NAN HUA PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1 – 2009
PRIMARY 5

SCIENCE

BOOKLET A

30 Multiple Choice Questions (60 marks)

Total Time for Booklets A and B : 1 hours 45 minutes

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers in the Optical Answer Sheet (OAS) provided.

Marks Obtained

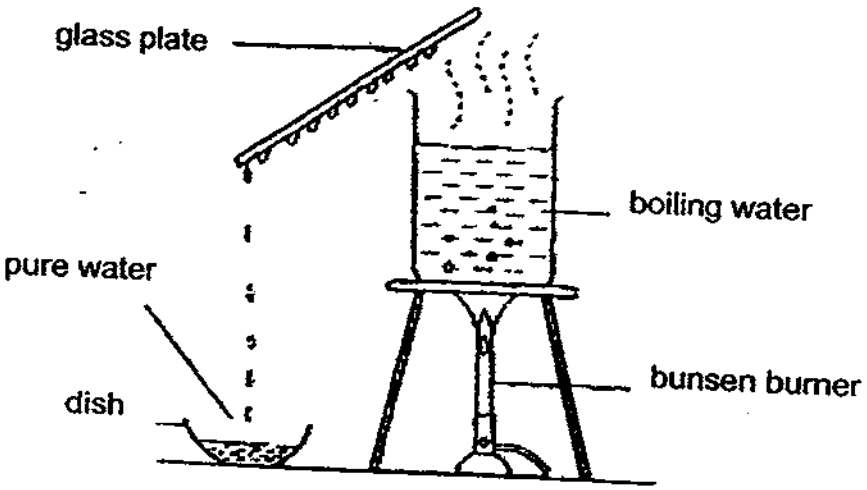
Booklet A		/ 60
Booklet B		/ 40
Total		/100

Name: _____ ( ) **Class: P 5** _____

Date : 14 May 2009 **Parent's Signature:** _____

Section A: **(30 x 2marks = 60marks)**
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. John set up the experiment below.



Name the processes that took place in the boiling water and on the glass plate which resulted in the water droplets being collected in the dish.

	Boiling Water	Glass Sheet (Plate)
(1)	Evaporation	Evaporation
(2)	Condensation	Condensation
(3)	Evaporation	Condensation
(4)	Condensation	Evaporation

2. Which of the following form part of the water cycle?

A: Formation of clouds.
B: Evaporation of water on the road.
C: Giving out of water vapour by plants.
D: Drying up of perspiration on your skin.

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

3. Living things reproduce to ensure _____.

(1) the continuity of their kind
(2) that there is food for its predators
(3) that there are more males than females
(4) that their young will take care of themselves

4. Benny found a plant in the school garden. When he examined its leaves, he found spore bags on the underside. Which of the following would most likely be the plant that he found?

(1) Balsam
(2) Hibiscus
(3) Green bean
(4) Staghorn fern

5. The list below shows parts of a flower.

A: Anther
B: Ovule
C: Ovary
D: Stigma

Which of the part(s) above belong (s) to the female part of the flower?

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

6. Which of the following correctly shows the sequence involved in the sexual reproduction of flowering plants?

(1) Fertilization → Germination → Pollination → Seed dispersal
(2) Germination → Seed dispersal → Fertilization → Pollination
(3) Pollination → Fertilization → Seed dispersal → Germination
(4) Seed dispersal → Pollination → Germination → Fertilization

7. Below is a list of animals and the average number of offspring they have in their lifetime.

Animal	Number of Offspring
A	3
B	1
C	12
D	10

Based on the data given above, which species of animal is most likely to eventually become extinct?

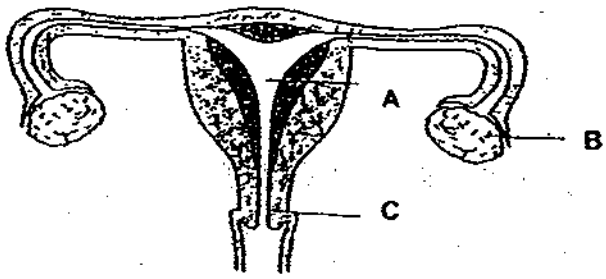
(1) A
(2) B
(3) C
(4) D

8. Which of the following statements about reproduction in human is correct?

A: Sperms are produced in the penis.
B: Only one sperm fuses with the egg.
C: The eggs are produced in ovaries.
D: The eggs travel towards the sperm.

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

9. The diagram shows the female reproductive system.



In which parts are the egg and the foetus formed?

	Egg	Foetus
(1)	B	A
(2)	A	B
(3)	C	B
(4)	C	A

10. Which part of a flower functions like the sperm in human?

(1) Ovum
(2) Anther
(3) Stigma
(4) Pollen grain

11. Which of the following is **not** a source of light?

(1) Sun
(2) lit candle
(3) lighted bulb
(4) A diamond that is reflecting light into our eyes

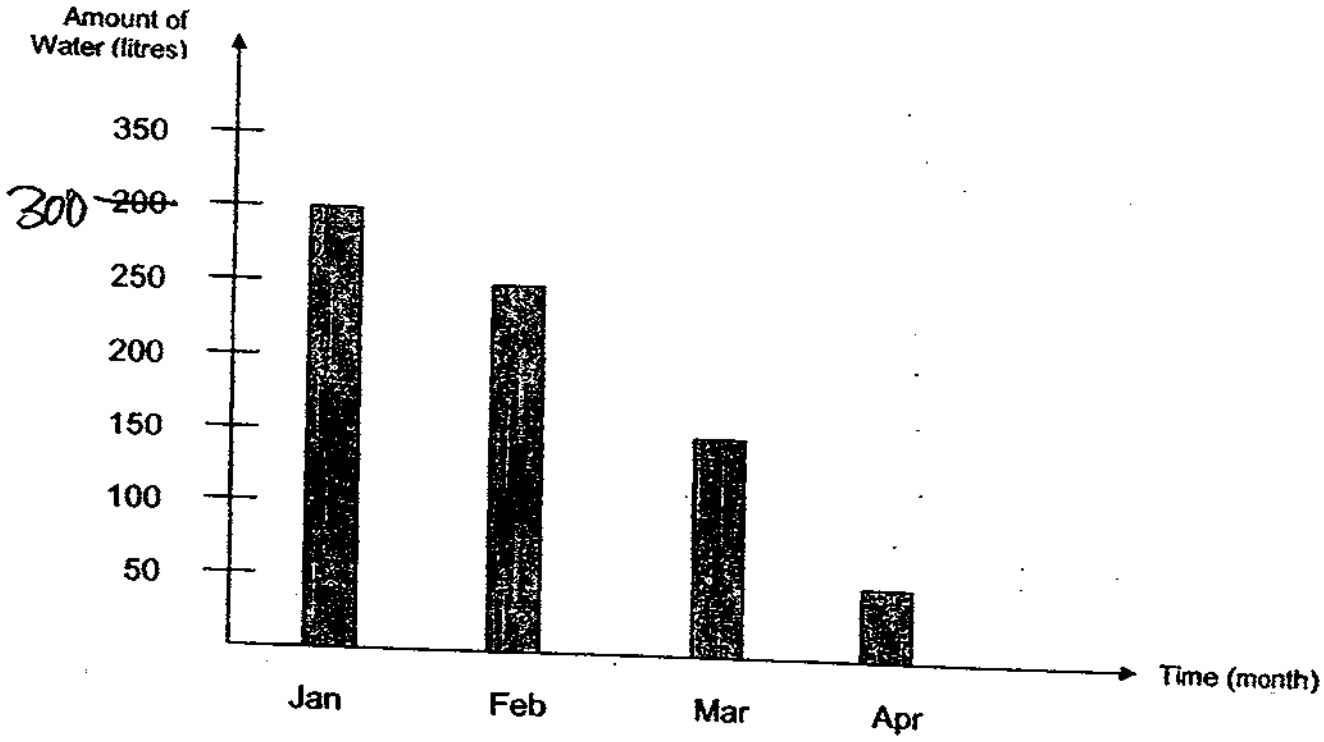
12. Rachel filled 4 identical containers A, B, C and D with the same volume of water. She left them undisturbed for 1 day in 4 different places in different conditions as listed in the table below.

Container	A	B	C	D
Surrounding conditions	Sunny	Sunny	Cloudy	Cloudy
	No wind	Windy	No wind	Windy
	Low humidity	Low humidity	High humidity	High humidity

Which one of the containers will have the largest volume of water left after 1 day?

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

13. The chart below shows the monthly household water consumption measured at the end of January, February, March and April for the Tan family.

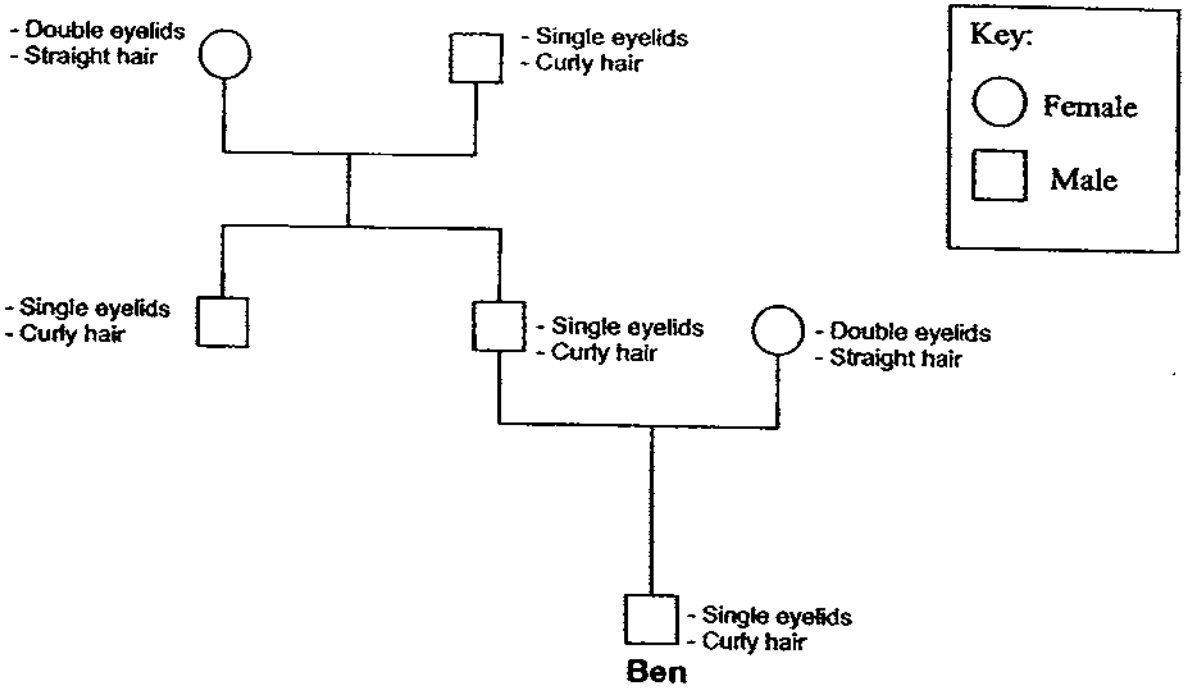


Which of the following are possible actions/events carried out in the month stated?

	Month	Action / Event
A:	February	Save Water Campaign
B:	March	Water Rationing Exercise
C:	April	A 3-week vacation for the Tan family

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

14. Study the diagram below which shows Ben's family tree.



Based on the above, Ben has single eyelids. From whom did he inherit this characteristic from?

(1) Uncle
(2) Father
(3) Mother
(4) Grandmother

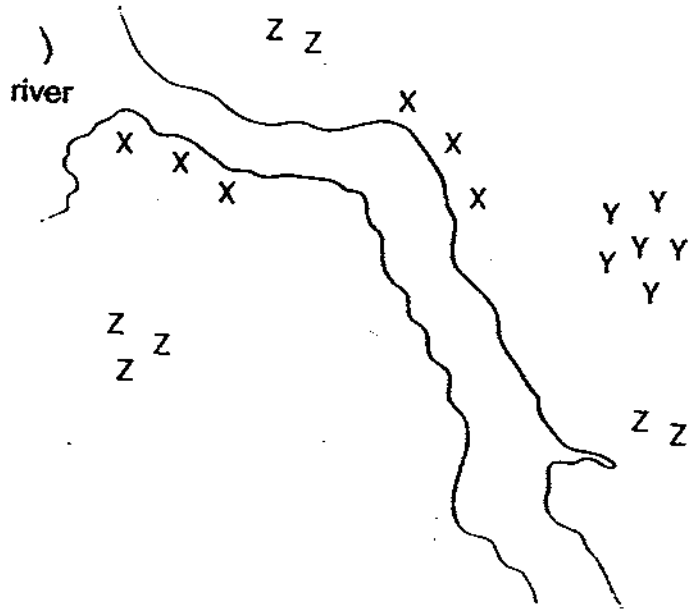
15. Ali dropped 3 different fruits, X, Y and Z, from a height of 5 metres and recorded the time each fruit took to land on the ground. He conducted the same experiment 3 times for each type of fruit. The following table shows his results.

		Fruits		
		X	Y	Z
Time taken (seconds)	1st try	1.1	4.6	2.7
	2nd try	1.2	4.9	3
	3rd try	1.1	5	2.3

Which fruit is Y most likely to be?

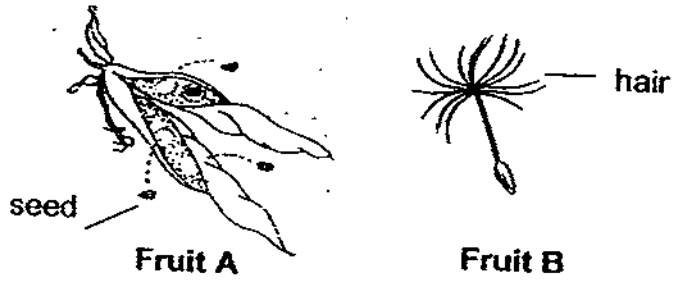
(1) Rubber
(2) Shorea
(3) Mimosa
(4) Pong pong

16. The diagram below shows the distribution of three different types of plants, X, Y and Z in a forest. Based on the distribution of the plants, which of the following correctly explains the method of dispersal of the seeds of plant X, Y and Z?



	X	Y	Z
(1)	splitting	water	animals
(2)	water	splitting	animals
(3)	water	animals	splitting
(4)	animals	splitting	water

17. Compare the two fruits below.



Based on your observation of the characteristics of the fruits shown above, which of the following shows how the fruits are dispersed?

	Fruit A	Fruit B
(1)	animal	wind
(2)	splitting	wind
(3)	wind	animal
(4)	water	splitting

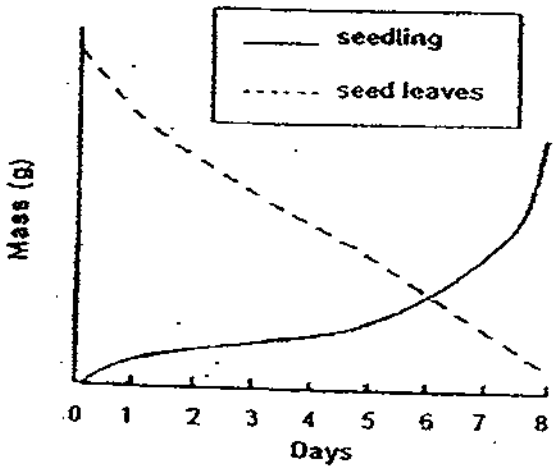
18. Kelly conducted an investigation on some flowers from a plant in her garden. The plant produced flowers which have male and female parts in the same flower. There were 12 flowers found on the plant. She divided the flowers on the plant into 3 groups and removed some parts as shown in the table below. The flowers were left intact on the plant.

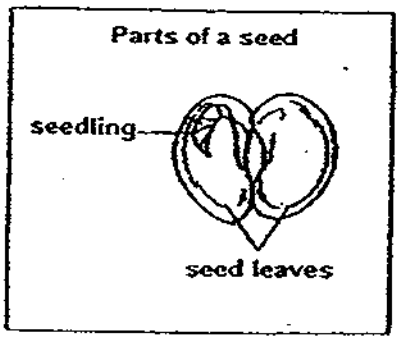
Flowers in	Part of flowers removed
Group A	Petals
Group B	Stigmas
Group C	Anthers

Which group(s) of flowers is/are most likely to develop in to fruits after three weeks?

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

19. John planted 8 red beans under suitable conditions for them to grow. At the end of each day he removed one seedling and weighed the mass of its seed leaves and seedling separately. He then recorded his findings in the graph below.





Based on the graph, which one of the following statements is true?

(1) Both the mass of seedling and seed leaves changed at the same rate.
(2) The mass of the seed leaves is always greater than the mass of the seedlings.
(3) The mass of the seed leaves decreased as the mass of the seedling increased.
(4) The mass of the seedlings remain constant while the mass of the seed leaves increased.

20. The table below shows the characteristics of Corrine and her parents.

Characteristics	Corrine's father	Corrine's mother	Corrine
Brown eyes	✓		✓
Widow's peaks		✓	
Right thumb over left when fingers are interlocking	✓	✓	✓

Which of the following statements about Corrine are most likely to be true?

A: Her brown eyes are an inherited trait from her father.
B: Either of her maternal grandmother or grandfather has widow's peak.
C: Her right thumb over the left when she interlocks her fingers is a habit resulted from practice.

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

21. The table below shows the development of a fertilised egg to a human baby.

Period after fertilisation	Stage of development
7-10 days	Hollow ball of cells which is thickened in one area.
3 weeks	Head is formed. Spinal cord and heart start to develop
6 weeks	Brain grows rapidly. Eyes and ears start to develop. Limbs start to form.
12 weeks	The foetus has almost all the external features of a baby.
9 - ~~10~~ 10 months	Birth

From the table, which is most likely to be the earliest period after fertilisation that the mother can start feeling the foetus kicking?

(1) 1st week
(2) ~~3th week~~ 3rd week
(3) ~~5rd week~~ 5th week.
(4) 15th week

22. The diagrams below show a flower and the human female reproductive system. Which part of the flower has the same function as the part marked X in the human female reproductive system?

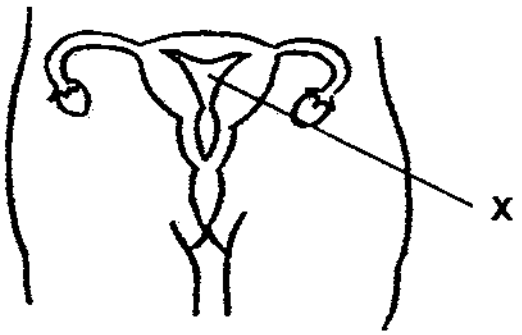


Diagram A

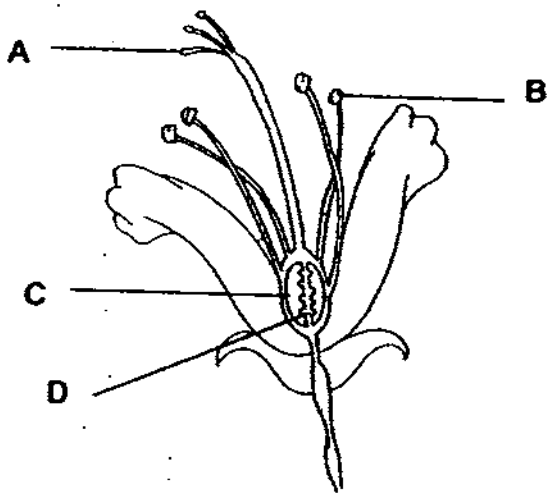
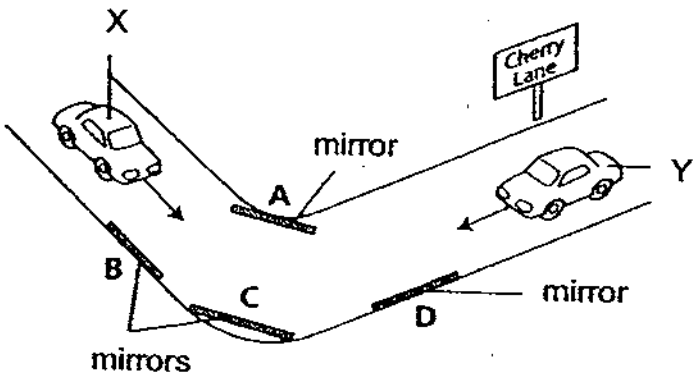


Diagram B

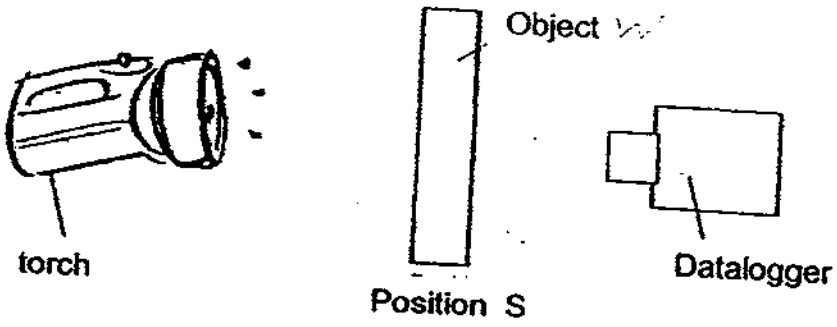
(1) A
(2) B
(3) C
(4) D

23. The diagram below shows a sharp bend along a narrow road. Where would you place a mirror so as to avoid an accident between the two on-coming cars, X and Y?



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

24. Celine set up an experiment as shown below.



She put Object W at position S and she shone the torch on it. A datalogger was placed behind the object to measure the amount of light passing through Object as shown. She repeated the experiment with Object X, Y and Z.

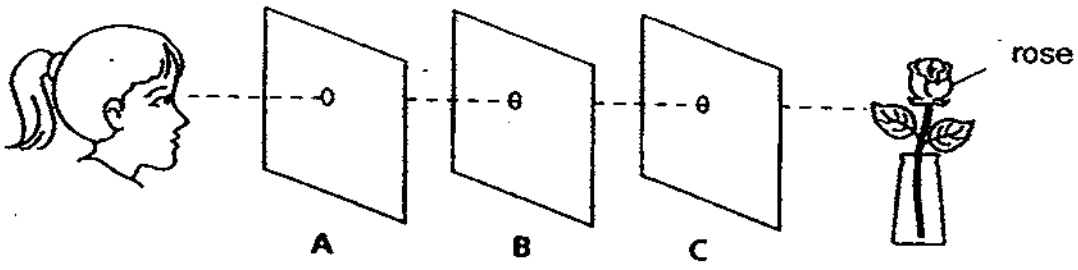
The table below shows the readings which measured the amount of light passing through the objects when different objects were placed at position S

Objects	Amount of Light (lux)
W	316
X	6500
Y	1124
Z	750

Which one of the following materials is most likely used to make Object X?

(1) Wood
(2) Clear Plastic
(3) Tracing Paper
(4) Stainless steel

25. Study the diagram below.

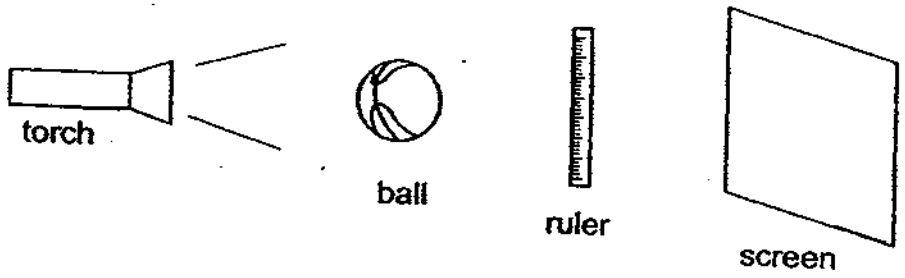


Lulu prepared three pieces of cardboard, A, B and C and pierced a hole through the centre of each piece of cardboard. She lined them up in a row such that the holes were perfectly aligned. She was initially able to see the image of the rose behind cardboard C. However, when she shifted cardboard B, she was no longer able to see the image of the rose. Which of the following statements below best explains why she was not able to see the image of the rose?

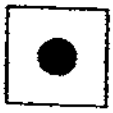
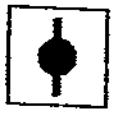
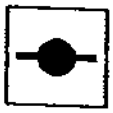
A: Light travels in straight lines
B: Light can only travel through air
C: Light travels in one direction only
D: Light is not able to pass through cardboard

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

26. Germaine conducted an experiment to observe the shadows formed by different objects. She shone a torch on a ball and a wooden ruler which are placed in a straight line.



Which one of the following shadows will she observe?

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

27. The table below shows the melting and boiling points of substances A, B and C.

Substance	Melting point (°C)	Boiling point (°C)
A	54	90
B	42	78
C	28	63

At which one of the following temperatures will the three substances, A, B and C, be the same state?

(1) 29 °C
(2) 51 °C
(3) 60 °C
(4) 80 °C

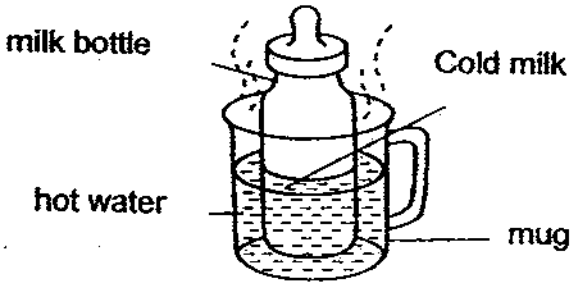
28. Peter wanted to find out how the temperature affects the rate at which a sugar cube is dissolved. He set up an experiment using some sugar cubes, a thermometer and four similar beakers containing water of different temperatures as shown in the table below.

Beaker	Number of sugar cubes	Amount of water	Temperature of water
A	1	400 ml	60°C
B	1	400 ml	80°C
C	2	450 ml	60°C
D	2	400 ml	80°C

In order to achieve his aim of the experiment, which two beakers should Peter use in his comparison?

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

29. Mrs Lim removed a bottle of milk from the refrigerator and placed the bottle in a mug containing hot water as shown in the diagram below. Which of the following statements are correct?

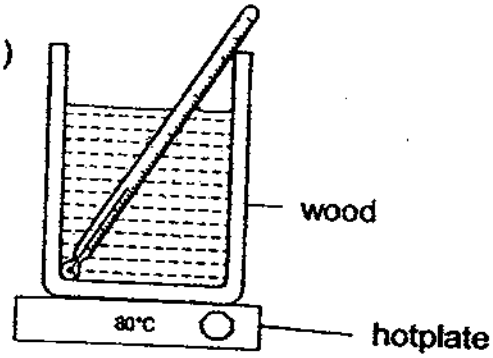


A: The cold milk loses heat
B: The temperature of the hot water falls
C: The mug gains heat from the hot water
D: The hot water gains heat from the cold milk

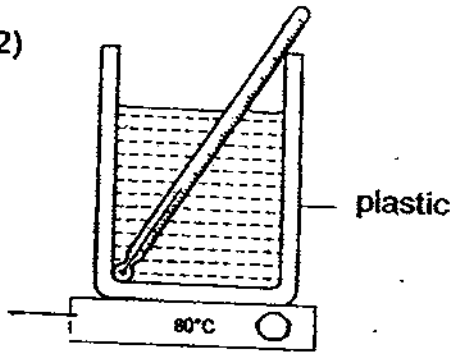
(1) A and B only
(2) A and D only
(3) B and C only
(4) C and D only

30. Four cans made of different materials were filled with water and placed on a hot plate for 10 minutes as shown below. A thermometer was placed in each can. At the end of the 10 minutes, which thermometer would show the highest reading?

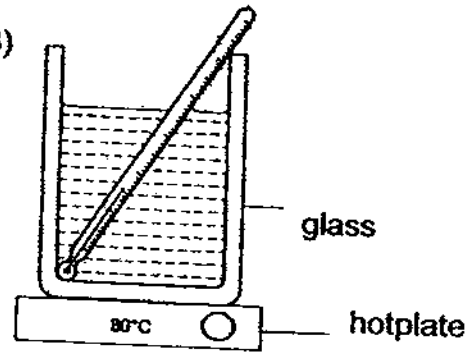
(1)



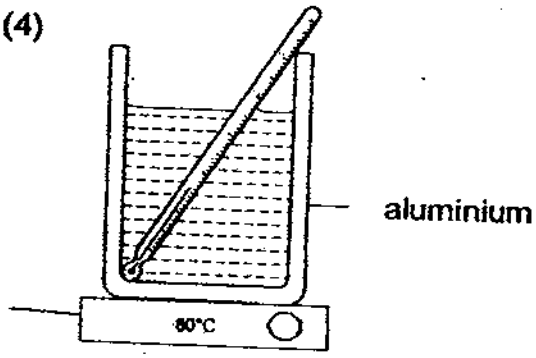
(2)



(3)



(4)



NAN HUA PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1 – 2009
PRIMARY 5

~~MATHEMATICS~~
Science
BOOKLET B

14 Open-ended questions (40 marks)

Total Time for Booklets A and B : 1 hours 45 minutes

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in this booklet.

Marks Obtained

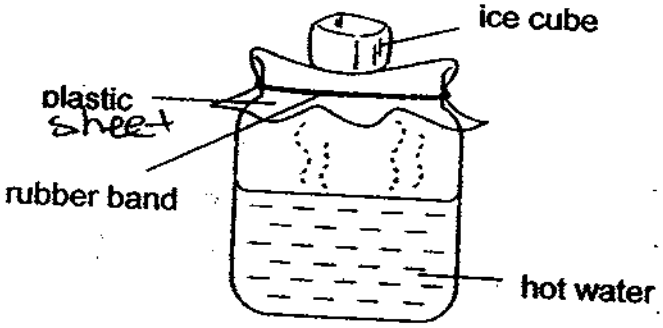
Section B		/40

Name:_____( ) **Class: P 5** _____

Date : 14 May 2009 **Parent's Signature:**_____

Section B: (40marks)
Write your answers to question 31 to 44.
The number of marks available is shown in brackets [ ] at the end of each question or part question.

31. Christopher set up a representation of the water cycle as shown in the diagram below.



(a) What was the purpose of putting an ice cube on top of the plastic sheet?
[1]

(b) After a few minutes, he noticed water droplets on the bottom of the plastic sheet. Explain how the water droplets were formed.
[2]

Score	3

32. Brown spots are found on the underside of the polypody fern as shown below.

(a) What are these brown spots?

[1]

_____

_____

(b) In what way are these brown spots important to the polypody fern?

[2]

_____

_____

Score	/3

33. Darren wanted to find out if the size of a fish tank affects the growth rate of fish. He conducted and wrote a report on the experiment as shown below

Aim To find out if the size of a fish tank affects the growth rate of a fish.

Hypothesis The size of a fish tank affects the growth rate of a fish.

Materials

- 10 swordtail (1 week old each)
- 10 Arowanas (1 week old each)
- 1 small fish tank (15 cm by 30 cm) labelled A
- 1 big fish tank (25 cm by 40 cm) labelled B
- Fish food

Procedures

- Measure and record the length of the fish
- Place the swordtail in Tank A by the window
- Place the Arowana in Tank B in a dark corner
- Feed the fish an equal amount of food daily
- Observe and measure the length of the fish every week for a month

Data Both fish are measured at the end of every week. The numbers in the table below show how much the fish have grown.

Fish	Week 1	Week 2	Week 3	Week 4	Total increase in length (cm)
Swordtail	0.4	0.4	0.4	1	2.2
Arowanas	0.4	0.5	1.3	1.3	2.9

Conclusion The size of a fish tank affects the growth rate of a fish.

Based on the report, give two reasons why Darren's experiment is not a fair one.

[2]

(a) _____

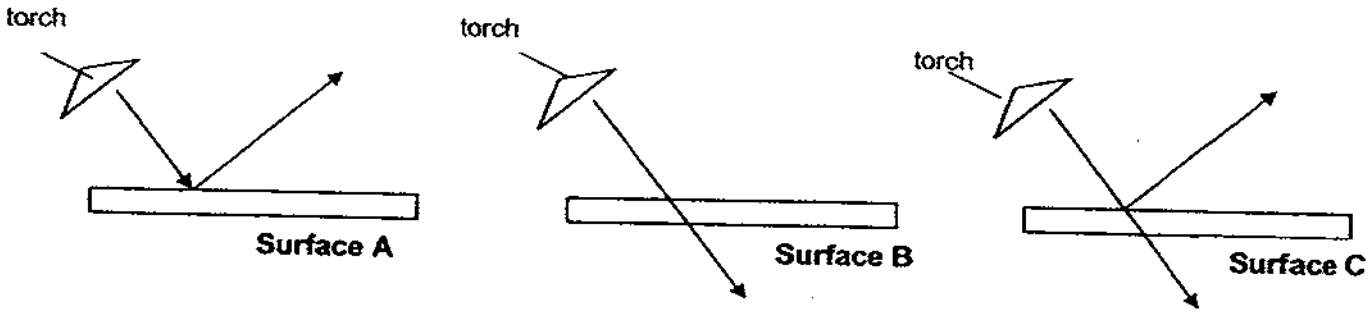
_____

(b) _____

_____

Score	
	2

34. The diagrams below show the passage of light when a torch is shone against three surfaces, A, B and C, respectively.

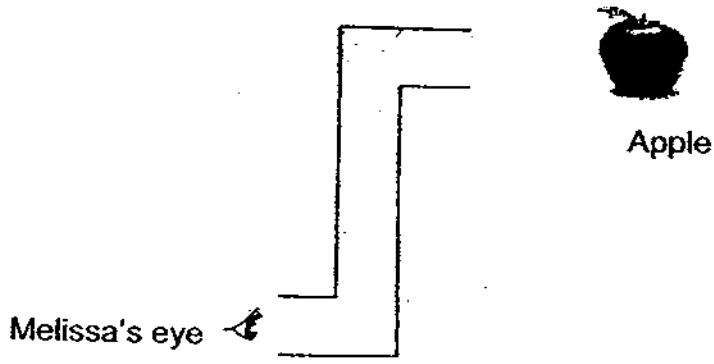


(a) Which of the surfaces, (A, B or C), represents a spectacle lense? Give a reason for your choice. [1]

_____

_____

(b) Study the diagram below.



(i) Which property of light explains why Melissa could not see the apple in the above set up?

[1]

_____

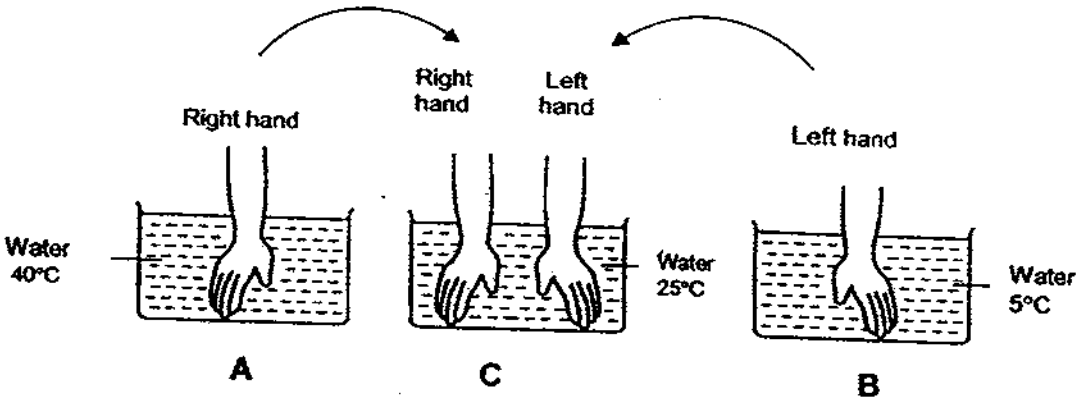
_____

(ii) Melissa was given two mirrors and was told that if she were to place the mirrors inside the set-up correctly, she would be able to see the apple.

In the diagram above **draw 2 lines** to show the position of the mirrors which would allow her to see the apple. [2]

Score	4

35. Study the diagram below.



Debbie dipped her right hand into basin A. At the same time, she dipped her left hand into basin B. After 30 seconds, she then put both hands into basin C.

(a) How would her left and right hands feel respectively when they were put into basin C? [2]

_____

_____

(b) Later that day, Debbie's brother, David, complained that he had a fever. Debbie used her hand to feel his forehead to check his temperature. Her mother told her that she should use a clinical thermometer instead.

State one advantage of checking David's body temperature using a clinical thermometer over the use of her hand. [1]

_____

_____

Score	3

36. The table below shows the amount of water used in Mrs Tan's household.

Amount of water used				
Mopping	**Laundry**	**Bathing**	**Cooking**	**Watering plants**
2 litres	40 litres	90 litres	15 litres	2 litres

(a) Which activity in her household used the most amount of water?

[1]

_____

(b) Based on your answer in part (a), suggest one way in which Mrs Tan's household could save water.

[1]

_____

_____

Score	
	2

37. Amy collected 5 identical acacia fruits A, B, C, D and E. She subjected each fruit to different temperatures because she wanted to find out the effects of temperature on the splitting of ~~rubber~~ acacia fruits. The results were recorded in the table below.

Temperature	20°C	25°C	30°C	35°C	40°C
Acacia Fruit	A does not split	B splits after 1 day	C splits after 3 hours	D splits after 2 hours	E splits after 30 minutes
How far the seeds are scattered	-	1 m	1.5 m	2.5 m	4 m

(a) From the above results, what can you conclude about the effect of temperature on the time taken for the fruit to split?

[2]

(b) Which Acacia fruit, B, C, D or E, split with the greatest force?

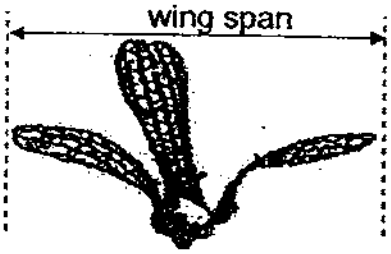
[1]

(c) State one reason why fruits and seeds need to be dispersed.

[1]

Score	
	4

38. The diagram below shows a shorea fruit.



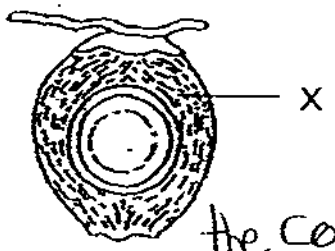
Fredrick did an experiment using different shorea fruits. He gathered 4 shorea fruits, A, B, C and D, which had different wing spans. He then dropped the shorea fruits one by one from the same height and measured the time taken for each to reach the ground. He recorded his results in the table below.

Fruit	Wing span (cm)	Time taken (seconds)
A	5	2
B	6	3
C	8	5
D	10	7

(a) Based on the information given above, what is the relationship between the length of wing span and the time taken for the fruit to reach the ground? [1]

(b) The diagram below shows a cross section of a coconut.

~~Fruit A~~ coconut



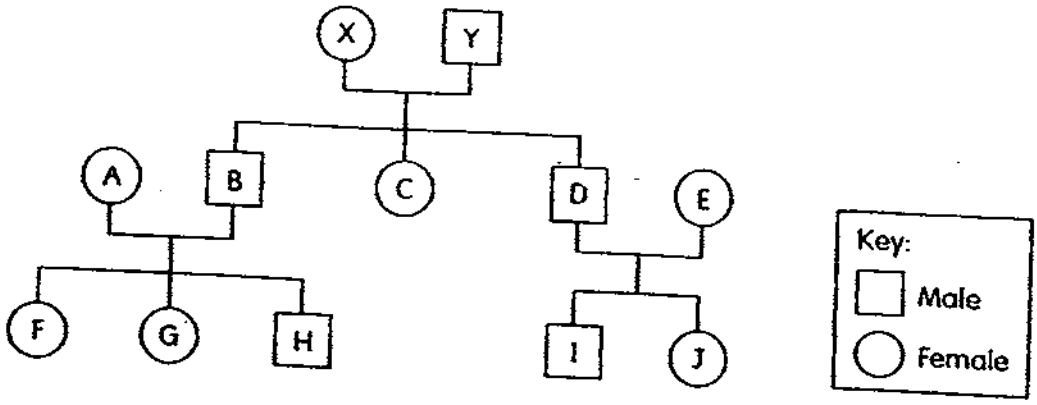
Cross section of ~~Fruit A~~ the coconut

(i) How is a coconut dispersed? [1]

(ii) How does the part X helps the coconut to be dispersed by the method stated in (a)? [1]

Score 3

39. Study Corrine's family tree below



(a) Corrine has two brothers. State the letter that represents Corrine.

[1]

(b) How is J related to Corrine?

[1]

(c) How is F related to B?

[1]

Score	3

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

Animals	Average gestation period (days)
Elephant	600
Rat	21
Cat	62
Sheep	150

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

[1]

_____

_____

(b) What is the relationship between the size of the animal and its gestation period?

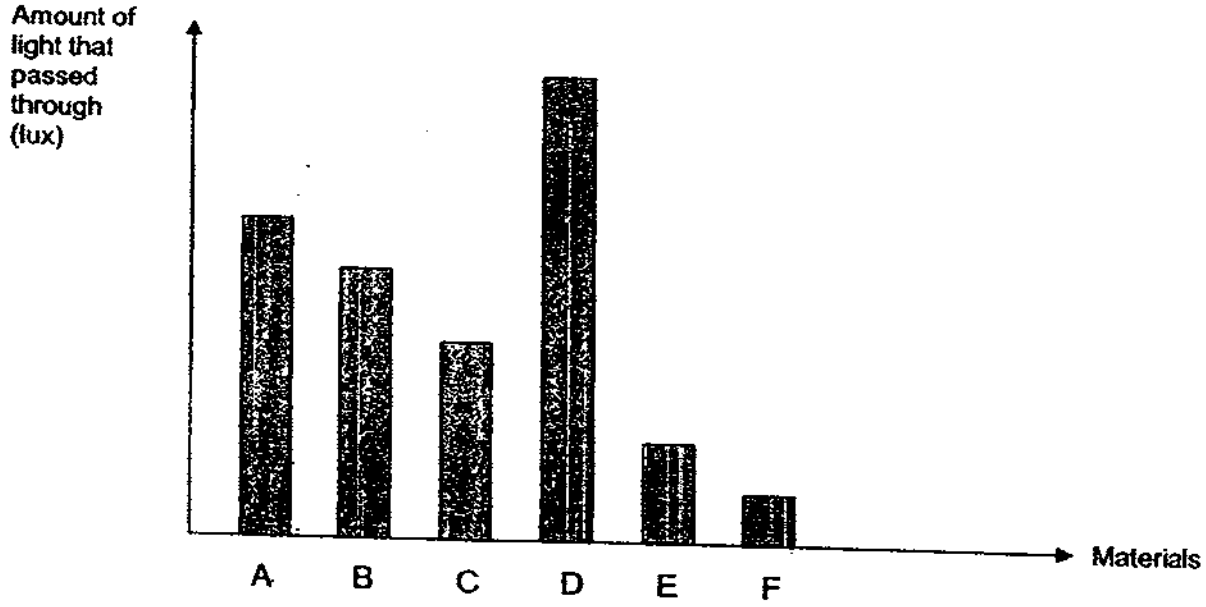
[1]

_____

_____

Score	
	2

41. The graph below shows the amount of light that passes through different materials when the light from a torch is shone through it.

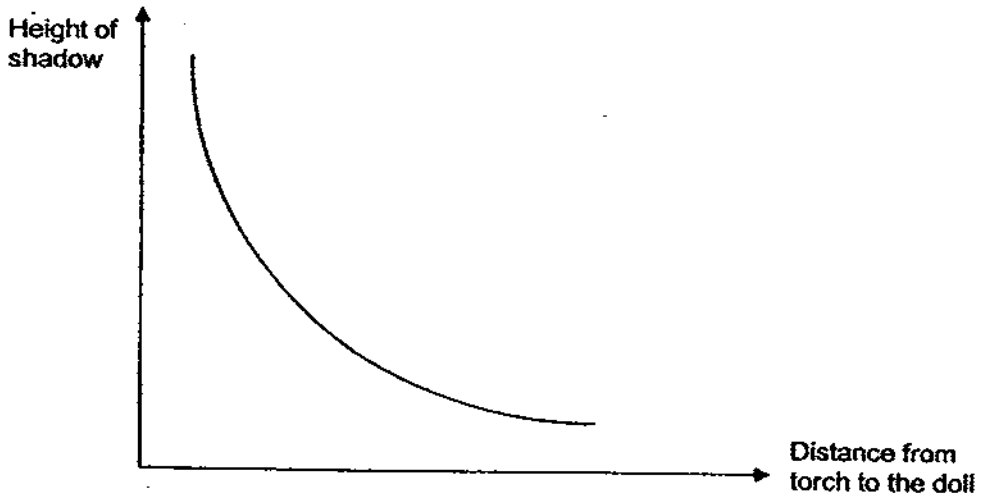


Based on the bar chart above, answer the following statements by putting a tick (✓) in the correct boxes below. [3]

	Statement	True	False	Not possible to tell
(a)	Material A has a darker shadow than Material B.			
(b)	Material A allows more light to pass through than material B.			
(c)	Material C is able to partially block light.			
(d)	Material D is opaque.			
(e)	Material F is darker in colour than Material E.			
(f)	Material F could be a mirror.			

Score	
	3

42. Rachel placed a doll between a torch and a screen. She moved the doll away from the torch and plotted the height of the shadow formed against the distance the doll is from the torch. The data collected was plotted in a graph as shown below.



(a) What is the relationship between the distance of the doll from the torch and the height of the shadow?

[1]

(b) State another property of the shadow that changes as the distance between the torch and the doll changes?

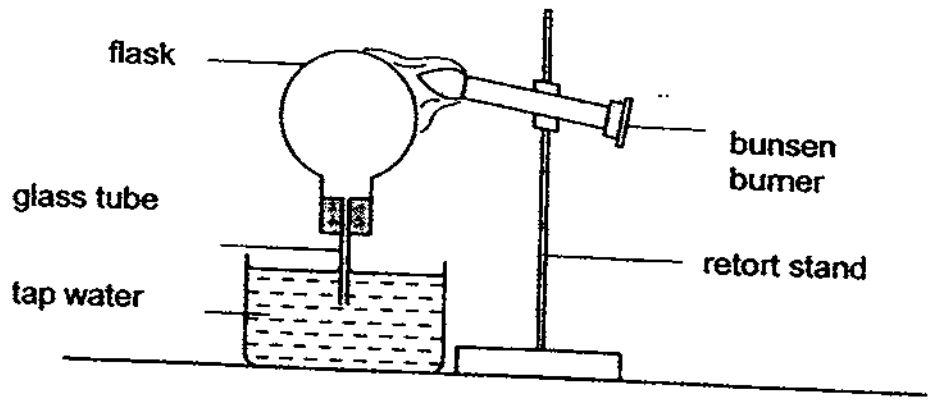
[1]

(c) When the doll is replaced with a clear glass rod, no shadow was formed. Give a reason for this observation.

[1]

Score	3

43. Study the diagram below.



The flask was heated gently with a bunsen burner.

(a) After the flask was heated for 3 minutes, what would you observe happening in the trough of water?

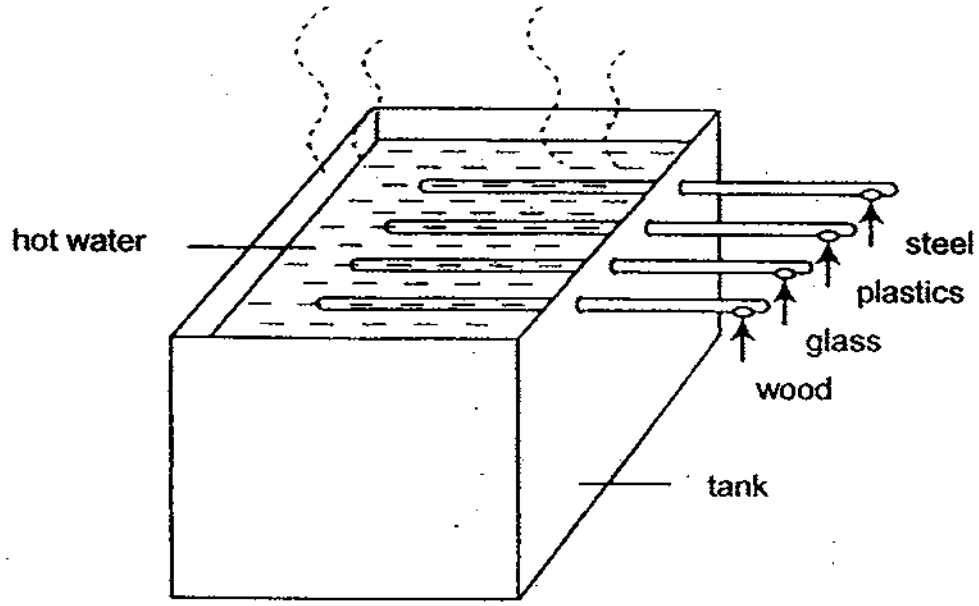
[1]

(b) Give a reason for your observation in part (a)

[2]

Score	
	3

44. Four rods of the same length but different materials are attached to a tank filled with hot water as shown in the diagram below.



Four thumbtacks are held on to the ends of the four rods with wax. As the rods get heated up, the thumbtacks on the ends of the rods begin to fall off one by one.

(a) Which thumbtack will fall off first?

[1]

_____

_____

(b) It was observed that the thumbtack on the end of the wooden rod fell off the last. Based on this observation, what can you conclude about the wooden rod when compared to the other rods?

[1]

_____

_____

End of Paper

Score	
	2

ANSWER SHEET

EXAM PAPER 2009

SCHOOL : NAN HUA PRIMARY
SUBJECT : PRIMARY 5 SCIENCE

TERM : SA1

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

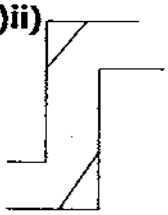
Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
3	3	1	4	3	3	2	3	3	3	1	3	4

31)a)It was to cool the plastic.
b)The water vapor from the hot water came in contact with the cool plastic sheet and condensed into water droplets.

32)a)They are spore bags.
b)The polypody fern reproduced from the spores contained in the spore bags.

33)a)The fish tanks are placed in different location.
b)He used two different kind of fish.

34)a)Surface C. It allows most light to pass through it.
b)ii)



i)Light travels in straight lines.

35)a)Her right hand will feel cool and her left hand will feel warm.
b)The thermometer shows the accurate temperature.

36)a)Bathing.
b)The household should not let the water run when soaping their bodies.

37)a)The higher the temperature, the faster it splits.
b)Fruit E.
c)To prevent over crowding near the parent plant so as to prevent the young plants from having to compete for water, nutrients sunlight and space.

38)a)The longer the wingspan, the longer it takes to reach the ground.
b)i)Water.
ii)It traps air for it to float.

39)a)C.
b)J is Corrine niece.
c)B is F father.

40)a)The embryo will develop into a foetus in the womb.
b)Bigger the animal the longer the gestation period.

41)a)Not b)T c)T d)F e)Not f)F

42)a)The further the doll from the torch, the height of the shadow decreases.
b)The darkness intensity off the shadow.
c)Glass is trans parent.

43)a)Bubbles will emerge in the water.
b)When the flask is heated, the air inside the flask gains heat and expands and escapes through the tube into the water as bubble.

44)a)The thumbtack on the steel rod.
b)It is best insulator among the four materials.