## SINGAPORE CHINESE GIRLS' SCHOOL

# SECOND SEMESTRAL ASSESSMENT 2004

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Class: Primary 5

SCIENCE

BOOKLET A

30 questions

60 marks

Total Time For Booklets A & B: 1 h 45 min

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO. FOLLOW ALL INSTRUCTIONS CAREFULLY.

#### Part 1 (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.

1 Study the table and answer the question below.

	Metal box	Styrofoam box	Glass box	Paper box
	Unbreakable	Good conductor of	Magnetic	Poor conductor of
i i	7-30-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	heat		heat
-	Hard	Waterproof	Heavy	Lightweight
Criteriospesiones	Poor conductor of heat	Lightweight	Breakable	Not waterproof

Which one of the boxes above is described correctly?

- 1) Metal box
- 2) Paper box

- 3) Glass box
- 4) Styrofoam box
- 2 Study the classification below.

Habitat A	Habitat B	Habitat C	Habitat D
Shark	Caterpillar	Duck	Elephant
Stingray	Beetle	Toad	Giraffe
Jellyfish	Swan	Mudskipper	Rhinoceros
Whale	Centipede	Turtle	Lion

Which one of the habitats has an animal that is classified incorrectly?

1) Habitat A

3) Habitat C

2) Habitat B

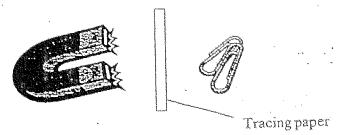
- 4) Habitat D
- . 3 Refer to the classification table in Q2. How many mammals are there?
  - 1) 5

3)3

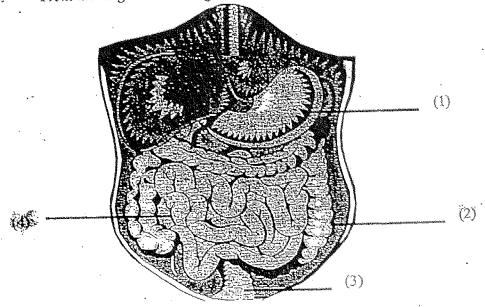
2)6

4)4

4 What would happen to the paper clips?



- 1) The paper clips would be attracted to the magnet.
- 2) Nothing would happen because the paper clips are not a magnetic material.
- 3) Nothing would happen because the magnet is not strong enough to attract the paper clip.
- 4) Nothing would happen because the tracing paper prevents magnetic force from passing through.
- 5. Which one of the following food items takes the longest to digest?
  - 1) Steak
  - 2) Apple
  - 3) Porridge
  - 4) French fries
- 6. From the diagram of the digestive tract, water is removed from part



- 7. A stalk of white rose was placed in a beaker containing 500 ml of dark blue water. It was left in a room with no direct sunlight. What would you observe after 3 days?
  - 1) The petals and leaves remain white and there would be no more water left.
  - 2) The petals and leaves would turn blue and there would be no more water left.
  - 3) The petals and leaves would turn blue and the water level in the beaker would decrease.
  - 4) The petals and leaves remain white and the water level in the beaker would decrease.
- 8. Which one of the following best describes the flow of water in the plant?
  - 1) The phloem vessels transport water from the roots of the plant to all parts of the plant.
  - 2) The phloem vessels transport water from the petals and leaves to all parts of the plant.
  - 3) The xylem vessels transport water from the roots of the plant to all parts of the plant.
  - 4) The xylem vessels transport water from the petals and leaves to all parts of the plant.
- 9. Which one of diagrams is part of the circulatory state ...



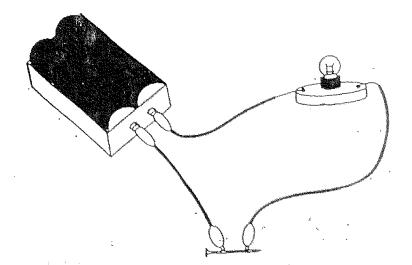
1)



2



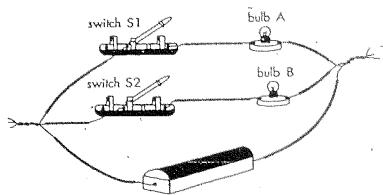




A nail was connected to the circuit tester as seen in the diagram above. Zaidi later substituted the nail with another object. The result of the experiment was different. What one of the following could be a likely substitute /s for the nail?

- A: Plastic
- B: Rubber
- C: Copper
- D: Carbon
- E: Aluminium
- 1) A and B only
- 2) B, C and D only

- 3) A, B, C and D only
- 4) All of the above are possible
- 11. Study the circuit and answer Q11 and Q12.



A circuit was set up as shown. Which bulb/s lighted up when switch S1 was opened and switch S2 was closed?

- 1) Bulb A only
- 2) Bulb B only

- 3) Both A and B
- 4) None lighted up

- 12. John added another battery to the circuit. What would happen to the bulb when switch S1 is opened and S2 is closed?
  - 1) There would be no change.
  - 2) Both bulbs would be brighter.
  - 3) Only bulb A would be lighted and it would be brighter than before.
  - 4) Only bulb B would be lighted and it would be brighter than before.
- 13. John created a classification table that compares the life cycle of a cockroach and a butterfly. Which of the following does not give the correct comparison?

	Characteristics	Butterfly	Cockroach
1)	Resemble the parent when young.	No	Yes
2)	There are 3 stages in its life cycle.	No	Yes
3)	Eat for part of its life cycle.	Yes	Yes
4)	The young moults before becoming an adult.	Yes	No

14. What would you do to inflate the balloon as seen in the diagram below?



- 1) Heat up the bottle on a stove.
- 2) Wrap a towel around the bottle.
- 3) Put the bottle in a pail of cold water.
- 4) Nothing can be done to inflate the balloon.

15. Study the table below.

			and the second s
- Group A	Group B	Group C	Group D
Salt	Diesel oil	Hydrogen	· Star
Paper cup	Condensed milk	Helium	Moon
Brick	Melted ice cream	Water vapour	Rain
Ice	Lime juice	Carbon monoxide	Soil

Each of the above items was grouped according to the state of matter they were in. Which one of the above groups has an item that has been classified wrongly?

Group \_\_\_\_

1) A

3) C

2) B

4) D

16. Benjamin, Julian, Jack and Peter wanted to have a competition to find out whose towel will dry fastest in the sun. They decided to use towels of the same material and size. Benjamin rolled up his towel tightly and hung it up on the clothesline. His towel looked like a round bundle on the clothesline. Julian squeezed his towel dry, opened it up fully before hanging it up. Jack, squeezed his towel dry, rolled it up like Benjamin's and hung it up. Peter simply placed his dripping wet towel on the clothesline. Whose towel will dry first?

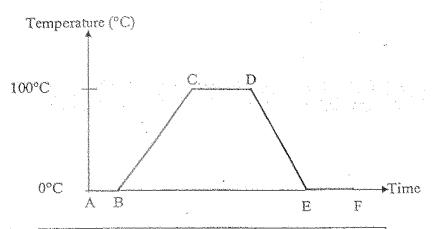
I) Jack

3) Julian

2) Peter

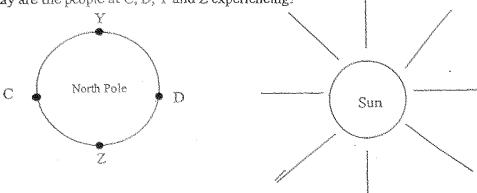
4) Benjamin

17. Jenny performed an experiment to find out how ice cubes respond to different amount of heat. The graph below shows the changes to the temperature of the water. Which one of the following in the table below showed the different processes that had taken place in different stages?



	A to B	C to D	E to F
1)	melting	boiling	melting
2)	freezing	boiling	freezing
3)	freezing	boiling	melting
4)	melting	boiling	freezing

18. The diagram below shows the Earth viewed from the top. If C and D, Y and Z are places on the Earth that are directly opposite to one another, what time of the day are the people at C, D, Y and Z experiencing?



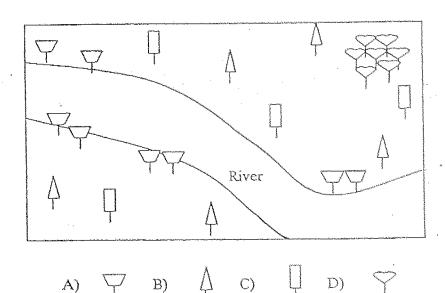
the control of	C	D	X	Z
1)	Night	Day	Dusk	Dawn
2)	Day	Night	Dawn	· Dusk
3)	Dawn	Dusk	Night	Day
4).	Dusk	Dawn	Day	Night

- 19. Mary told her brother that cell division involves the parent cell growing to a certain size, then the parent cell will make a copy of its nucleus. When this is achieved, it will split into two identical cells .What are some characteristics of the identical cells?
  - A: The daughter cells have the same genetic information as their parent cell.
  - B: During the process, the parent cell becomes two daughter cells.
  - C: If genetic information of the parent cell is changed during the duplication process, daughter cells will become cancerous.
  - 1) A and B only

3) B and Conly

2) A and C only

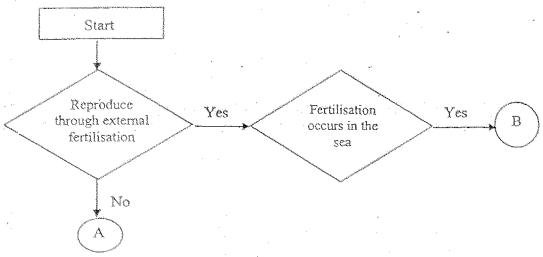
- 4) All of the above
- 20. The diagram below shows the distribution of 4 types of trees in a section of the forest. From the diagram, which type(s) of tree(s) has / have seeds that are most likely dispersed by wind?



- 1) B only
- 2) D only

- 3) B and C only
- 4) A and D only

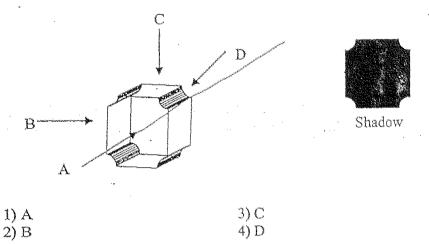
21. Peter studied the following flowchart and gave different examples that fit the characteristics of A and B in the table below. Which one of the following is correct?



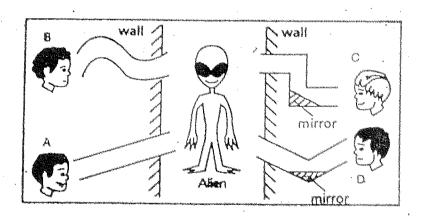
	A	В
1)	Chicken	Lobster
2)	Monkey	Dolphin
3)	Whale	Platypus
4)	Dog	Whale

- 22. James was told some characteristics of cells. Which one of the following is not a characteristic of cells?
  - 1) Plants and animals have different cell structures.
  - 2) The nucleus can be likened to the brain of the cell.
  - 3) All cells reproduce itself through a process known as budding.
  - 4) Cells are building blocks of life and are found in all living things.

23. John shone his torch at the solid object below and a shadow was formed. Which possible position could John be shining his torch from?



24. Four boys are trying to see the alien standing between 2 walls as shown below. Which boy(s) will be able to see it?



- 1) A only
- 2) Donly

- 3) A and C only
- 4) A and D only

25. Jim placed a block of butter each into 4 different boxes of different materials, steel, wood, cardboard and plastic. He placed these 4 boxes of the same size under the Sun. He recorded the order in which the butter melts from the fastest to the slowest in the table below. From the results obtained, which one of the following statements is not possible?

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- 1	<b>"</b>	2	ζ.	4 1
- 1	A	I de la companya della companya della companya de la companya della companya dell		
- 1	Ctaal	Close	Plactic	l Wood l
1	Siger	Ulass	Fidstic	YY O'O'CL

A: Steel is the best insulator.

B: Wood is the best conductor of heat.

C: Wood is not a good conductor of heat.

D: Glass is a better conductor of heat than plastic.

1) A only

3) B and C only

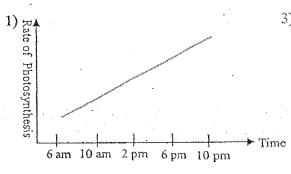
2) D only

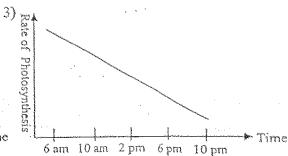
- 4) A and B only
- 26. Sam placed a cup of hot coffee in a room. He puts an aluminium spoon into the cup of coffee. Which one of the following correctly indicates if the coffee, spoon and the cup loses or gains heat?

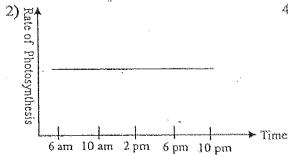
	Coffee	Aluminum	Cup
		spoon	
1)	loses heat	gains heat	loses heat
2)	loses heat	gains heat	gains heat
3)	gains heat	loses heat	loses heat
4)	gains heat	gains heat	loses heat

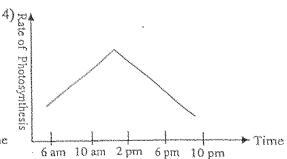
- 27. Which one of the following statements about photosynthesis is true?
  - 1) Photosynthesis takes place all the time.
  - 2) Starch is formed during the process of photosynthesis.
  - 3) Photosynthesis is only carried out in the leaves of the plant.
  - 4) During the process, carbon dioxide is used up and oxygen is produced.

28. Which one of the following graphs best illustrates the rate of photosynthesis at different times of the day?









- 29. Which of the following are needed during respiration?
  - A: water

B: glucose

- 1) A and B only
- 2) B and C only

C: oxygen

D: carbon dioxide

- 3) C and D only
- 4) A, B and D only
- 30. Which of the following about respiration is / are true?
  - A: Respiration takes place in plants only at night.
  - B: Respiration is a process that release energy stored in food.
  - C: Cells use the energy that is produced to carry out life processes.
  - 1) A only
  - 2) A and C only

- 3) B and C only
- 4) All of the above

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### Part II (40 marks)

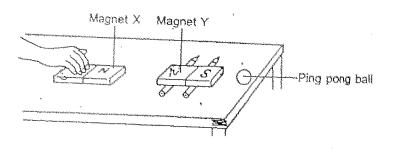
Write your answers from questions 31 to 46 in this booklet.

31. Classify the animals in the table below according to their animal group. (2m)

Butterfly	Elephant	Cat	
Flamingo	Shark	Whale	

Bird	Insect	Amphibian	Fish	Mammal	Reptile
Parrot	Beetle	Newt	Mackerel	Deer	Iguana
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		***			
•			1		
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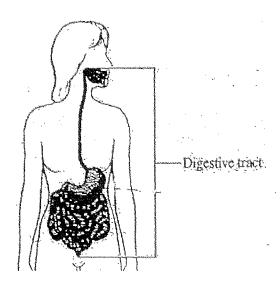
32. An experiment was set up as shown below.



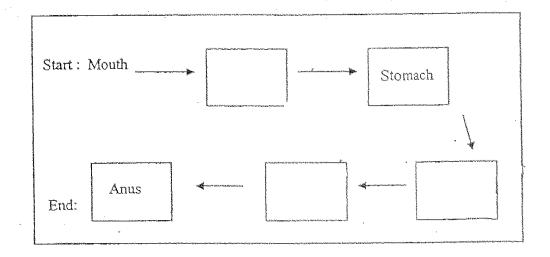
- a. What would happen to the ball when the two magnets are brought together? (1m)
- b. Explain your answer in (a). (2m)

5

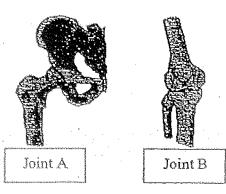
33a. Draw an arrow and label an organ that produces digestive juice/juices. (1m)



b. In the box below, complete a simple flowchart to show the digestive tract. (1 m)



34a. What is the difference between the two joints found in our body? (1m)



b. Read the statements below. Write 'T' for True and 'F' for False in the answer space provided. (1m)

(i)	The heart is an involuntary muscular organ.	
(ii)	All living things have a muscular system.	

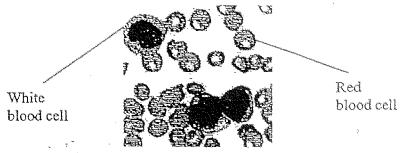
35 Observe the leaves.



Leaf A

Leaf B

- a. List one difference between Leaf A and Leaf B. (1 m)
- b. State one function of a leaf in a plant. (1 m)
- The diagram below shows red blood cells and white blood cells.



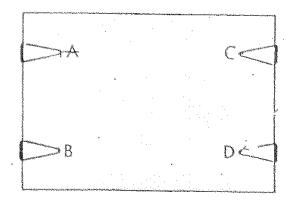
- (i) Name 2 substances that can be found in a red blood cell. (1m)
- (ii) What is the function of white blood cells? (1m)

and the second second

37. A circuit card was made as shown below. Tom tested to see which pair of clips would light the bulb up in the circuit tester. The results were as follows:

Clips Tested	Results
A and B	Bulb lit up.
A and C	Bulb lit up.
A and D	Bulb did not light up.
B and C	Bulb lit up.
B and D	Bulb did not light up.
C and D	Bulb did not light up.

a. Draw 2 lines to show how Tom joined the wires to the clip. (2m)

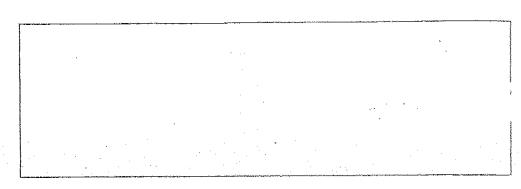


b. List 2 ways to conserve energy. (2m)

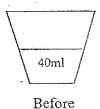
(i)	,			
11	I management to the commence of the commence o		ngininingkatananahan ani an-inga ang -inga ang -inga ang akan bankatan bankatan ang ang agai in inga ang ang a	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

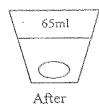
(ii)

Draw the life cycle of a mealworm beetle in the box provided below. (2m) 38a.

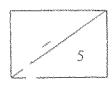


- State one main difference between the life cycle of a mealworm beetle and a b. cockroach.(1m) "
- A stone was placed in a beaker of water. The following height was shown below. 39.

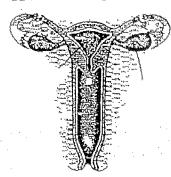




- What is the volume of the stone? (1m) a.
- What does the experiment described above tell you about matter? (Im) Ъ.

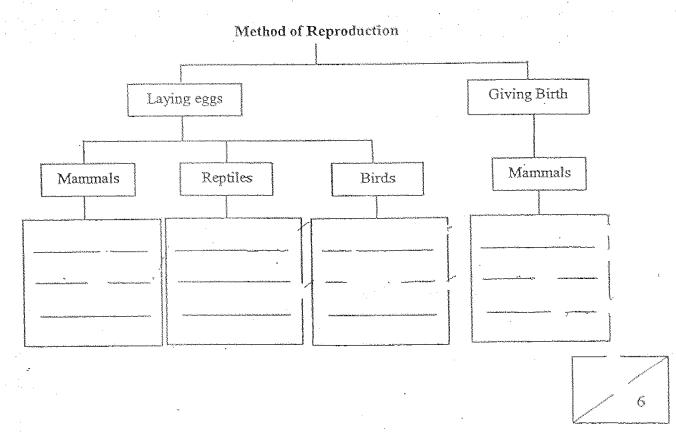


40. The diagram below shows a female reproductive system. Label the part(s) of the system that produces the egg, X and the part that develops the fertilised egg, Y.

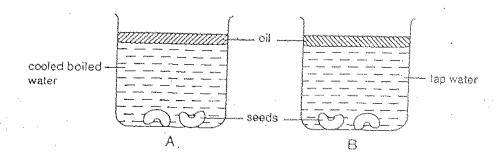


41. Study the chart below. Below are names of some animals. Place them under the correct heading. (4m)

	Platypus	Ostrich	Crocodile	Donkey
Principle Company	Whale	Cobra	Dog	Parrot
į				

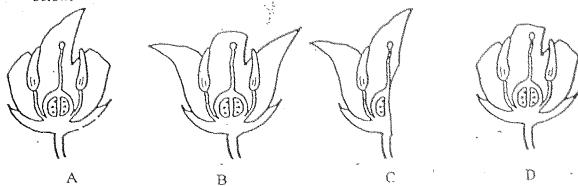


42. Michelle set up an experiment as shown below. Two days later, she noticed that only the seeds in beaker B germinated.



Why is it so? (2m)

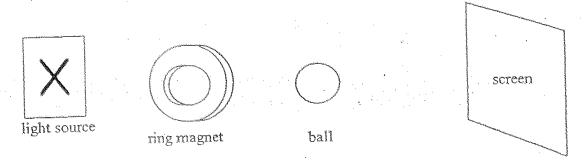
43. The following flowers have been fertilised. However, while trimming the bushes, Mr Long, the gardener, accidentally trimmed off part of the flowers as shown below.



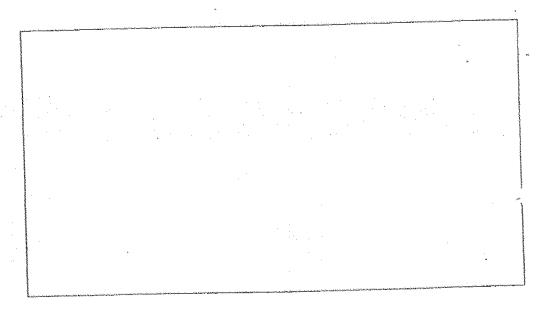
- a. Which one of the flowers has the least possibility of developing into a fruit (1m)
- b. Give a reason for your answer in (a) above. (1m)

4

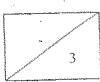
44. Jeremiah performed an experiment using the set-up shown below. The diameter of the ball is the same as the diameter of the hole in the ring magnet. The ball is placed such that it blocks the hole of the ring magnet exactly.



a. Draw the shadow formed on the screen in the box provided below. (2m)

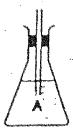


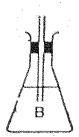
b. What can be done to the light source to make the image on the screen smaller?(1m)

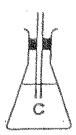


Judith placed 3 flasks, A, B and C with the same water level at room temperature before an experiment as shown below. After some time, she placed each flask into 3 different containers of water at different temperature. At the end of the experiment, she noticed that the water level of the glass tube in the different flasks were different as shown below. Put a tick in the table below to indicate which flask has been placed into the different containers. (2m)

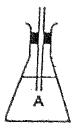
Before the Experiment:

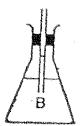


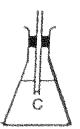




After the Experiment

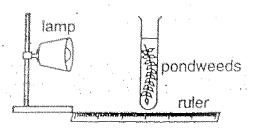






Container of water	Flask A	Flask B	Flask C
at 2°C ·			
at 70°C			
at 30°C			

Marianne wants to find out the effect of light on some pondweeds. She placed the same amount of pondweeds into 4 test tubes filled with pond water. Next, she placed a lamp at different distance from the test tube as shown below. She counted the number of bubbles produced in one minute at the different distances. She conducted the experiment 3 times and took the average.

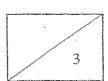


Her results are tabulated in the table below.

Distance of lamp from pondweeds (cm)	40	. 30	20	10	No. of Persons Street, Section 2
Average number of bubbles per minute	10	15	22	31	

a.	What car	ı vou	conclude	from the	he results	tabulated? (	(2m)
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b.	Name the	gas produced	bу	the pondweeds.	(1m)
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#### SINGAPORE CHINESE GIRLS SCHOOL 2004 P5 SEMESTER ASSESSMENT 2 SCIENCE

SAT

Question	Answer
. 1	.2
2.	2.
3	1
4	1
5	1
6	2
7	3
8	3
9	1
10	Į.
11	2.
- 12	4
13	4
14	1
15	4 -
16	The second secon
17	4
18	I.
19	4
20	3
21	1
22	
23	1
. 24	4 .
25	4
26	2
27	4
28	4
29	2
30	3

- 31) Flamingo Butterfly ---- Shark Cat Elephant Whale
- 32) a) The ball could roll off the table.
  - b) The magnets repel as they ar positioned with their like poles together.
- 33) a) Gullet

  Large Small intestine intestine
- 34) a) Joint A ball and socket joint. Joint B hinge joint.
  - b) i) T ii) F
- 35) a) Leaf A has an entire edge while Leaf B has a jagged edge.
  - b) It receives sunlight to make food for the plant.

- 36) i) Oxygen and glucose
  - ii) They kill bacteria and viruses:
- 37) a)
- b) i) Switch off lights and fans when not in use.
  - ii) Switch off television if no one is watching.
- mealworm mealworm beetle
  - b) The life cycle of a mealworm beetle has four stages while a cockroach only has three.
- 39) a) 25 cm
  - b) Matter has volume./Matter takes up space.
- 40)
- 41) Platypus Cobra Ostrich Whale Grocodile Parrot Dog Donkey.
- 42) In beaker A, the water is boiled, destroying all the oxygen and air essential for the seed to germinate, but beaker B's tap water has air and water.
- 43) a) C
  - b) Half of its ovary and ovules are gone, thus not being able to develop into a fruit.
- 44) a)



- b) Bring the light source further to the ring magnet.
- 45)
- 46) a) The nearer the distance of the lamp from pondweeds, the higher the average number of bubbles per minutes.
  - b) Oxygen