METHODIST GIRLS' SCHOOL

Founded in 1887

PRIMARY 5 END-OF-YEAR EXAMINATION 2009
SCIENCE

BOOKLET A

Total Time : 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

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

Name: _____ ( )

Class: Primary 5._____

Date: 12 October 2009

Booklet A	**/ 50**
Booklet B1	**/ 20**
Booklet B2	**/ 20**
Science Practical Paper	**/ 10**
TOTAL	**/ 100**

This booklet consists of 12 printed pages.

Section A (25 × 2 = 50 marks)

For each question from 1 to 25, 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 provided.**

1. Study the table below.

	Can swim	Is a herbivore	Gives birth to young alive
A	√	√	√
B	√	X	√
C	√	√	X
D	√	X	X

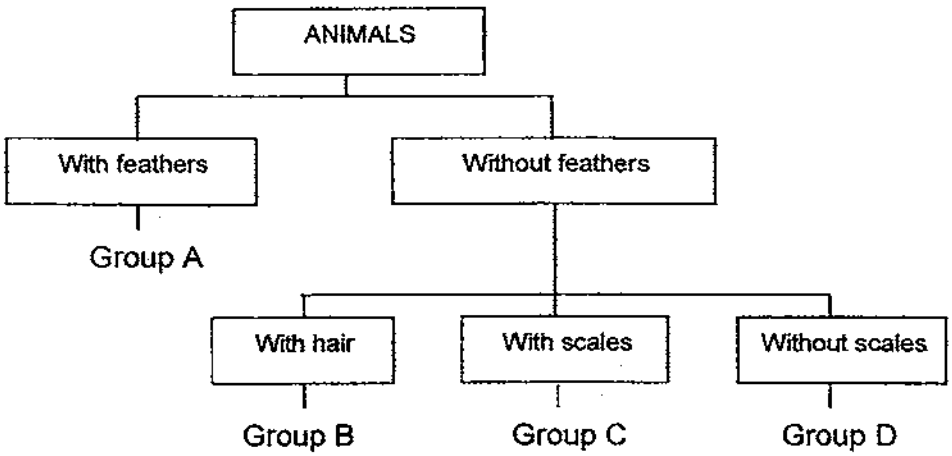
In which group, A, B, C or D should the dolphin be placed in?

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

2. Which of the following is a difference between a flowering plant and a fungus?

	Flowering plant	Fungus
(1)	Contains chlorophyll	Does not contain chlorophyll
(2)	Cannot move freely from one place to another	Can move freely from one place to another
(3)	Seeds need to be dispersed	Spores do not need to be dispersed
(4)	Is poisonous	Is not poisonous

3. Study the classification table below



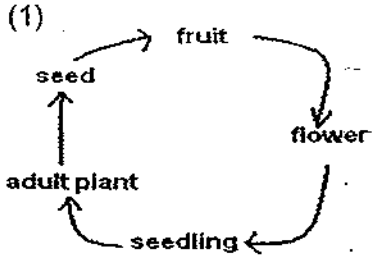
Which of the following belong(s) to Group B?

W : Dog
X : Lizard
Y : Spider
Z : Bird

(1) X only
(2) Y only
(3) X and Z only
(4) W and Y only

4. Which one of the following shows the life cycle of a flowering plant?

(1)



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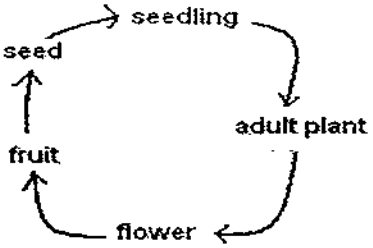

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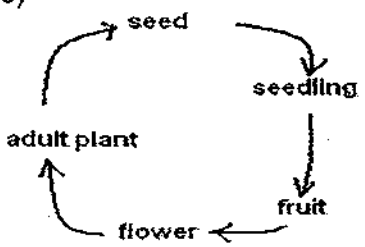

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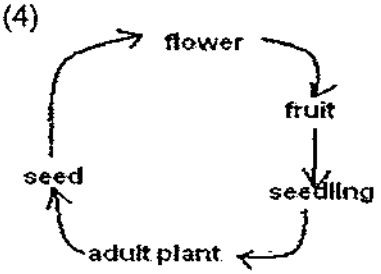
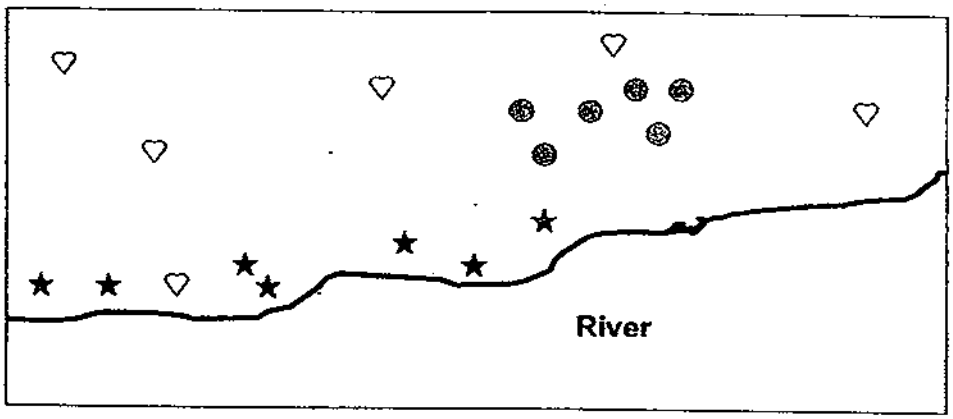


5. The diagram below shows part of an island where three types of plants (♥♡, ★, ●) are growing.



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

	♥♡	★	●
(1)	Water	Explosive action	Wind
(2)	Explosive action	Animal	Water
(3)	Explosive action	Water	Animal
(4)	Animals	Water	Wind

6. Human blood can be classified into four main blood groups – A, B, O and AB. The table below shows how each of these blood groups can be matched.

Blood type	**Type of blood can be received**			
	A	**B**	**O**	**AB**
A	Yes	No	Yes	No
B	No	Yes	Yes	No
O	No	No	Yes	No
AB	Yes	Yes	Yes	Yes

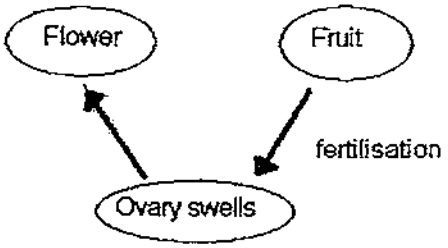
Suzy's family have the following blood types: Father - B
Mother - A
Brother - AB
Sister - AB
Suzy - B

If Suzy needs a blood transfusion, who can she receive blood from?

(1) Her father only
(2) Her brother only
(3) Her father and mother only
(4) Her brother and sister only

7. Which diagram below shows **correctly** the development of the reproductive plant part after pollination?

(1)



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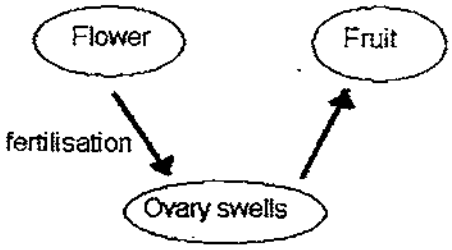

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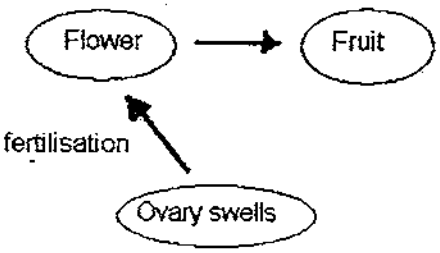

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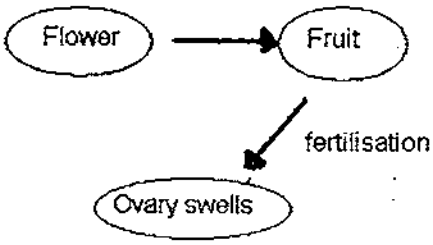


8. Dan and Linda are a married couple. One day, Linda had plastic surgery to get double eyelids, while Dan dyed his hair brown. A few months later, Linda gave birth to a baby boy. What are the traits which the baby boy can inherit from his parents?

Name	Traits
Dan	Dimples, single eyelids
Linda	No dimples, black hair

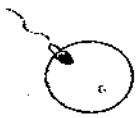
(1) Dimples, double eyelids, brown hair
(2) No dimples, single eyelids, brown hair
(3) Dimples, double eyelids, black hair
(4) Dimples, single eyelids, black hair

9. Which one of the following diagrams **correctly** shows that a foetus will develop?

(1)

(2)

(3)



(4)

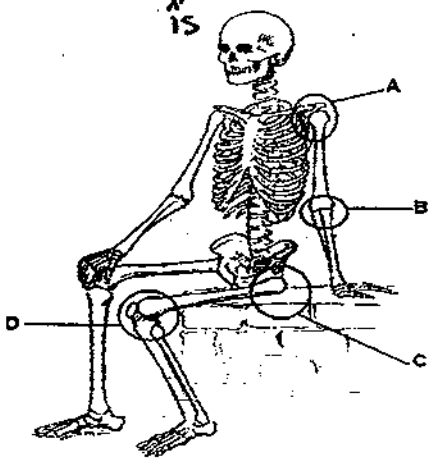
10. The fruits or seeds shown below are grouped according to their methods of dispersal.

Group A	Group B	Group C
Rubber	Angsana	Pong Pong
Saga	African Tulip Seed	Nipah

Which one of the following sets of fruits has been classified **incorrectly**?

	Group A	Group B	Group C
(1)	Balsam	Shorea	Lotus
(2)	Rain tree	Lalang	Coconut
(3)	Flame of the forest	Shorea	Mangrove
(4)	Mangrove	Lalang	Coconut

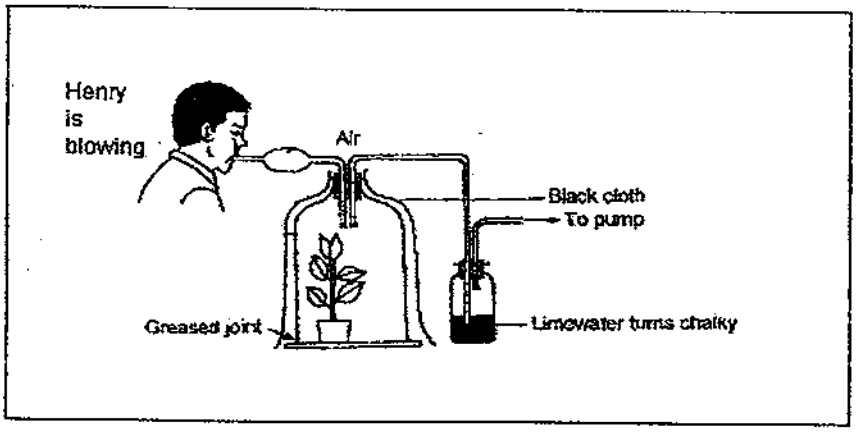
11. The diagram below shows the human skeleton. Which of the following statements about the joints are **true**?



X : Joints A and C allow movement of the bones in all directions.
Y : Joints A and D allow the bones to move in at least 2 directions.
Z : Joints B and D allow movement of the bones in one direction only.

(1) X only
(2) Y only
(3) X and Z only
(4) Y and Z only

12. In the experiment shown below, where does the carbon dioxide that turns the limewater chalky comes from?



(1) Plant only
(2) Henry only
(3) Atmosphere only
(4) Henry and plant

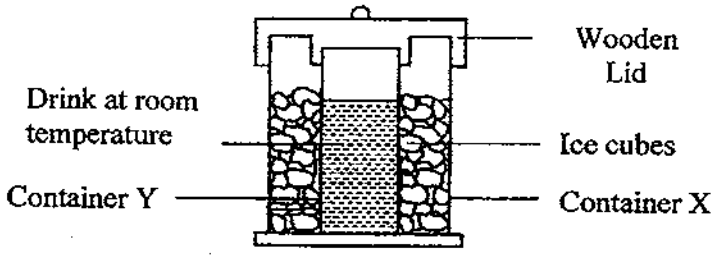
13. Study the following classification table.

Material that are hard	Material that has high flexibility
Metal	Plastic
Wood	Rubber
G	H

Which of the following represents G and H?

	Material G	Material H
(1)	Glass	Plasticine
(2)	Paper	Porcelain
(3)	Fabric	Nylon
(4)	Mercury	Brass

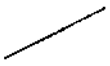
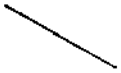
14. A group of MGS girls invented a container for making chilled drink. The diagram of the invention is shown below.



What should Container X and Y be made of?

	Container X	Container Y
(1)	Steel	Steel
(2)	Steel	Wood
(3)	Glass	Wood
(4)	Glass	Steel

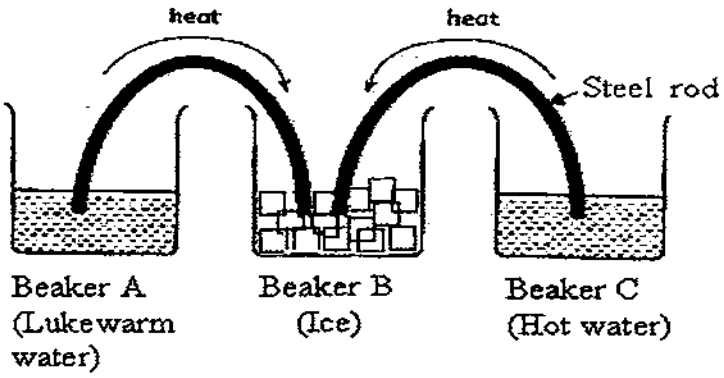
15. In a Science Laboratory, the following symbols are used to indicate heat gained or heat loss.

Heat gained	No change	Heat Loss
		

Which of the following statements is **true** when there is a change of state of matter?

	Solid to Liquid	Liquid to Gas	Gas to Liquid
(1)			
(2)			
(3)			
(4)			

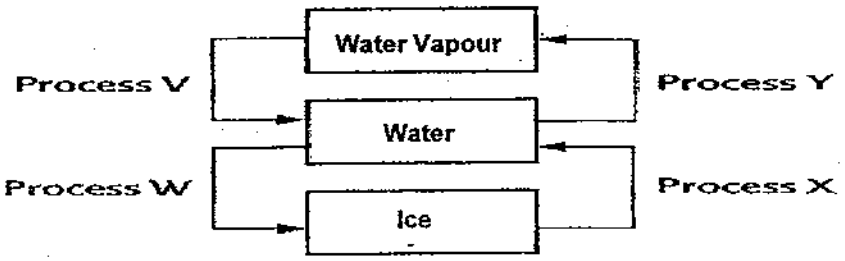
16. The following experiment was set up as shown below. Once the steel rods were immersed into the beakers the heat began to flow as indicated by the arrows.



Which of the following observations would be **true** after one hour?

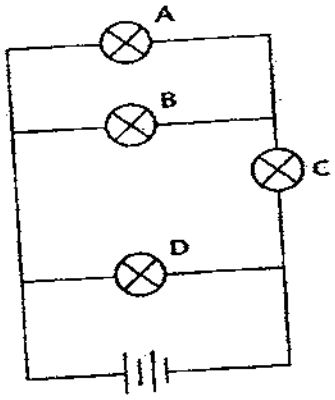
(1) Beaker A will become ice
(2) Beaker B will become water
(3) Beaker C will become steam
(4) No change of state will be observed

17. Water changes from one state to another through some processes. Identify the following processes in the diagram below.



	Process V	Process W	Process X	Process Y
(1)	Freezing	Melting	Evaporation	Condensation
(2)	Condensation	Freezing	Melting	Evaporation
(3)	Evaporation	Condensation	Freezing	Melting
(4)	Melting	Evaporation	Condensation	Freezing

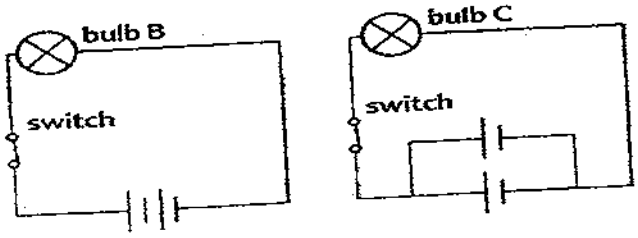
18. Study the diagram carefully.



Which of the following bulbs will cause all the other bulbs not to light up when fused?

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

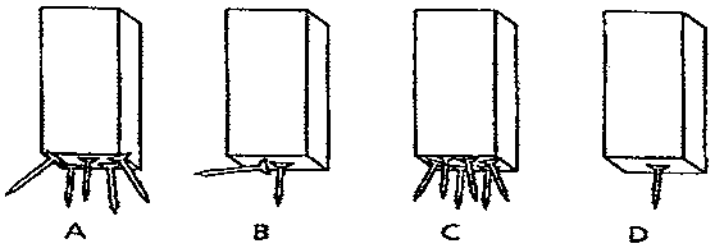
19. Tanni used similar electrical components to set up the two circuits shown below.



Which of the following statements is **correct** about the brightness of the bulbs in the circuits above?

(1) Bulb B is brighter than Bulb C
(2) Bulb B is dimmer than Bulb C
(3) Bulb B is as bright as Bulb C
(4) Both bulbs will not light up

20. Four bar magnets A, B, C and D were dipped into a pool of nails. The number of nails picked by the magnets were shown below.



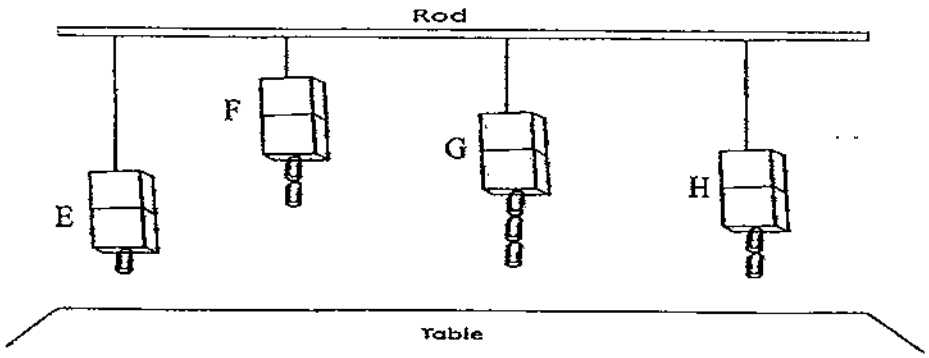
What can we conclude from this experiment?

(1) Magnet C is stronger than Magnet B
(2) All magnets have the same magnetism
(3) Magnet A is the strongest while Magnet D is the weakest
(4) Magnet C is the strongest while Magnet B is the weakest

21. Julian had a magnet and a box of paper clips. He spilled the paper clips onto a table and held the magnet over them. Some of the paper clips were attracted to the magnet while others remained on the table. What is the best explanation for such an observation?

(1) Some paper clips are made of nickel
(2) All the paper clips are made of cobalt
(3) All the paper clips are made of aluminium
(4) Some paper clips are made of copper and some are aluminium

22. The diagram below shows the distance from which four magnets, E, F, G and H can attract the paper clips from a table.



Based on the above results, Harry made the following statements. Which statement below is **incorrect**?

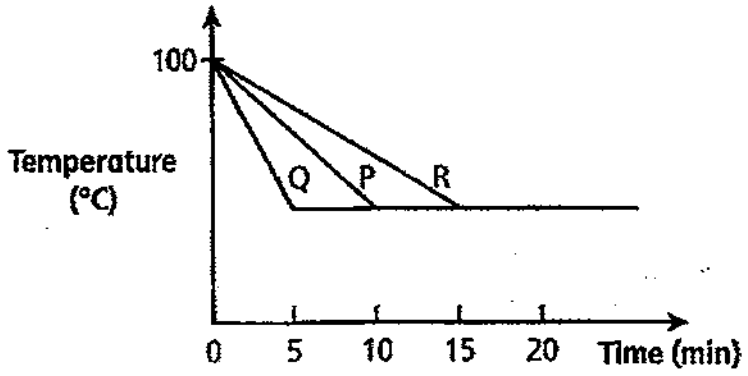
(1) Magnet E is the weakest magnet
(2) Magnet F is the strongest magnet
(3) Magnet E is weaker than magnet G
(4) Magnet G is stronger than magnet H

23. Sylvia holds on to a steel ladle in one hand and the wooden ladle in another. One feels cooler than the other.

Which explanation is the best to describe what she feels?

(1) The steel ladle feels cold while the wooden ladle feels warm
(2) The steel ladle feels warm while the wooden ladle feels cold
(3) Both ladles feel the same
(4) Both ladles feel cold

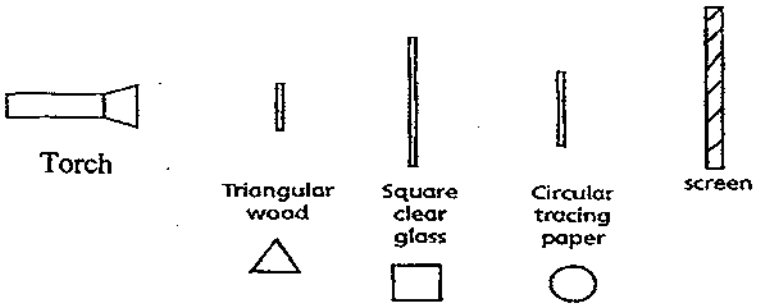
24. Madam Chia poured some boiling water into three different containers, P, Q and R. The time taken for the water in each container to cool down is shown in the graph below.



She asked her Primary Five students what can they infer from the graph. Which student has made the right inference?

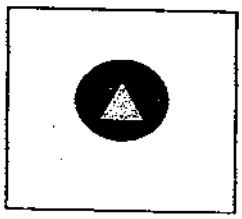
(1) Student A: Container R is the best conductor
(2) Student B: Container Q is the poorest conductor
(3) Student C: Container P is a better conductor than R but a poorer conductor than Q
(4) Student D: Container P is a poorer conductor than R but a better conductor than Q

25. A piece of wood, clear glass and tracing paper, each having different shapes and sizes were placed along the same line between a torch and a screen.

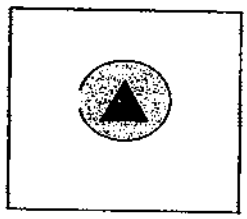


What is likely to be formed on the screen?

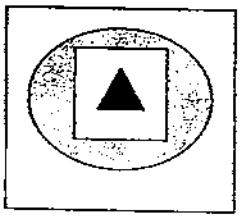
(1)



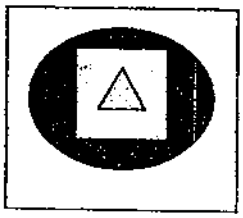
(2)



(3)



(4)



--- End of Booklet A. Please proceed to Booklet B ---

METHODIST GIRLS' SCHOOL

Founded in 1887

PRIMARY 5 END-OF-YEAR EXAMINATION 2009
SCIENCE
BOOKLET B1

Total Time : 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

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

Name: _____ ( )

Class: Primary 5._____

Date: 12 October 2009

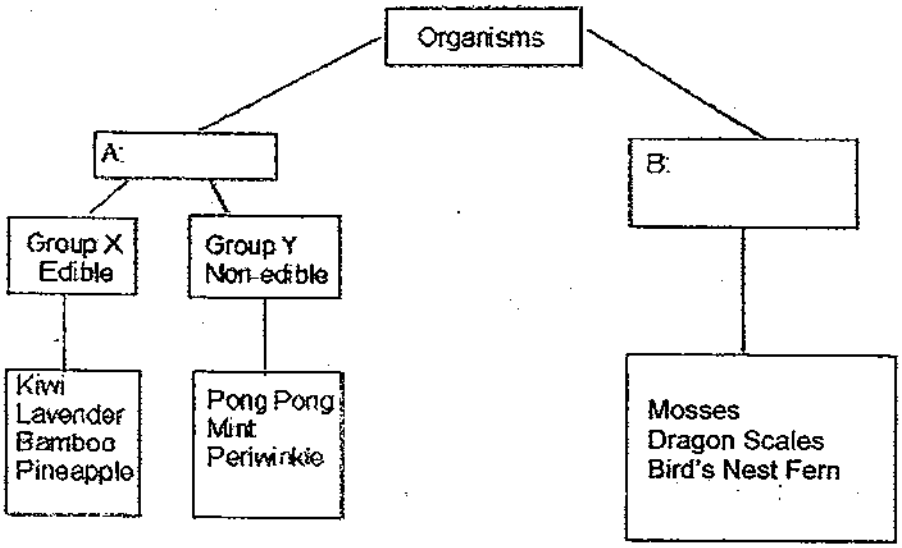
20

This booklet consists of 7 printed pages.

Section B1: Open-ended (7 questions = 20 marks)

Read each question carefully and write your answers in the spaces provided.

26. Study the classification chart below.



(a) Give the **correct** heading for A and B. (1 m)

A : _____

B : _____

(b) One of the organisms has been wrongly classified. Identify this organism and the group in which it should be placed? (1 m)

_____

27. The diagrams below show the cross sections of a few flowers. Study them carefully and answer the questions that follows:

A

B

C

D

(a) Based on what you can observe in the diagrams above, group the flowers A to D into 2 groups X and Y. Write the letters to show which flower you placed in each group. (2 m)

Group X	Group Y

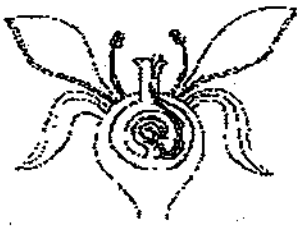
(b) State the characteristics you used to sort the flowers into the 2 groups. (1 m)

_____

_____

28. The sequence of pictures below shows the different stages of reproduction of plants. Name the process which is happening in each of the picture. (2 m)

a)_____

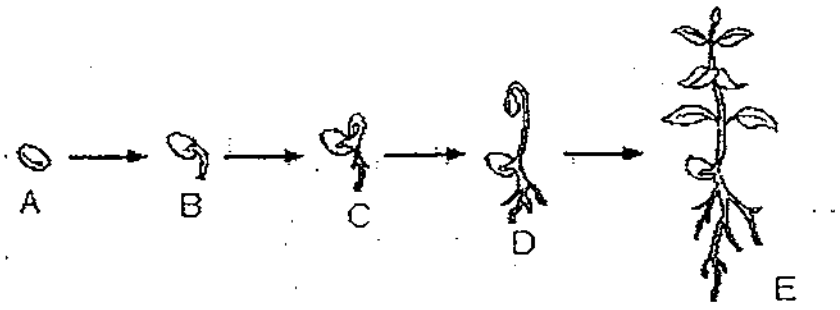


b)_____

c)_____

d)_____

29. Jane placed some seeds in a pot filled with soil. The diagram below shows the different stages of development of one of the seeds.



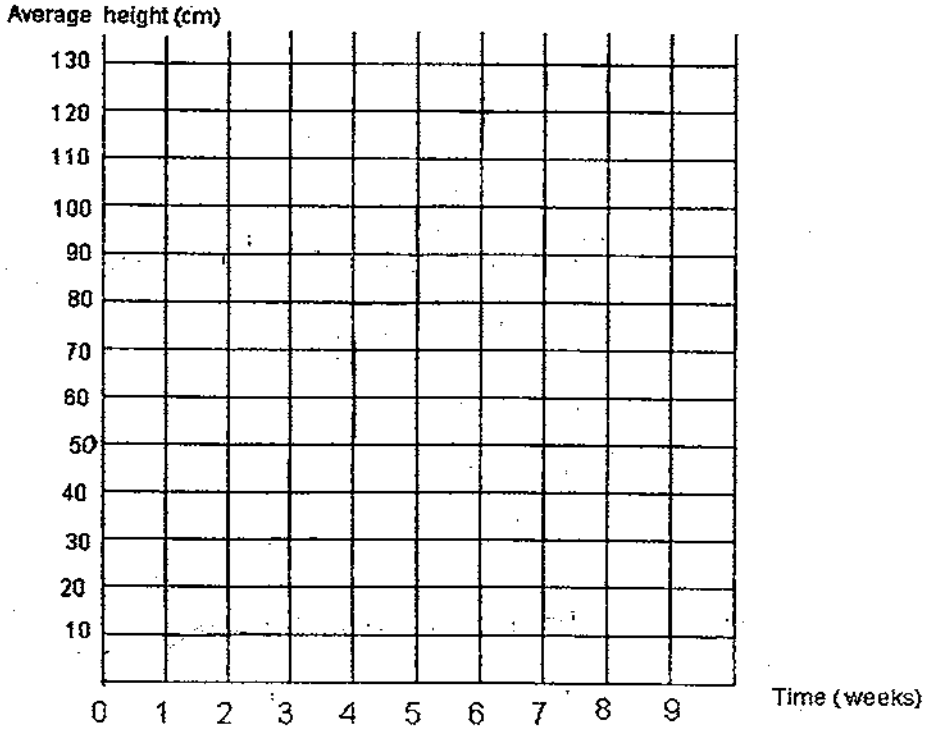
(a) Where does the seedling gets its nutrition from at Stage C? (1 m)

_____

Jane tracked the growth of the seedlings by measuring their heights at the end of each week. She recorded the results in the table below.

Time (weeks)	0	1	2	3	4	5	6	7	8	9
Average height(cm)	0	5	15	35	60	100	120	125	125	125

(b) In the space provided, plot a graph to show the average height of the plant over time. (1 m)



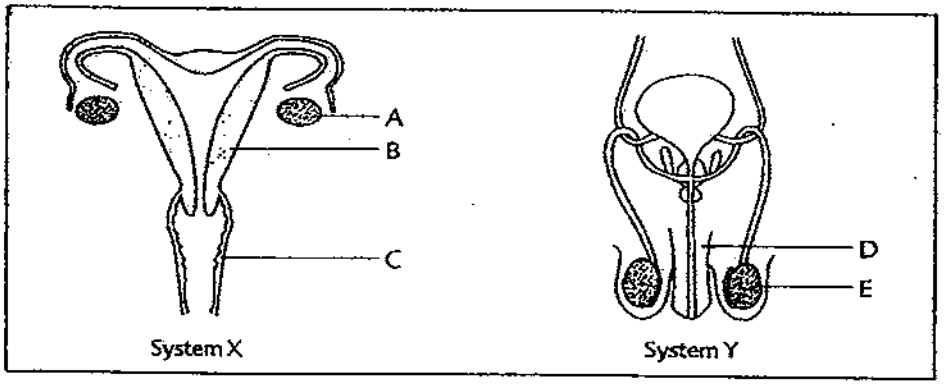
(c) Which of the following statement(s) is/are **true** about the growth of the seedlings? Tick (√) the **correct** option. (1 m)

☐ The seedlings stopped growing after Week 6.

☐ The seedlings grew fastest between Week 3 and 5.

☐ The seedlings only started growing after Week 1.

30. The diagram below shows two human reproductive systems.



(a) Identify the system and labelled parts. (2 m)

System X : _____

Part A : _____

Part B : _____

Part E : _____

(b) ~~How is the reproductive cell in System X different from System Y?~~
Name one difference between System X and System Y. (1 m)

_____

_____

_____

_____

31. A fish was placed in water of different temperatures. The amount of oxygen dissolved in the water was measured at each temperature and the number of times the gill cover flapped was counted by carefully observing the fish. The results are tabulated in the table below.

Water temperature (° C)	Amt of dissolved oxygen per ml of water	Number of times the gill cover flapped per minute
5	9.15	20
10	8.02	28
15	7.22	33
20	6.57	41
25	6.06	?
30	5.57	44

(a) What happens to the amount of dissolved oxygen as the temperature increases? (1 m)

_____

_____

(b) Predict the number of times the gill cover flaps when the temperature of the water is 25° C. (1 m)

_____

_____

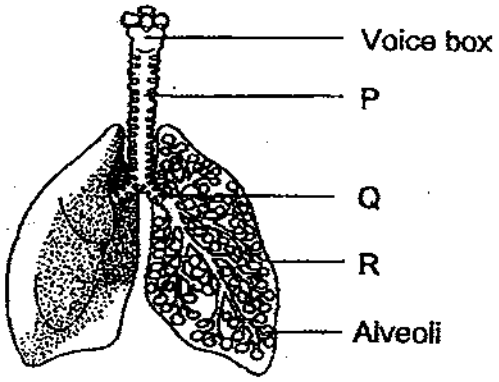
(c) What relationship can you observe between the number of times the gill cover flaps and the temperature of water? (1 m)

_____

_____

_____

32. The diagram below shows part of the respiratory system.



(a) From the diagram above, which letter represents the windpipe. (1 m)

_____

(b) Name the gas that passes into the blood from the alveoli. (1 m)

_____

(c) There are millions of alveoli in the lungs. They provide a very large surface area. Why is a large surface area necessary? (2 m)

_____

_____

_____

_____

End of Booklet B1

METHODIST GIRLS' SCHOOL

Founded in 1887

PRIMARY 5 END-OF-YEAR EXAMINATION 2009
SCIENCE
BOOKLET B2

Total Time : 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

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

Name: _____ ( )

Class: Primary 5._____

Date: 12 October 2009

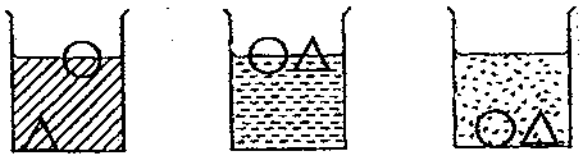
/20

This booklet consists of 6 printed pages.

Section B2: Open-ended (7 questions = 20 marks)

Read each question carefully and write your answers in the spaces provided.

33. The diagram below shows the position of two objects when they are placed in three different liquids, P, Q and R.



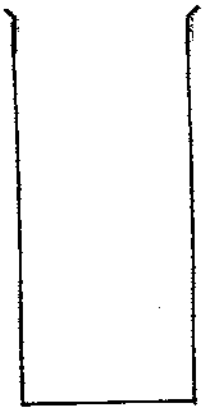
Liquid P Liquid Q Liquid R

(a) By looking at the position of the two objects, arrange the liquids from the least dense to the most dense. Fill in the blanks with the letters 'P', 'Q' and 'R' accordingly. (1 m)

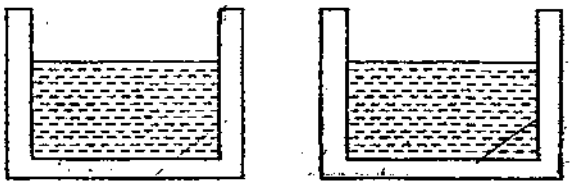
Liquid_____ Liquid_____ Liquid_____

Least dense _____→ Most dense

(b) The three liquids are poured into a container as shown below. Draw the position of the two objects when they are placed into the container. (2 m)



34. Two similar containers Y and Z are used to contain water of different temperatures. After 10 minutes, water droplets were spotted around the containers.

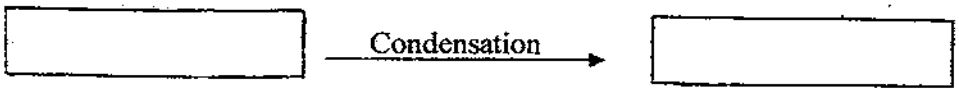


Container Y
100 °c

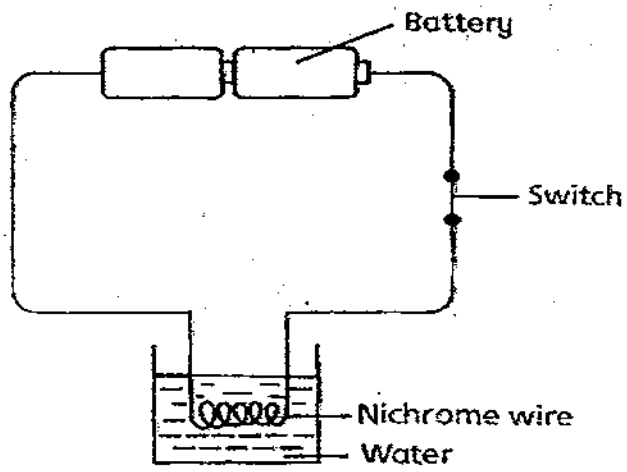
Container Z
10 °c

(a) Draw on each container where water droplets are formed. (2 m)

(b) Name the states of water related to the process of condensation. (1 m)



35. Study the diagram below.



(a) What will happen to the water after 20 minutes? (1 m)

_____

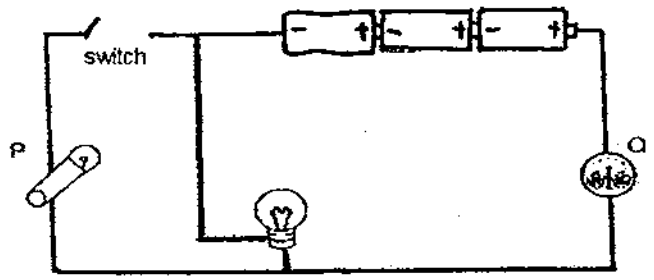
(b) What modification should be made to the set-up if we would like to see the same result above in a shorter time? (1 m)

_____

(c) State one safety precaution when using electricity at home. (1 m)

_____

36. In the diagram below, P is a paper clip and Q is a coin.



(a) Based on the diagram, will the bulb light up? Explain your answer. (1 m)

_____

_____

(b) If Object Q is removed and the switch is closed, will the bulb now light up? Explain your answer. (1 m)

_____

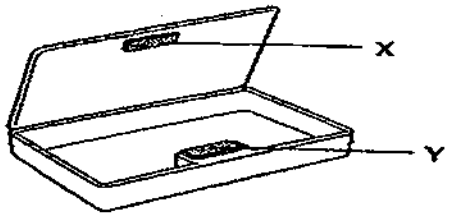
_____

(c) Object Q is now replaced with Object P and the switch remains closed, the bulb did not light up. Explain why it is so. (1 m)

_____

_____

37. The pencil case below makes use of two pieces of magnets, X and Y, to close itself.



(a) Indicate on each magnet the North Pole with the letter '**N**' and the South Pole with the letter '**S**' so that the pencil case can close tightly. (1 m)

( ) ( )	Magnet X
( ) ( )	Magnet Y

(b) After using the pencil case for a year, Nick realized that it does not close as tightly as before. What could be a possible reason that the magnets lost their magnetism? (1 m)

_____

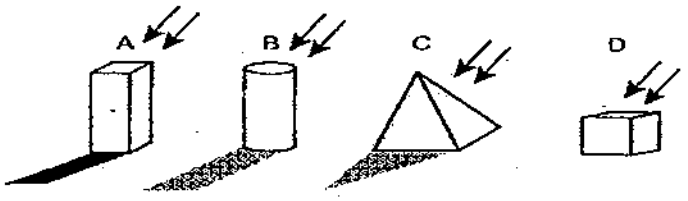
_____

(c) What should Nick do to strengthen the magnets again so that he can continue to use the pencil case without removing the magnets? (1 m)

_____

_____

38. Basha placed four objects, **A**, **B**, **C** and **D** on the floor in a dark room. He then shone a torch at each of them.



(a) Based on the above observation, indicate what type of object is **A**, **B**, **C** and **D** in the following table. (1 m)

Type	Object(s)
Transparent	
Translucent	
Opaque	

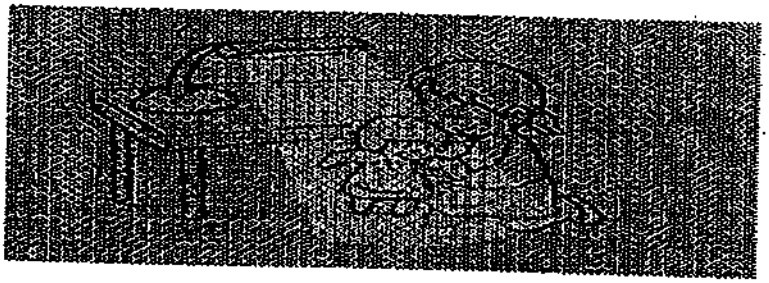
(b) Basha has just shifted into his new house, he told his mother that he would like to have a full length glass window for his room so that more light can enter his room to brighten it. However, his mother discouraged him as this would make his room very warm. Explain why his mother said that. (1 m)

_____

_____

_____

39. One night after dinner, Hui Ern carried her doll into her bedroom and realized that she could not see anything. She switched on a table lamp and placed her doll below it to have a good look at it.



(a) Explain why Hui Ern could see her doll clearly when she placed it below the table lamp. (1 m)

(b) Explain why Hui Ern could see the table lamp. (1 m)

(c) After knowing what happened in her room, Hui Ern began to understand why she is able to see the stars in the sky and why the Earth is not totally pitched dark! Explain what Hui Ern had understood. (1 m)

End of Booklet B2

Answer Ke

EXAM PAPER 2009

SCHOOL : MGS PRIMARY
SUBJECT : PRIMARY 5 SCIENCE

TERM : SA2

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

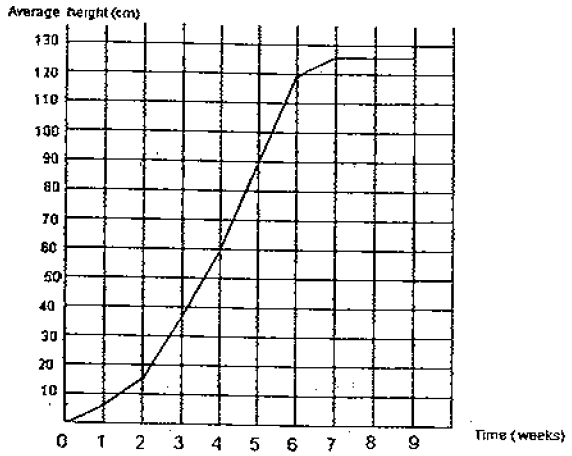
Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25
4	1	1	1	2	1	3	2

26)a)A: Flowering plants B: Non-flowering pants
b)Mint. It should be placed in Group X.

27)a)X: A,C,D Y: B
b)Contains both male and female reproductive parts and contains only male reproductive parts.

28)28)a)Pollination b)Fertilisation c)Seed dispersal d)Germination

29)a)From its seed leaves.
b)



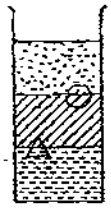
c)The seedling grew fastest between Week 3 and 5

30)a)X: Female reproductive system.
A: Ovary B: Womb C: Testis
b)The ovaries in system X produce eggs but the testes in system Y produce sperms.

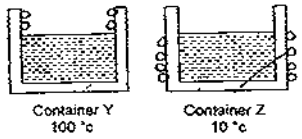
31)a)The amount of dissolved oxygen decreases as the temperature increases.
b)42 times.
c)The higher the temperature of water, the greater the number of times the gill cover flaps.

32)a)Letter P.
b)Oxygen.
c)To allow the exchange of gases occur.

33)a)R,P,Q
b)



34)a)



b)Gaseous-->Liquid

35)a)The water will become warm.
b)Add more batteries.
c)Do not touch electrical appliances with wet hands.

36)a)Yes. It is still a closed circuit and electric current can still flow through the circuit to light up the bulb.
b)No. It is an open circuit and electric current cannot flow through the circuit to light up the bulb.
c)Object P was not a good conductor of electricity and formed an open circuit when it replaced Object Q.

37)a)(N) (S)
(S) (N)
b)He could have accidentally dropped the pencil case a few times, causing the magnets to loose some of their magnetism.
c)He can stroke the magnets in a circuit motion.

38)a)D

B and C

A

b)Glass is a bad conductor of heat, so it will trap heat in the room.

39)a)The light from the table lamp reflected from the doll and into Hui Ern's eyes, making her able to see her doll clearly.

b)The light from the table lamp enter into her eyes.

c)Stars are a source of light and the light that shone on the Earth is reflected into her eyes.