of the following form part of the circulatory system ?

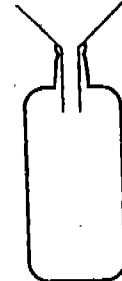
- A. nose
- B. heart
- C. stomach
- D. blood vessels

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

18. Kristi poured oil into an empty bottle through a funnel. However, the oil did not flow into the bottle. This is because the _____.

- A. oil has weight
- B. bottle is full of air
- C. oil has a fixed volume
- D. air cannot escape from the bottle

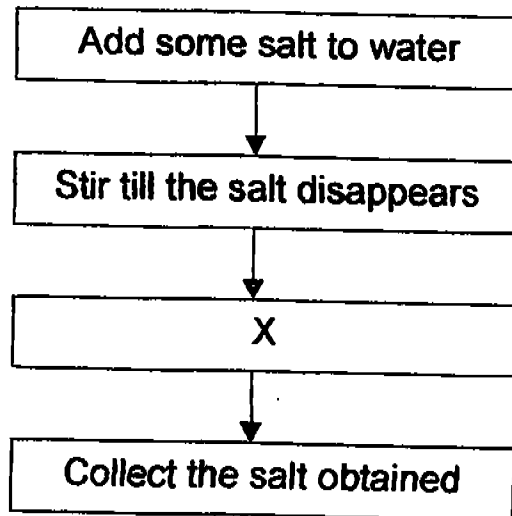
- (1) A and B
- (2) B and D
- (3) A, C and D
- (4) A, B and D



19. Which of the following shows the organs involved in the complete digestion process ?

- (1) Mouth → Stomach → Small intestine
- (2) Mouth → Stomach → Large intestine → Anus
- (3) Mouth → Stomach → Small intestine → Anus
- (4) Mouth → Stomach → Large intestine → Small intestine

20. Study the flow chart below.



Which one of the following is process X ?

- (1) Dissolving the salt
 - (2) Evaporating the salt
 - (3) Heating the salt solution
 - (4) Condensing the salt solution
21. Which of the following statement (s) about light is/are true ?
- A. Light occupies space
 - B. Light travels in a straight line
 - C. Light travels much faster than sound.
- (1) B only
 - x(2) A and B only
 - (3) B and C only
 - x(4) All of the above

22. ShuFen did an experiment to find out whether some plants grow better than others at the same temperature.

	Plant A	Plant B
Material of pot	clay	clay
Type of soil	garden soil	garden soil
Size of pot	1500cm ³	500 cm ³
Amount of water	250 ml	250ml
Time	24 days	24 days
Place	garden	garden

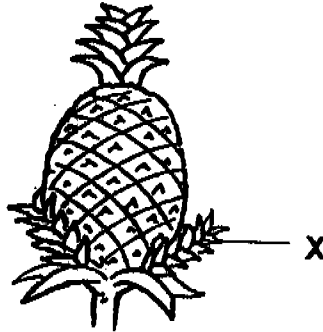
Why was the experiment NOT a fair test ?

- (1) Different plants were used.
 - (2) The amount of soil in each pot was different.
 - (3) Time taken for the plants to grow was the same.
 - (4) Both pots were given the same amount of water.
23. Which of the following organisms will make their own food when air, water and light are present ?

- A : moss
- B : African violet
- C : mushroom
- D : wood fungus
- E : onion

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

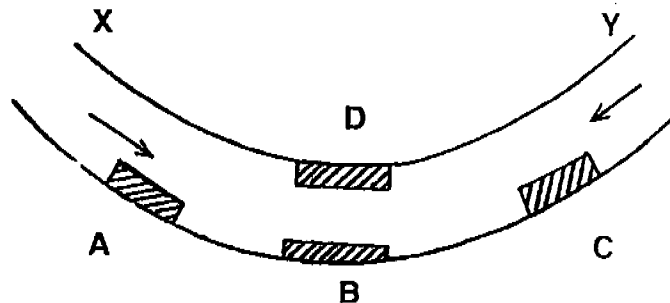
24. Look at the part marked 'X' of the pineapple plant.



Of what use is this part to the plant ?

- (1) It produces pollen.
- (2) It protects the plant.
- (3) It supports the plant.
- (4) It grows into a new plant.

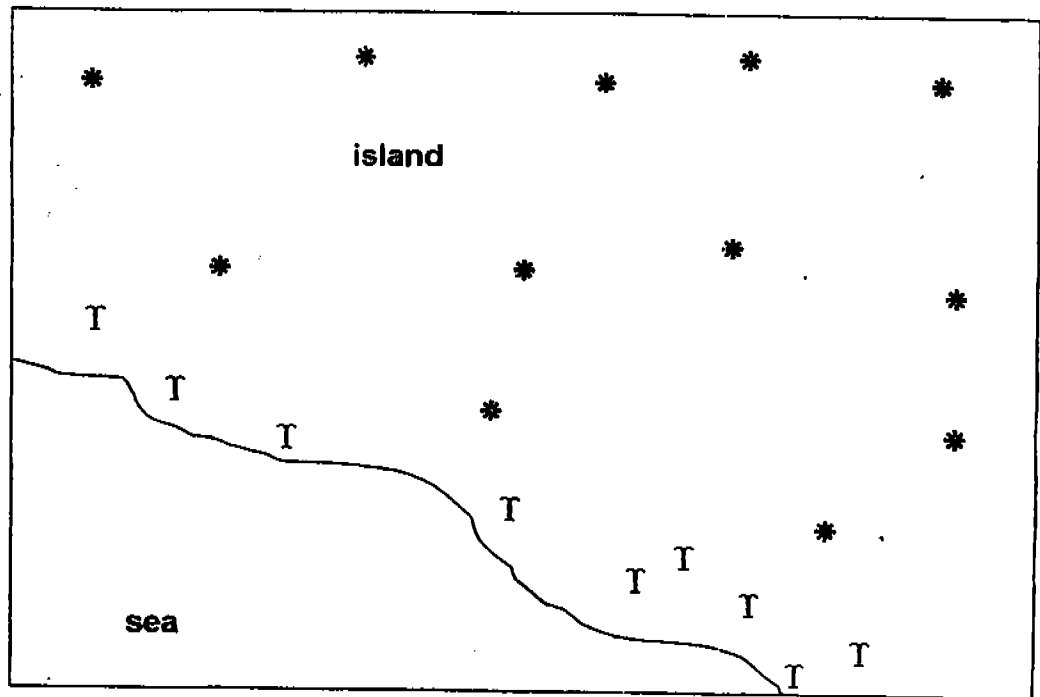
- 25.



The diagram above shows a bend along a road. Where would the authorities place the mirror so as to enable motorists coming from X and Y to see each other?

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

25. The diagram shows part of an island where two types of plants (* , T) are growing.

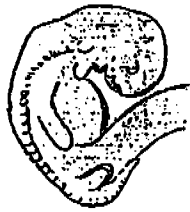


How are the fruits or seeds of each type of plant most likely dispersed ?

	*	T
1	Animals	Wind
2	Wind	Water
3	Water	Wind
4	Splitting action	Wind

For questions 27 and 28, use the information below.

The diagrams show an unborn baby at different stages of growth inside the mother's womb.



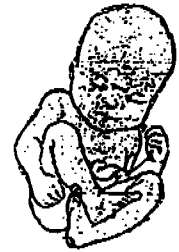
4 weeks



6 weeks



30 weeks



38 weeks

Weeks of growth inside the womb	Description
4	brain and backbone are developing
6	arms and legs are forming
30	might survive if born
38	ready for birth

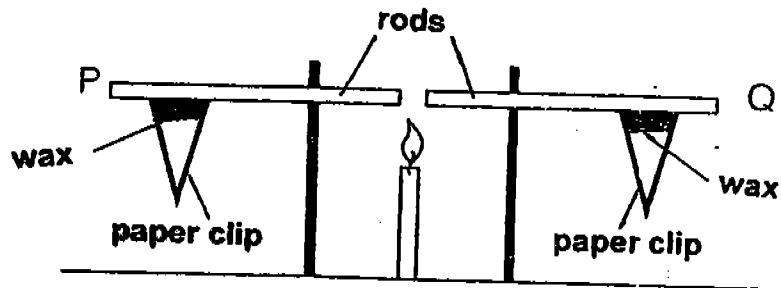
27. What is the least number of weeks of growth inside the womb after which a foetus could survive being born ?

- (1) 5 weeks
- (2) 7 weeks
- (3) 13 weeks
- (4) 30 weeks

28. Which of the following is true about the foetus at 3 weeks ?

- (1) It has fingers and toes.
- (2) It could survive if born.
- (3) Its eyes are fully formed.
- (4) Its heart starts to develop.

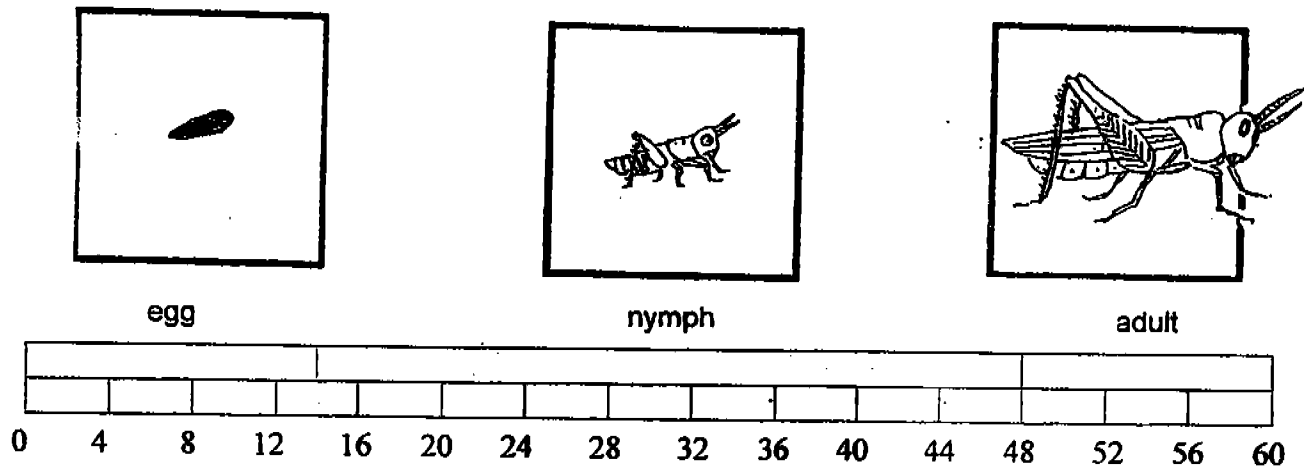
29. Study the diagram. There are two rods, P and Q, which are made of different materials. A paper clip is stuck to each rod by wax. When the rods are heated for 5 minutes, the clip on P drops first. Which of the following statements are correct ?



- A. Wax melts when it gains heat.
- B. Wax melts when it loses heat.
- C. P is a good conductor of heat.
- D. The clip is a good conductor of heat.

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

30. The following graph shows the length of time taken for the three stages in the life of a grasshopper.



How many days are there in the nymph stage ?

- (1) 9
- (2) 16
- (3) 34
- (4) 48

METHODIST GIRLS' SCHOOL (Primary)
Semestral Assessment 1 2004
Primary 5

Science

Thursday, May 13, 2004

Booklet B



Name:

Class: P 5.

Total time for Booklets A and B:
1h 45 min

Booklet A (60)
Booklet B (40)
Total: (100)

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ANSWER ALL QUESTIONS.

Section B (40 marks)

Write your answers to questions 31 to 46 in spaces provided.

31. - The planets in the Solar System are all held in their different orbits by _____ exerted by the _____ (2 marks)

32. Use the information in the table for questions (a) and (b).

Man-made satellite	Purpose
A	For communications
B	For observations on weather patterns
C	For exploring other planets and stars

- (a) Which man-made satellite is used to study the planet Mars ? (1mark)

- (b) Which satellite is used to send live telecasts from one country to another ? (1mark)

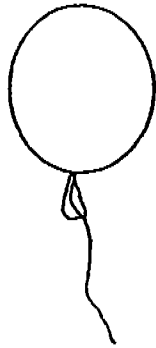
33. The diagram below shows a cell.



- (a) Is this a plant or animal cell ? (1mark)

- (b) Explain your answer. (1mark)

34. An inflated balloon was tied at the opening to prevent air from escaping.
After two days, the balloon deflated.



inflated balloon



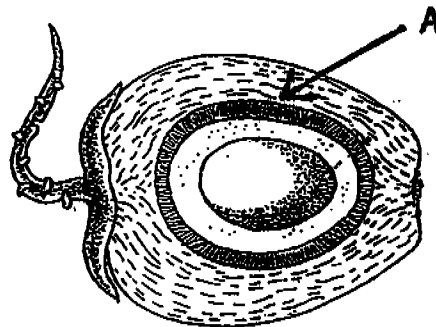
deflated balloon

- (a) How did the air escape from inside the balloon? (1mark)

- (b) Which part of the cell is like the balloon? (1mark)

- (c) In what way is Answer (b) like the balloon? (1mark)

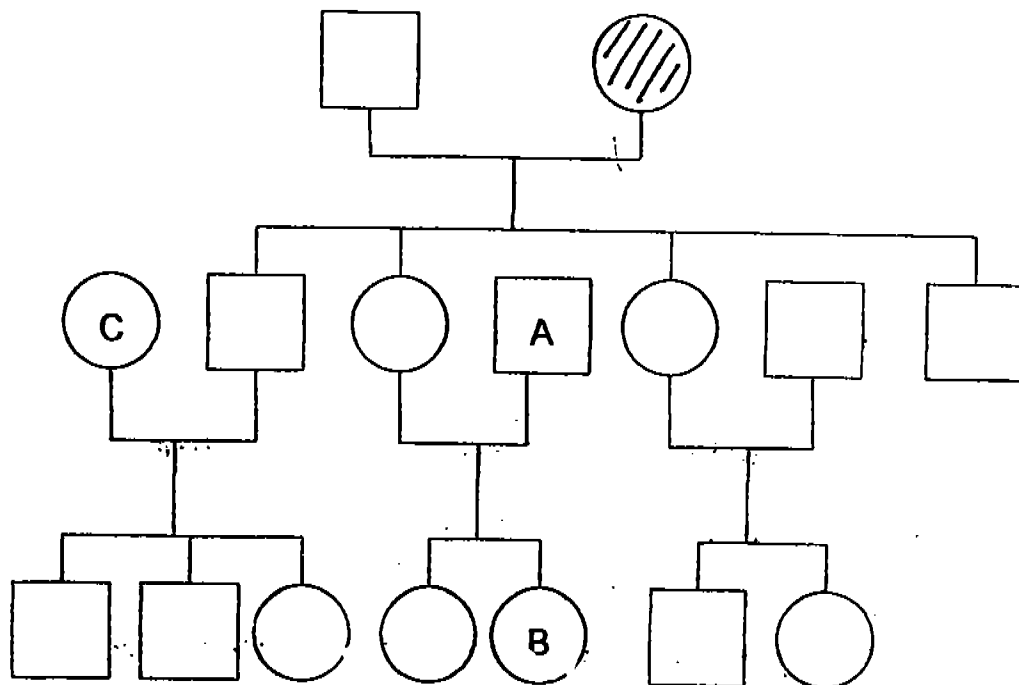
35. The diagram shows a cross-section of a coconut fruit.



- (a) Label the part that helps the fruit to float with the letter 'A'. (1mark)

- (b) How does 'A' help the fruit to float? (1mark)

36. Study Madam Salina's family tree below and answer the questions that follow.



Key

□ male

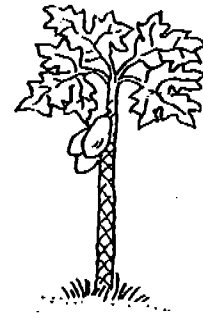
○ female

- (a) Madam Salina has four children.
Shade the blank that represents Madam Salina. (1 mark)
- (b) How many granddaughters has she? (1 mark)
-
- (c) How is 'A' related to Madam Salina? (1 mark)
-
- (d) How many cousins has B? (1 mark)
-
- (e) 'C' does not have the characteristics of Madam Salina and her husband.
Why? (1 mark)
-

37. The bird's nest fern and the papaya plant grow and reproduce themselves.



Bird's nest fern



Papaya plant

- a) Are they similar in the way they reproduce? Give a reason. (2 marks)

- b) Are they similar in the way they make food? Give a reason. (2 marks)

38. Food digestion begins once the food enters our mouth. Our teeth, tongue and stomach help in the digestion process.

- (a) How do our teeth help to digest the food? (1 mark)

- (b) How does our tongue help to digest the food? (1 mark)

- (c) How does our stomach help to digest the food? (1 mark)

39. The diagrams show a developing chick and a germinating seed.

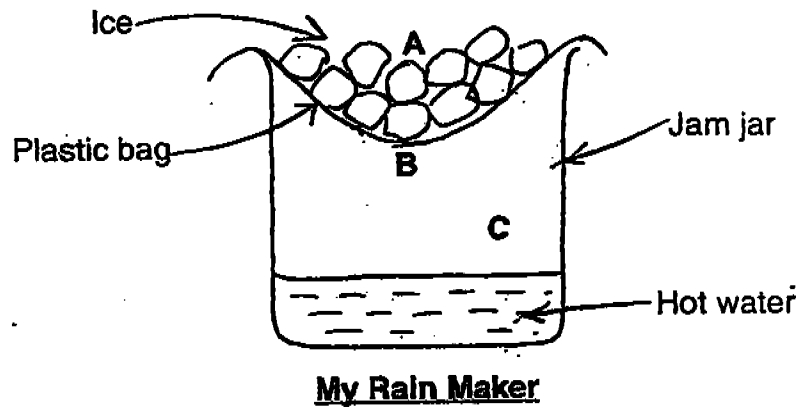


- (a) Name the process that has taken place in both the organisms. (1 mark)

- (b) In what way is the sexual reproduction of both organisms similar? (1 mark)

40. When the diaphragm _____, air is inhaled and the lungs _____ with air. When the diaphragm _____, the lungs contract and the air is _____ . (2 marks)

41. Preela wanted to carry out an experiment called the 'Rain Maker'. Below is a diagram of her set-up.



Describe what happens at each marked part of Preela's 'Rain Maker'. (3 marks)

A: _____

B: _____

C: _____

42. Pollen and sperm are male reproductive cells.

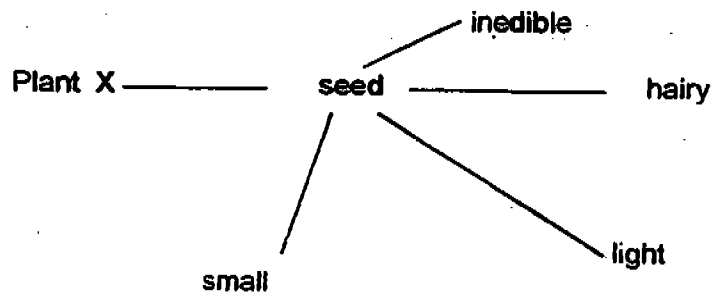
(a) What is the difference between these cells ? (1 mark)

(b) Name the organs that produce pollen and sperm. (2 marks)

Pollen : _____

Sperm : _____

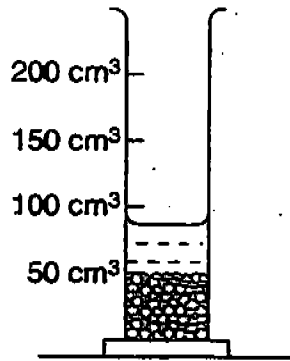
43. Study the concept map below.



(a) How are the seeds dispersed ? (1 mark)

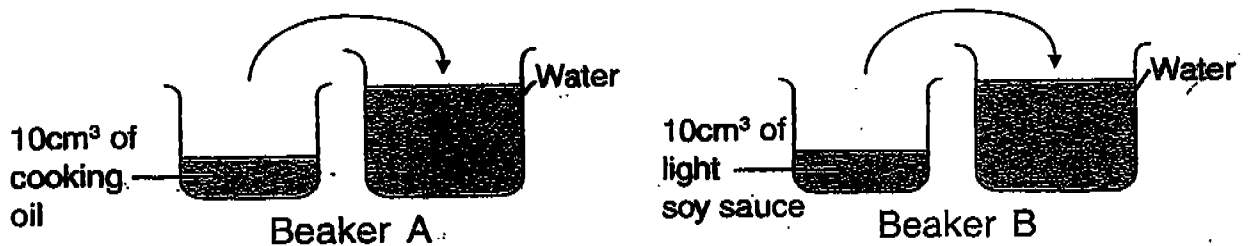
(b) Give two features of the seed which enable it to be dispersed in (a).
(1 mark)

44. A measuring cylinder was packed with pebbles to the 50 - cm³ mark. 50 cm³ of water was added but the water level did not reach the 100 - cm³ mark.



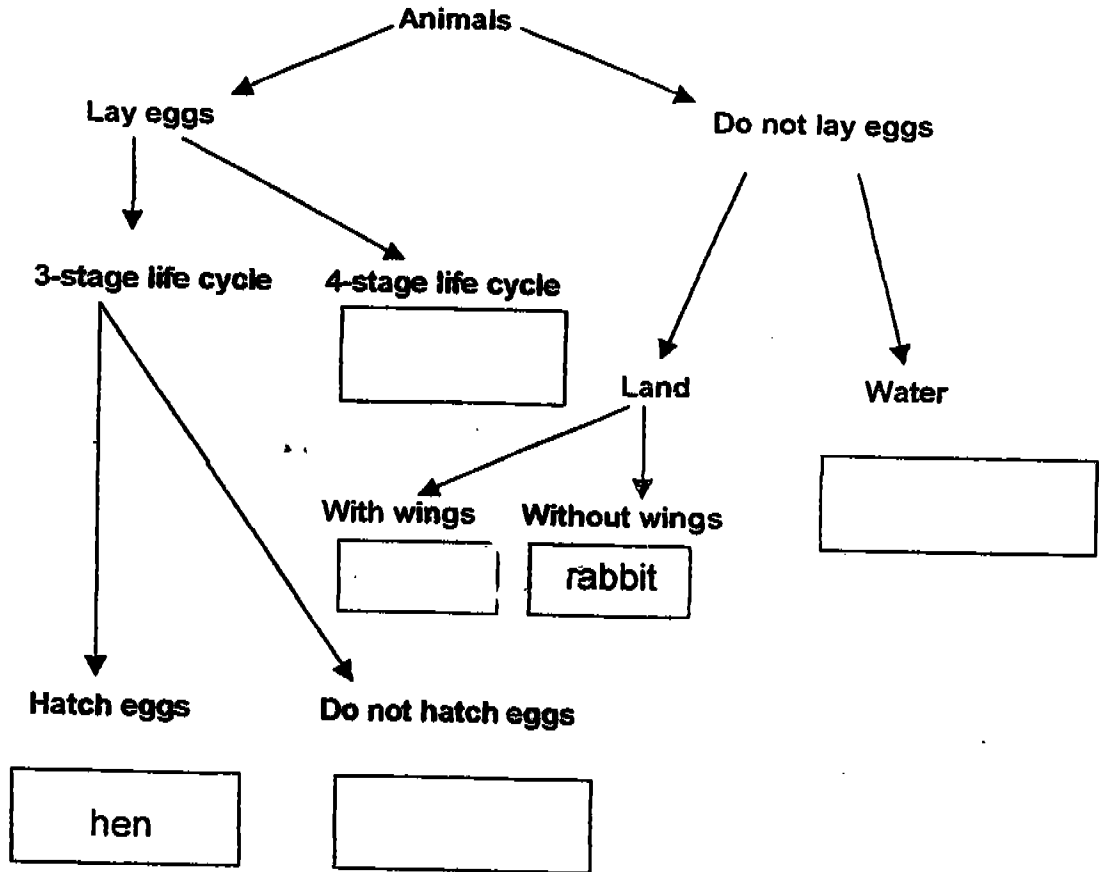
Explain why the water level did not reach the 100 cm³ mark. (2 marks)

45. There are two beakers of water. Pauline pours 10 cm³ of cooking oil into Beaker A and 10 cm³ of light soy sauce into Beaker B. She observes that the oil stays on top of the water but the soy sauce mixes with the water.



What conclusion can be drawn from this experiment ? (1 mark)

46. Below is a classification table for animals.



(a) Based on the classification table, what are the two characteristics of the rabbit? (1 mark)

(b) Put 'bat' and 'mealworm beetle' in the appropriate boxes. (1 mark)

- 39) a) The process is fertilization.
 b) Both need a male cell to fuse with a female cell.
- 40) contracts
 expand
 expands
 exhaled
- 41) A : The ice will soon melt and it will become water.
 B : Water droplets will be formed and then it will drip down after a while.
 C : The process is evaporation. The hot water will rise and water droplets will form on the plastic bag.
- 42) a) The pollen is found on the anther but the male reproductive cells are found in the testes.
 b) Anther
 Testes
- 43) a) The seeds are dispersed by wind.
 b) It need to be light and small.
- 44) There were still little gaps in between, the pebbles and water can pass through the gaps.
- 45) We can conclude that cooking oil is lighter than water but the soy sauce is the same weight as water.
- 46) b)

4-stage life cycle

Mealworm beetle

With wings

Bat

- a) The rabbit does not lay eggs and it does not have wings.