Name : _____( )

Class : Primary 4 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL

SIMPLE IN VIRTUE

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Primary 4

Semestral Assessment I – 2008

SCIENCE

BOOKLET A

8th May 2008

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

30 questions
60 marks

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

Section A : (30 x 2 marks)

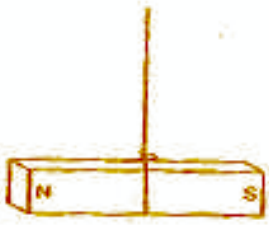
For each question from 1 to 30, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet provided.

1. The diagram below shows a U-shaped magnet.

Which part of the magnet has the strongest pull?

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

2. Alan was lost in a jungle during a hiking trip. He suspended a magnet in the air as shown.



What was he trying to do with the magnet?

(1) Attract other magnets.
(2) Find the right direction.
(3) To strengthen the magnet.
(4) Find out the time of the day.

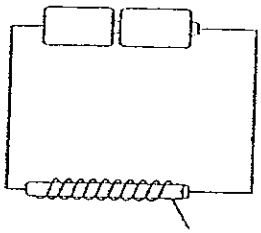
3. A magnet will lose its magnetism when it is being _____.

A: hammered by a hammer
B: heated under a hot flame
C: stroked with a piece of wood
D: dropped from a certain height repeatedly

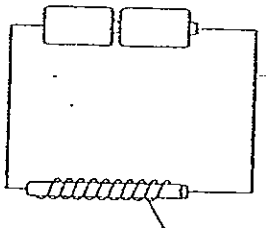
(1) A and B only
(2) C and D only
(3) A, B and D only
(4) All of the above

4. Which one of the following rods will be able to attract the most number of paper clips?

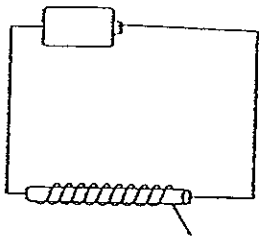
(1)



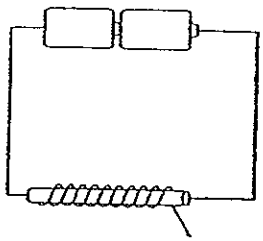
(2)



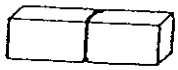
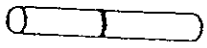
(3)



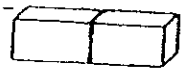
(4)



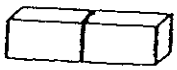
5. Which one of the following will <u>not</u> show either a pushing or a pulling force when the magnet is moved towards the item?

(1)  

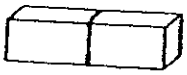
magnet Magnetised iron rod

(2)  

magnet steel paper clip

(3)  

magnet copper wire

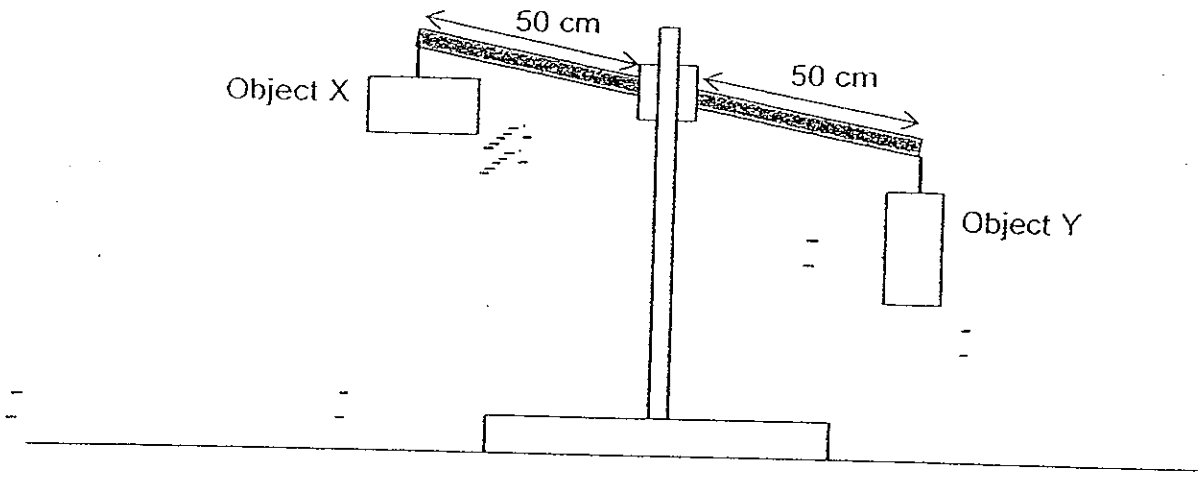
(4)  

magnet iron nail

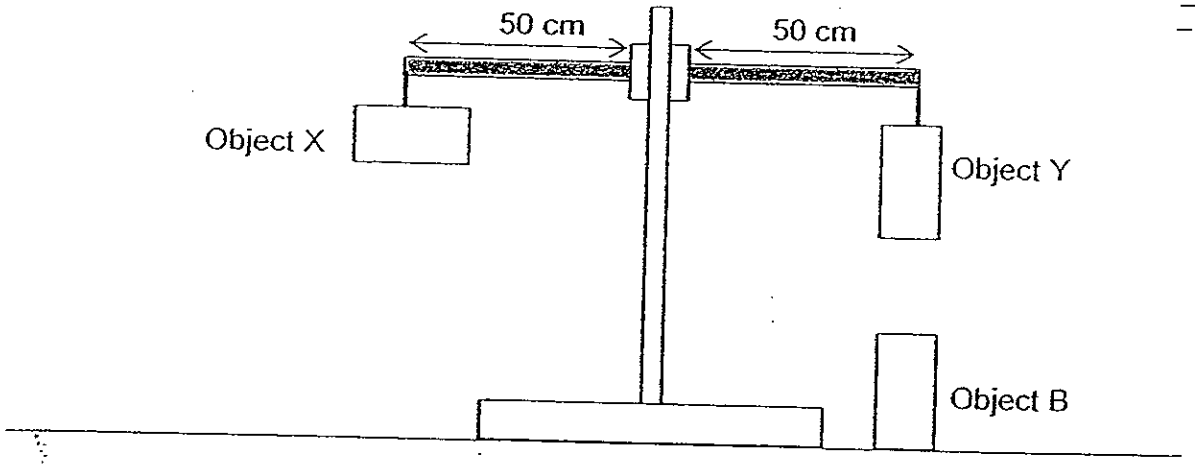
6. Which one of the following objects does <u>not</u> make use of magnets?

(1) Battery
(2) Telephone
(3) Refrigerator
(4) Metal door stopper

7. Meiling put 2 objects, X and Y, on a lever and the result is shown in the diagram below.



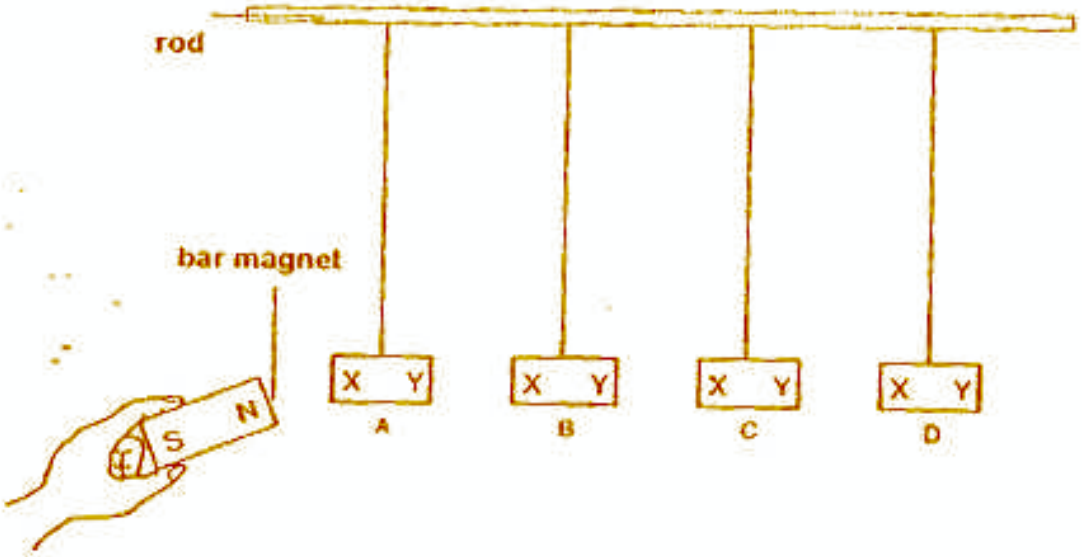
She then placed Object B directly below Object Y as shown in the diagram below and noticed that the lever was now balanced.



What could have caused the lever to be balanced?

(1) Object X pulls Object Y.
(2) Object X is heavier than Object Y.
(3) The mass of Object X and Y are equal.
(4) The like poles of Objects B and Y are facing each other.

8. Four different objects, A, B, C and D, are hung from a rod as shown below. The north pole of a bar magnet is brought near the end of each object, marked X and Y.



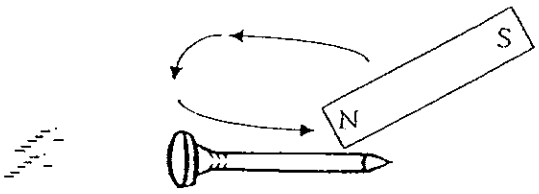
The table below shows the observations made during the experiment.

Object	Observations	
	North Pole and X	North Pole and Y
A	attract	attract
B	repel	attract
C	no reaction	no reaction
D	attract	repel

Based on the above observations, which of the following conclusion is/are correct?

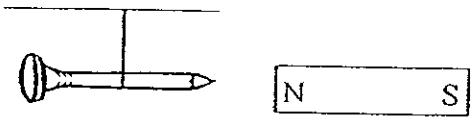
(1) C is made of iron.
(2) B and D are magnets.
(3) A is made of aluminium.
(4) A, B and D are magnets.

9. A nail is magnetised by using the touch method, as shown below. The nail is then suspended from a string. A magnet is brought near the nail.

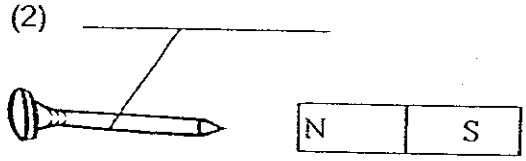


Which one of the following correctly shows what happens when the magnet is brought near the nail?

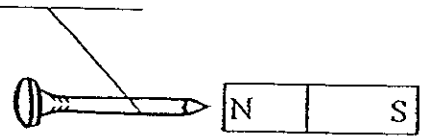
(1)



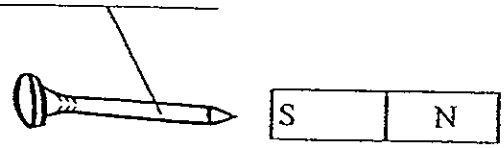
(2)



(3)



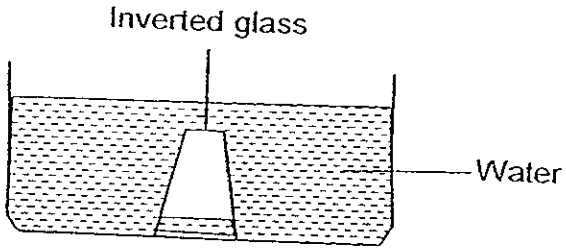
(4)



10. Which one of the following is <u>not</u> a matter?

(1) Ink
(2) Clay
(3) Sound
(4) Water vapour

11. Rashid took an empty glass, inverted it and pushed it into a basin of water as shown in the picture below. He noticed that a small amount of water entered the glass.



This shows that air _____.

(1) has mass
(2) can be compressed
(3) has a definite shape
(4) has a definite volume

12. Study the classification table below carefully.

Solid	Liquid	Gas
Clay Wooden block Flour	Orange juice Water plasticine	Oxygen Carbon dioxide Water vapour

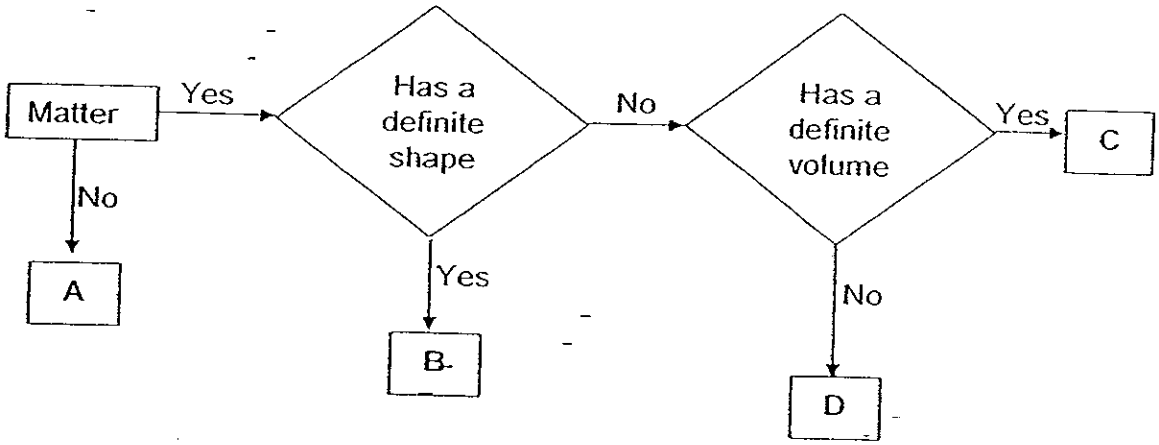
Based on the classification table above, which one of the following objects has been grouped wrongly?

(1) clay
(2) flour
(3) plasticine
(4) water vapour

13. P, Q, R and S are matters with the characteristics shown by a tick (✓) in the table below.

	P	Q	R	S
Occupies space	✓	✓	✓	
Can be compressed		✓		
Takes the shape of the container it is in	✓	✓		

Based on the information above, where should Objects P and Q be classified in the flowchart below?



	Object P	Object Q
(1)	A	B
(2)	B	C
(3)	C	D
(4)	D	A

14. Alice tried to fit a book into her jewellery box but she couldn't. But when she tried to fit a sponge into the jewellery box, she found that she could fit the whole sponge in it. What could be the reason?

(1) Sponge is not a solid.
(2) Sponge can be compressed.
(3) Sponge has no definite shape and size.
(4) Sponge contains air that can be removed.

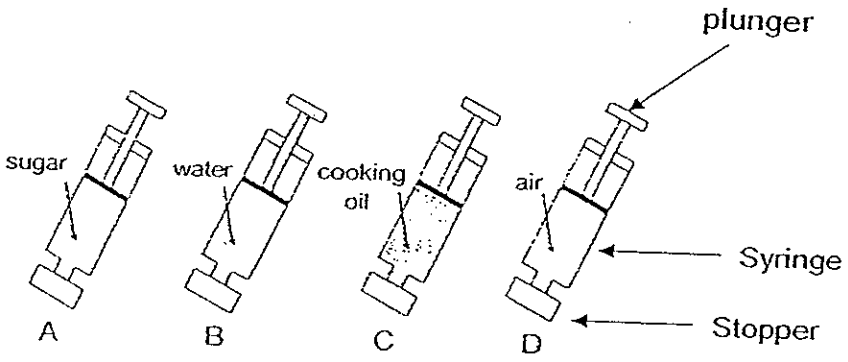
15. The statements below list out the characteristics of solid, liquid and gas.

A: All of them have mass.
B: Only solid has a definite shape.
C: All of them can be compressed.
D: Only soft solid can be compressed

Which of the following statements above is/ are true?

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

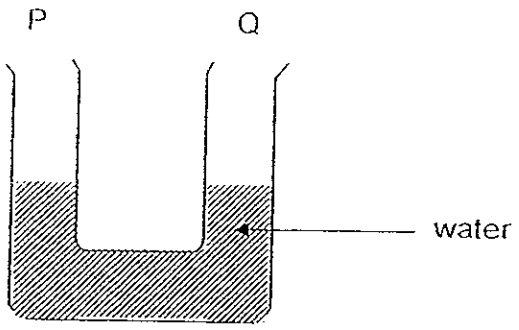
16. The diagram below shows 4 syringes filled with different matters.



Which plunger can be pushed in?

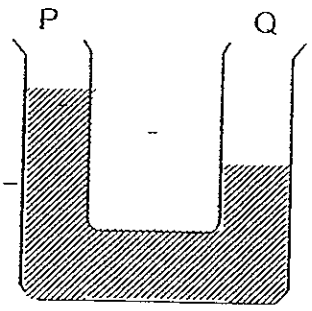
(1) A
(2) B
(3) C
(4) D

17. Farhan filled a tube with water as shown below.

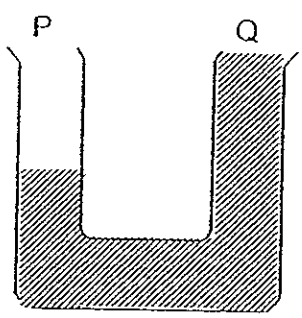


Where would the new water level be after he poured in some more water through P?

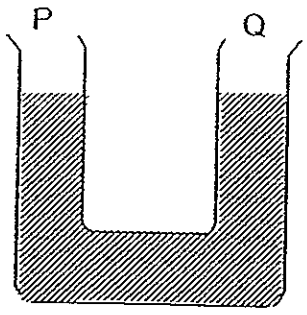
(1)



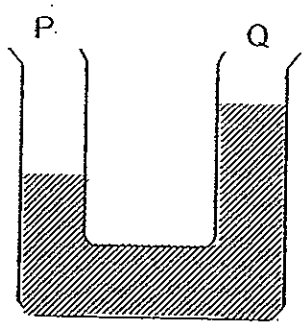
(2)



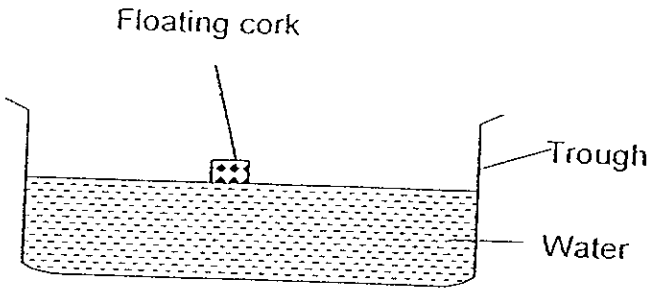
(3)



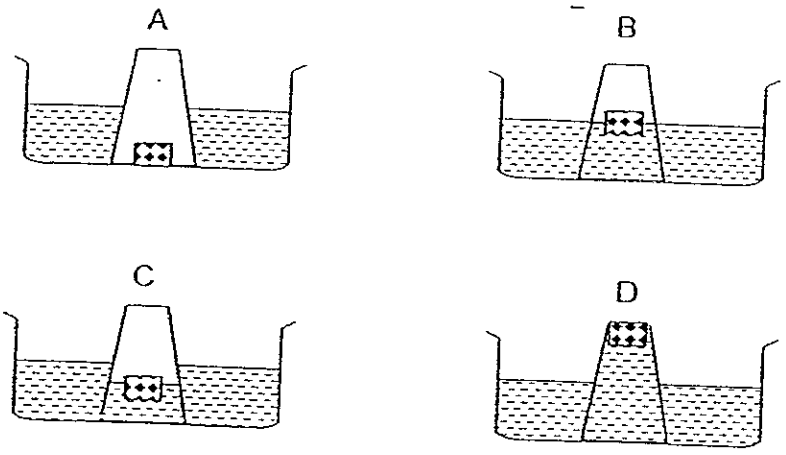
(4)



18. The diagram below shows a piece of cork floating in a trough of water.



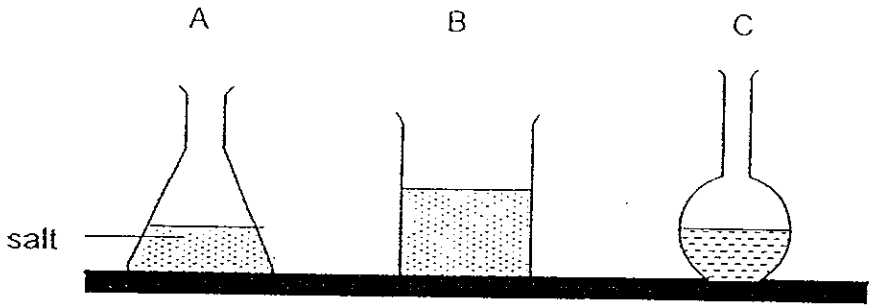
Plastic cup is inverted over the cork and held down into the trough of water.



Which one of the diagrams above shows the correct position of the cork?

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

19. Siti poured 10g of salt into each of the 3 different containers as shown below.



At the end of her experiment, she concluded that:

A: Salt has mass.
B: Salt takes up space.
C: Salt can be compressed.
D: Salt is not a solid as it has no definite shape.

Which of her conclusions are correct?

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

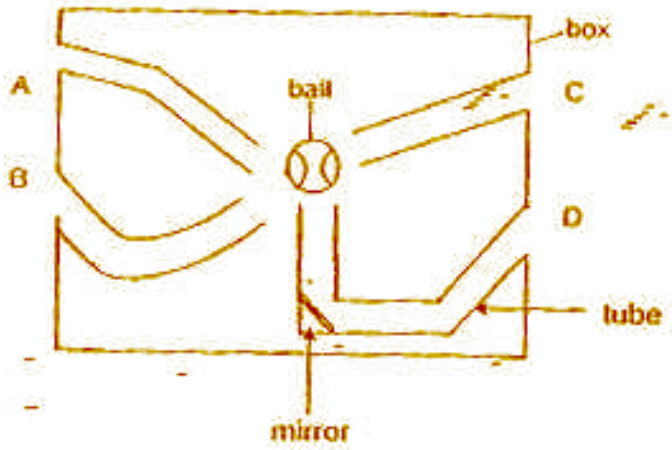
20. Which one of the following objects does <u>not</u> allow any light to pass through?

(1) Mirror
(2) Glass bottle
(3) Tracing paper
(4) Clear plastic sheet

21. Which of the following is <u>not</u> a source of light?

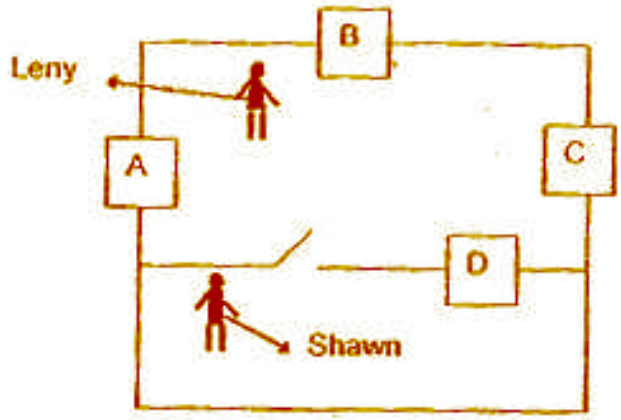
(1) Sun
(2) Battery
(3) Light bulb
(4) Burning candle

22. A ball was placed in the middle of a card board box as shown in the figure below. Four tubes, A, B, C and D, were placed in the box. Which of the tube(s) enable(s) us to view the ball?



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

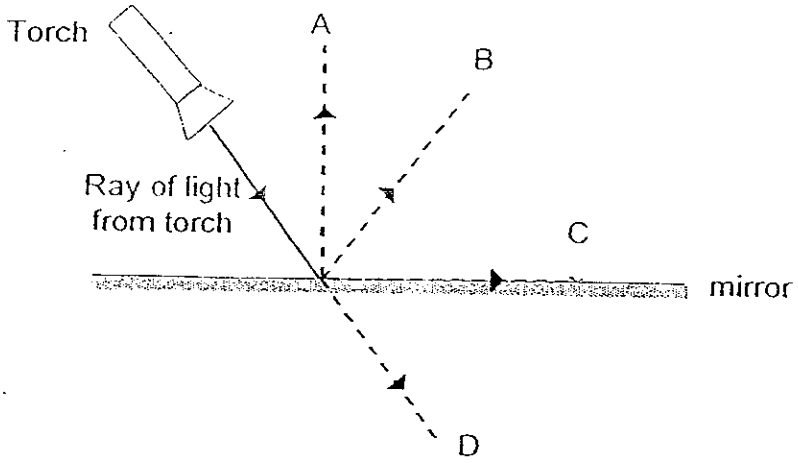
23. The picture below shows a room. Shawn is in one room and Leny in another.



Where on the wall A, B, C or D should a mirror be placed so that Shawn can see Leny in the other room from where he is?

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

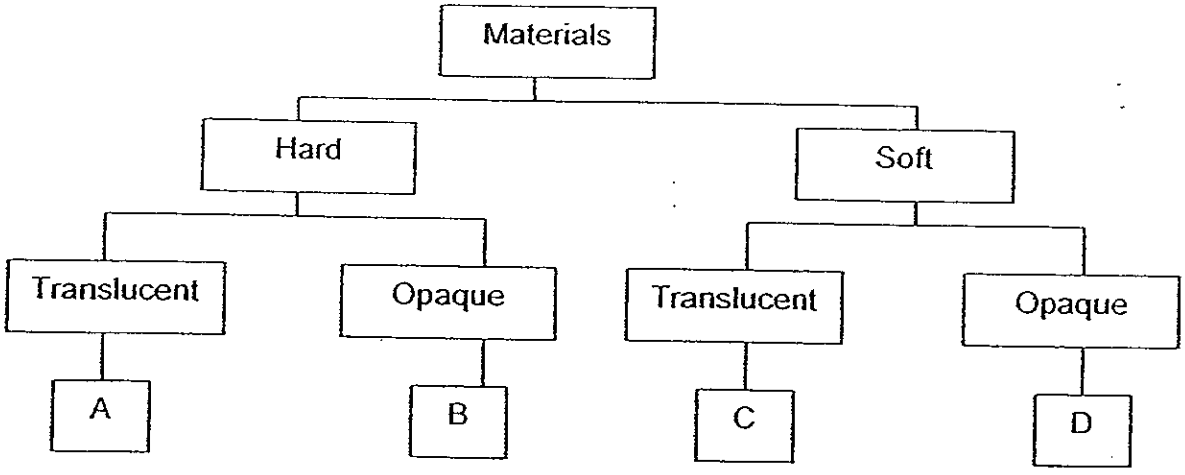
24. Study the diagram below carefully.



Which of the paths A, B, C or D, will the ray of light from the torch take after hitting the mirror?

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

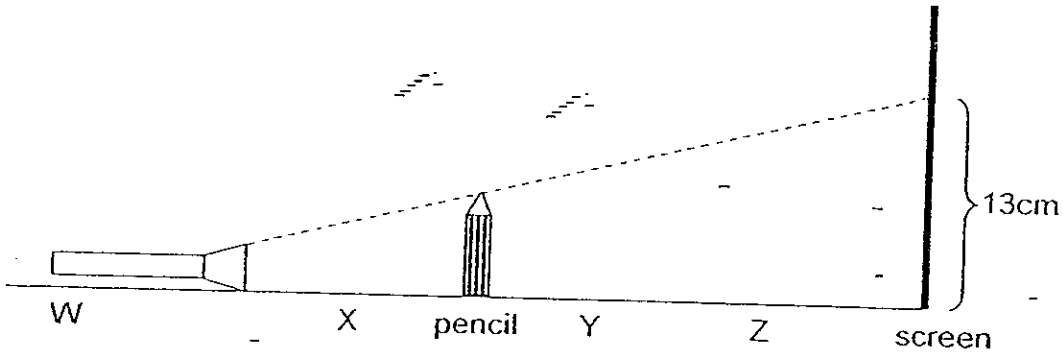
25. Study the classification chart below.



Where would you place the blue 'cellophane paper'?

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

26. Jennifer carried out an experiment to find out whether the position of the torch would affect the length of the shadow cast by the pencil. She marked the table with four points, W, X, Y and Z, in front of the screen. She then placed the torch and the pencil as shown below.

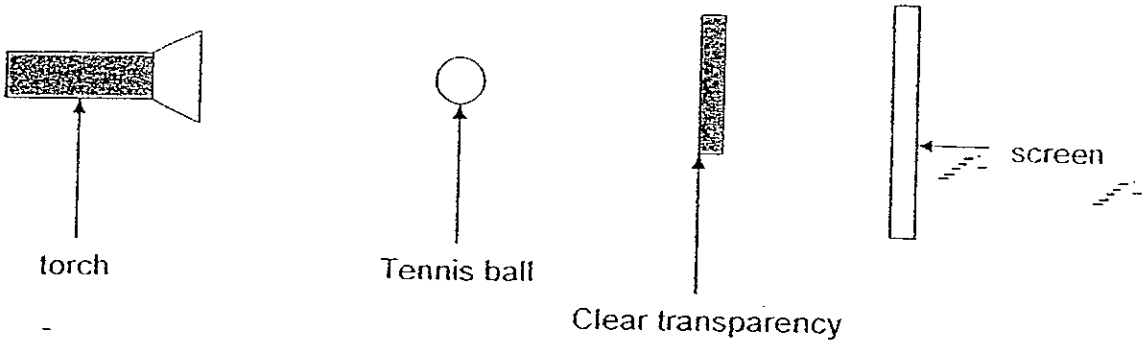


She noticed that the length of the shadow cast on the screen by the pencil was 13cm. She then placed the torch and pencil at different positions and recorded down her observations in the table below.

Which of the following could be the correct observation?

	Position of torch	Position of pencil	Length of shadow (cm)
(1)	W	Y	16
(2)	X	Y	9
(3)	Y	Z	18
(4)	X	Z	7

27. Fandi shone a torch at a tennis ball and a rectangular piece of transparency as shown below. A shadow was cast on the screen.



Which one of the following is the shadow most likely cast by the two objects on the screen?

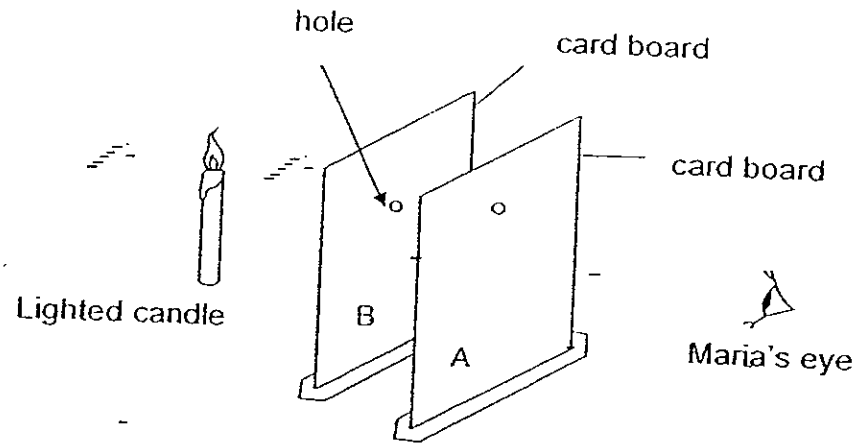
(1) 

(2) 

(3) 

(4) 

28. Maria placed a candle and two cardboards on a table as shown below. Each of the cardboard has a hole.



Maria cannot see the light from the candle flame when she looks through the holes in the two cardboards because _____.

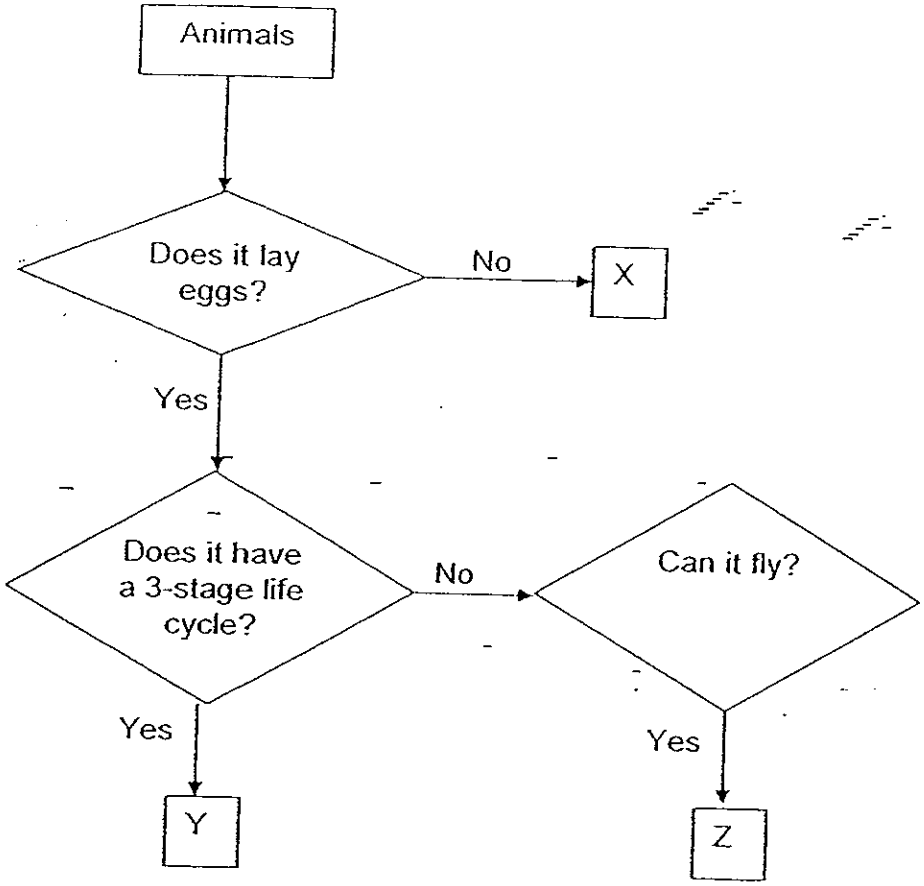
(1) the candle is too thin
(2) the cardboards are too thick
(3) the holes on the two cardboards are too small
(4) the holes on the board are not aligned in a straight line

29. Which of the following animals have a life cycle similar to the chicken?

A: Frog
B: Butterfly
C: Cockroach
D: Grasshopper

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

30. Study the flow chart shown below carefully.



What can the animals X, Y and Z be?

	X	Y	Z
(1)	Cow	Duck	Moth
(2)	Horse	Frog	Grasshopper
(3)	Grasshopper	Duck	Cow
(4)	Duck	Moth	Butterfly

******* END OF SECTION A *******

Name : _____( )

Class : Primary 4_____

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SIMPLE IN VIRTUE

STEADFAST IN DUTY

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Primary 4

Semestral Assessment I – 2008

SCIENCE

BOOKLET B

8th May 2008

Booklet A	60
Booklet B	40
Total	100

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

16 questions
40 marks

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

_____
Parent's Signature/Date

Section B: 40 marks

For questions 31 to 46, write your answers in this booklet.

The number of marks available is shown in the brackets [ ] at the end of each question or part question.

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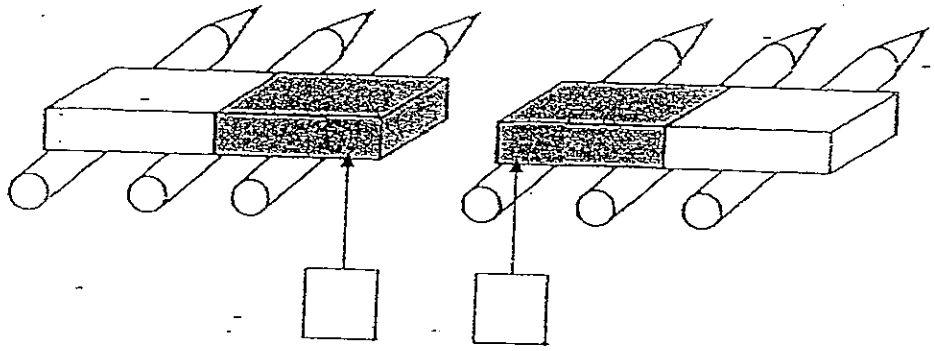
31. The diagram below shows two magnets positioned on the pencils.

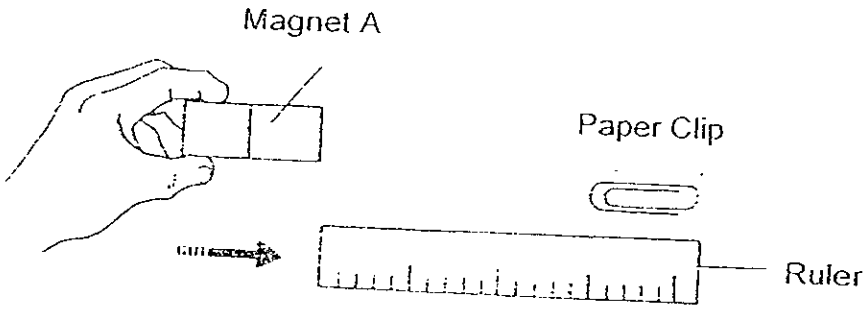


When both the magnets were brought close to each other, they moved away from each other.

(a) Label the poles of the magnets on the diagram above. [1]

(b) What property of magnet does this experiment show? [1]

32. Boon Kiat conducts an experiment using four bar magnets of different thickness. He moves each magnet slowly towards a paper clip as shown below.



(a) What is the aim of his experiment? [2]

He then measures the distance at which the paper clip is attracted to the magnet and records it down in the table shown below.

Magnet	Thickness (cm)	Distance at which the paper clip is attracted to the magnet (cm)
A	2	3
B	4	5
D	12	10
C	8	6

(b) Based on the information in the table above, what is the relationship between the thickness of the magnet and its magnetism? [2]

33. Classify the following objects according to their magnetic properties.

[3]

Steel fork	iron rod	copper wire
aluminium foil	plastic ruler	wooden chopsticks

Magnetic objects	Non-magnetic objects

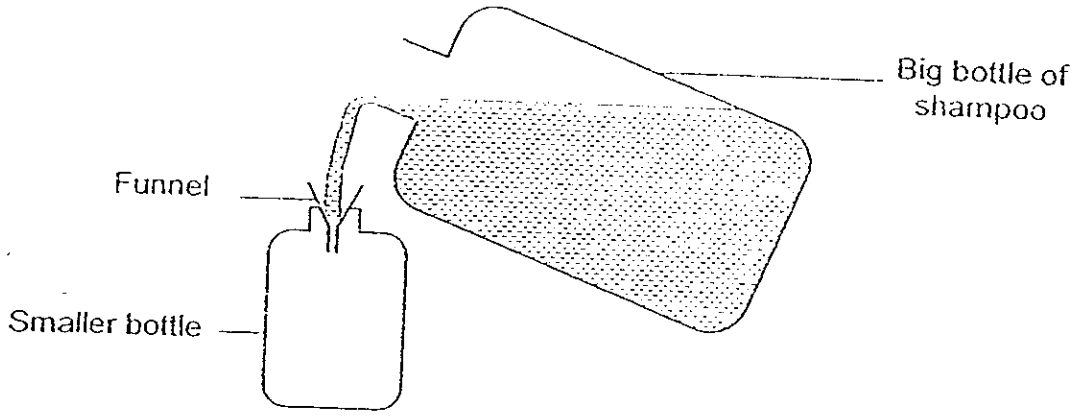
34. Three containers, S, T and U, are pumped with 300 cm^3 of air each as shown in the table below.

Container	Volume of container (cm^3)	Volume of air pumped in (cm^3)
S	500	300
T	300	300
U	100	300

(a) In which container is the air compressed? [1]

(b) Will container S be completely filled with air? Explain your answer. [1]

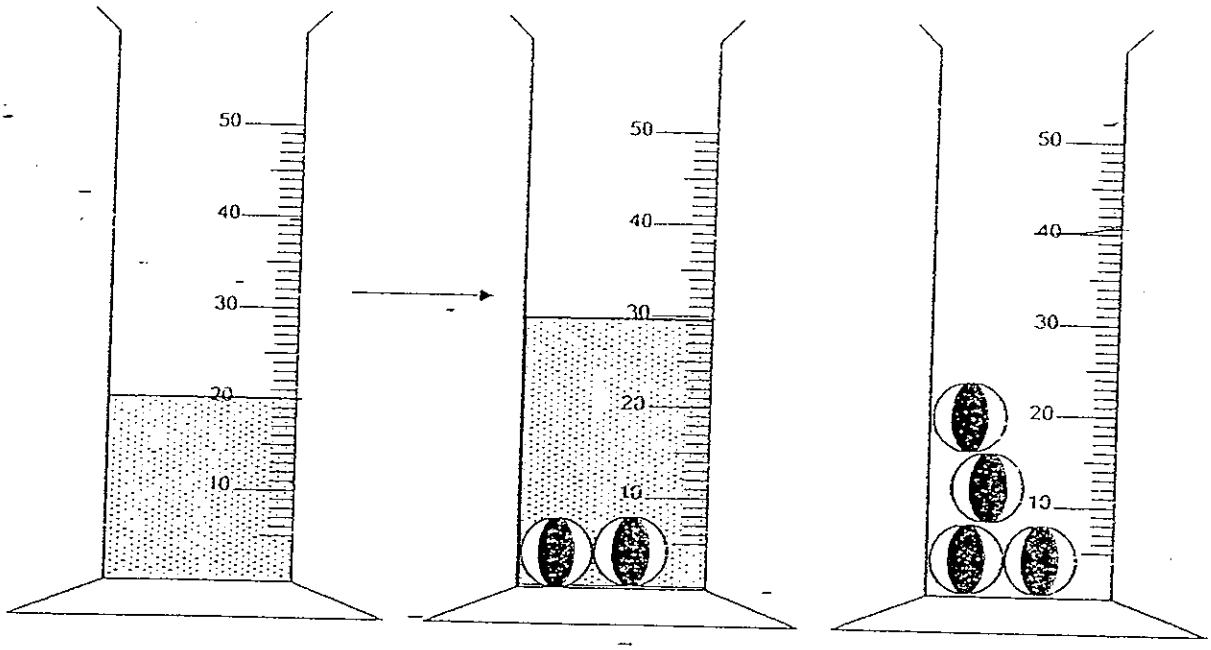
35. Lily wanted to transfer some shampoo from a bigger bottle into a smaller plastic bottle as shown in the diagram below.



(a) What would happen when she continues to pour the shampoo when the smaller bottle is full? [1]

(b) What property of liquid does this show you? [1]

36. Kamsiah filled a glass cylinder with some water. She noticed that the water level in the jar rose each time she put in a marble. The diagram below shows the water level after a different number of marbles were put into the glass cylinder.



(a) Draw the new water level in the glass cylinder above when she put in 4 marbles. [1]

(b) What does this show you about the properties of the marble? [1]

_____

37. Jonathan seals one end of a straw with his finger and pushes the straw into some water as shown below.

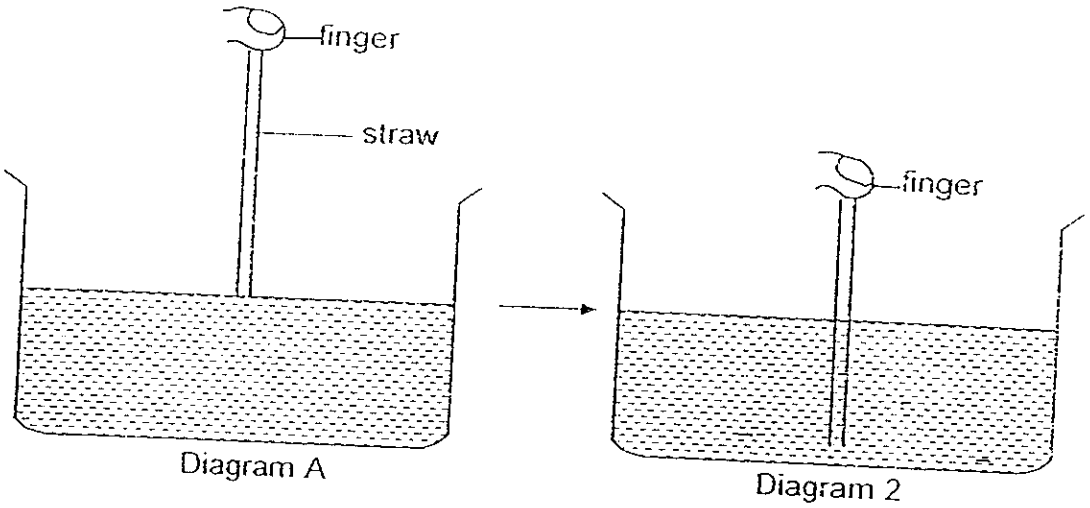


Diagram A

Diagram 2

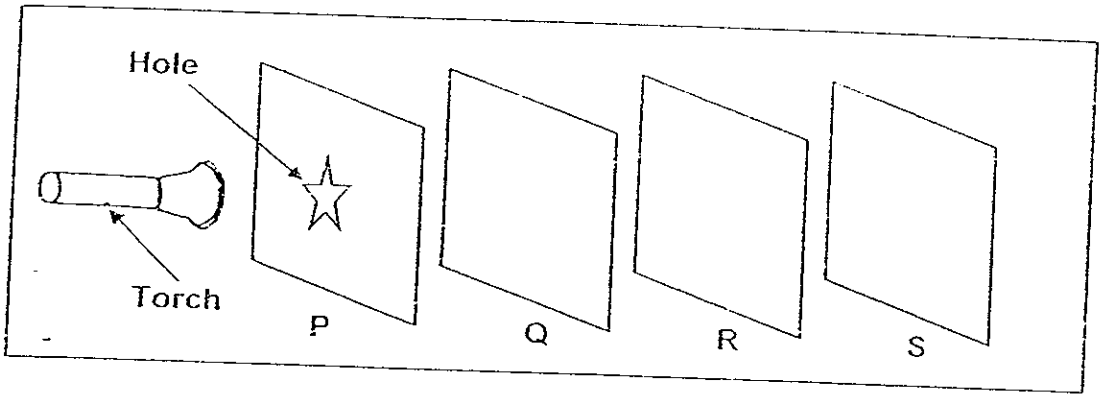
(a) He realized that the water does not fill the straw. Explain why this is so?

[2]

(b) What must Jonathan do if he wants the straw to be filled with water?

[1]

38. Jamilah carried out an experiment to find out whether light can pass through certain materials. She set up the experiment in a dark room.



She arranged 4 sheets of different materials, P, Q, R and S, one behind another in a straight line. She also cut a hole in sheet P before shining the torch through the hole. She observed a bright star-shaped patch of light on sheet R.

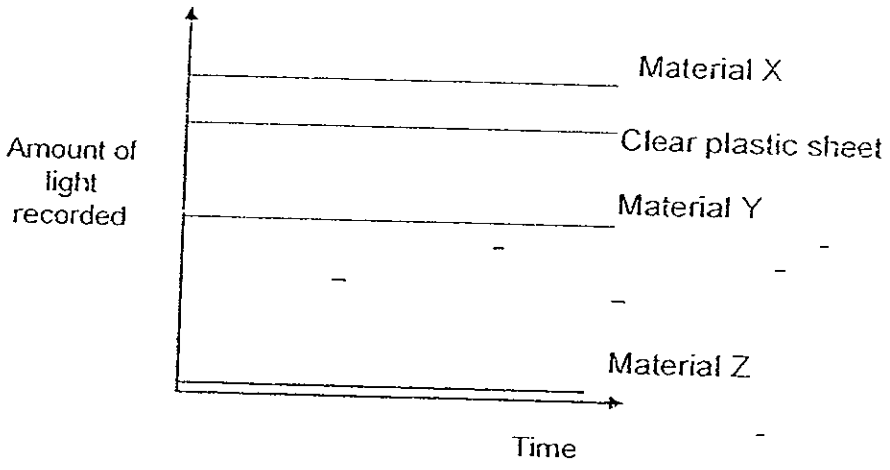
Tick (√) in the table below, the properties of the materials that sheets, P, Q, R and S, are possibly made of?

[2]

Materials	Allows light to pass through	Does not allow light to pass through	Not possible to tell
P			
Q			
R			
S			

39. Kumar conducted an experiment to investigate the amount of light that can pass through three materials, X, Y and Z of the same thickness. He shone a torch through the three materials. He used a light sensor to measure how much light has passed through each of them.

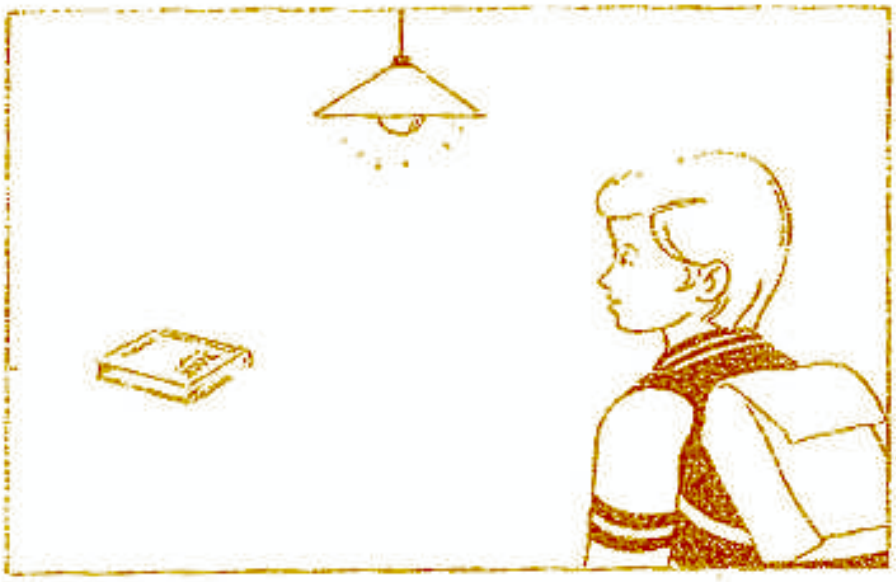
He drew a graph to show the amount of light recorded by the light sensor.



(a) Based on the graph above, which material, X, Y or Z, is most suitable for making the window of a room that is along a corridor? [1]

(b) Explain your answer in (a). [2]

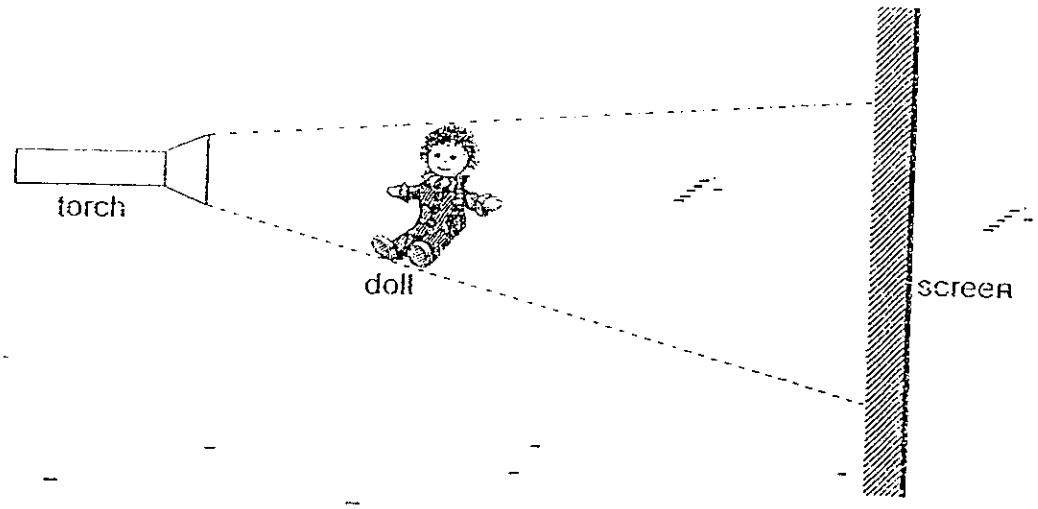
40. Study the diagram below carefully.



(a) Draw arrows to represent the path taken by light in the picture above to show how Jaya is able to see the book. [1]

(b) What property of light allows Jaya to see the book? [1]

41. Tanya shone a torch at her doll and observed the shadow that is formed on the screen as shown below.



She realised that the shadow of the doll is big and not sharp.

(a) Without moving the torch, what can she do to make the shadow of the doll sharper? [1]

_____

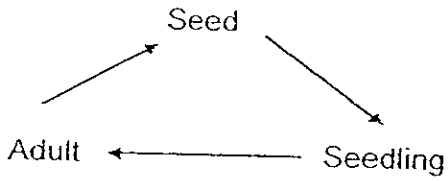
_____

(b) How is a shadow formed? [1]

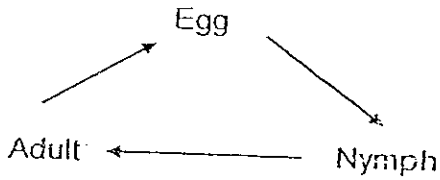
_____

_____

42. Study the life cycles shown below carefully.



Life cycle A



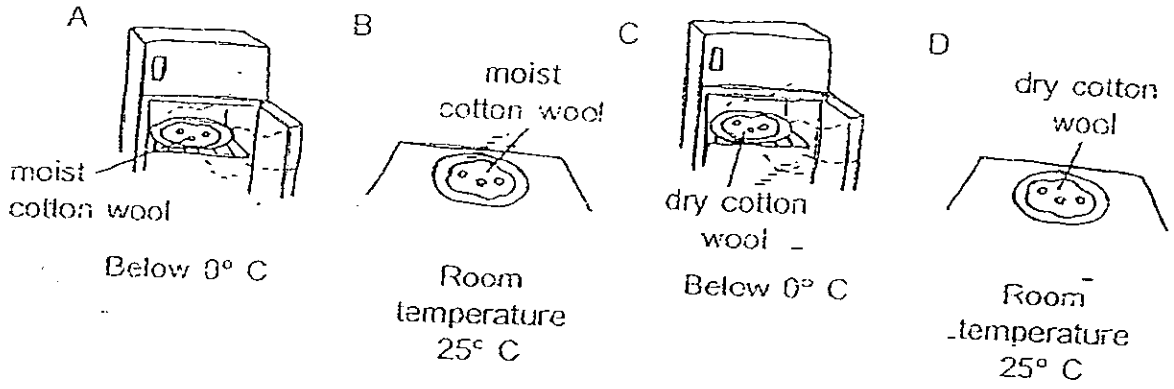
Life cycle B

(a) State one similarity between the two life cycles. [1]

(b) State one difference between the two life cycles. [1]

(c) Name an organism which has life cycle B. [1]

43. Amelia carries out an experiment as shown below.



(a) In which of the set-ups will the beans germinate? [1]

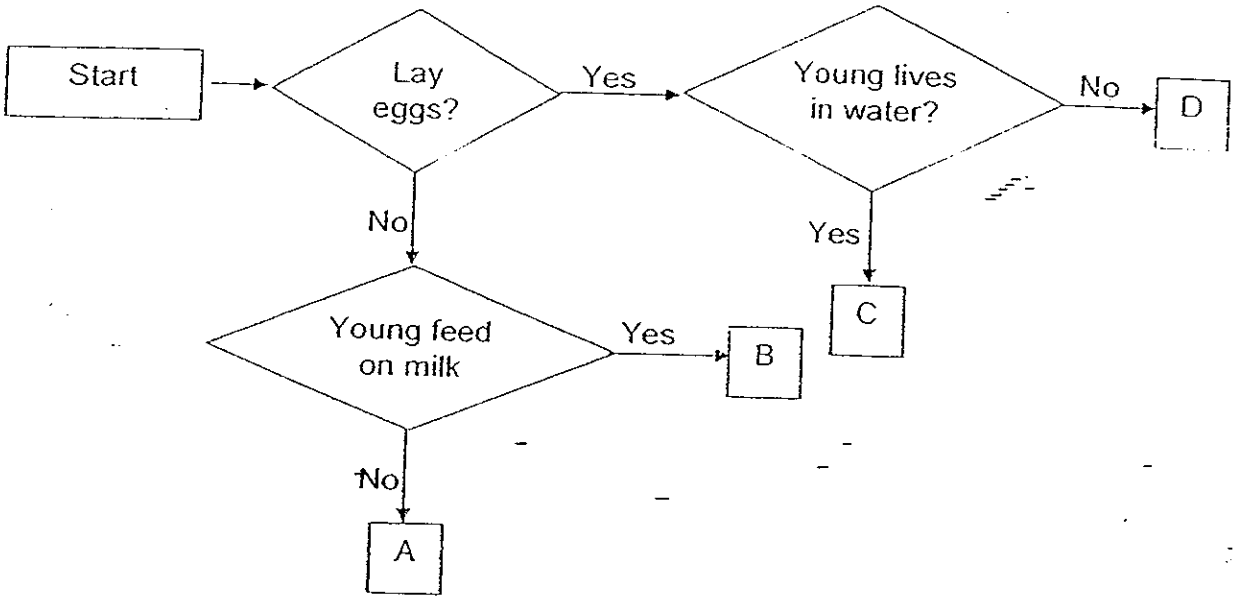
_____

(b) Explain your answer in (a). [1]

_____

_____

44. Study the flow chart below carefully.



(a) What is the similarity between Animals A and B? [1]

_____

_____

(b) Based on the flow chart, which animal could A, B, C and D be? [2]

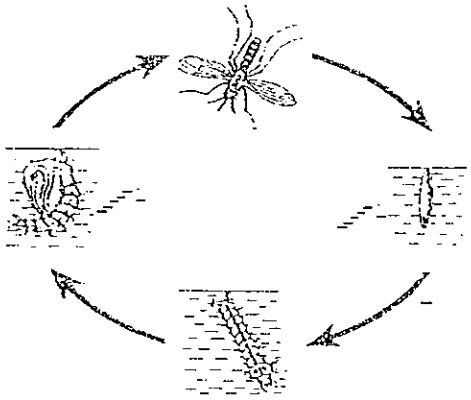
(i) Chicken: _____

(ii) Frog : _____

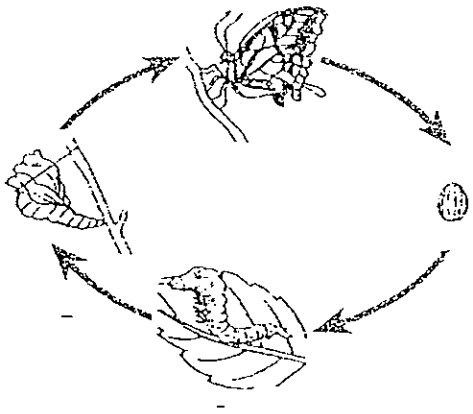
(iii) Guppy : _____

(iv) Goat : _____

45. Study the life cycle below carefully.



Life cycle of a mosquito



Life cycle of a butterfly

(a) State one difference between the larval stages of the two life cycles. [1]

_____

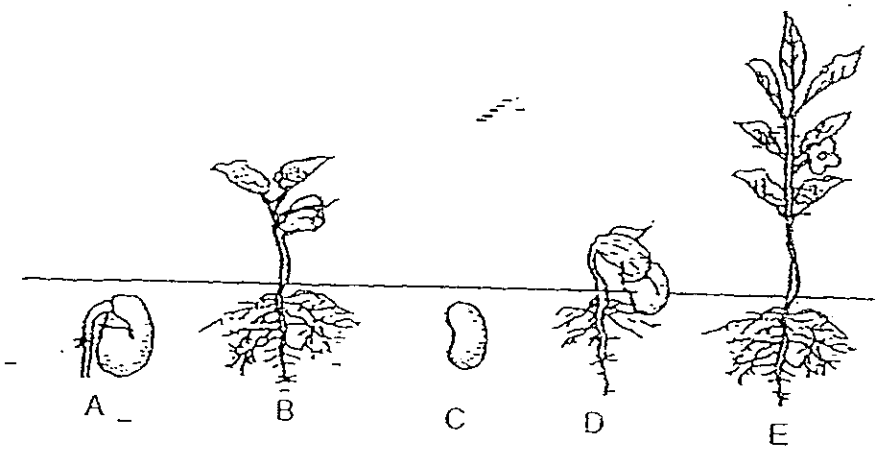
_____

(b) State one similarity between the life cycles of the mosquito and the butterfly. [1]

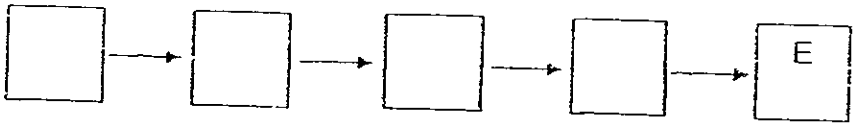
_____

_____

46. Study the diagram below carefully.



(a) Arrange the stages in the correct order of growth by writing the letters, A, B, C and D, in the boxes below. [2]



(b) At stage D, where does the seedling get its food? [1]

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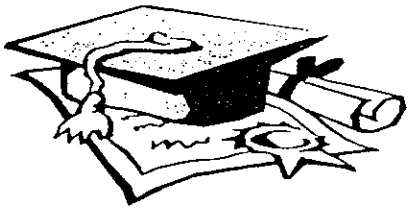


ANSWER SHEET

EXAM PAPER 2008

SCHOOL : CHIJ PRIMARY SCHOOL
SUBJECT : PRIMARY 4 SCIENCE

TERM : SA 1

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

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

31)a)N, N
b)The experiment show that like poles repel.

32)a)To find out if the thicker magnet has a greater magnetic force.
b)Clip from the longest is the strongest.

33)

Magnetic objects	Non-magnetic objects
Steel fork	Plastic ruler
Iron rod	wooden chopsticks
	Aluminium foil

34)a)Container U.
b)Yes. Because air have no definite volume.

35)a)The shampoo will over flow.
b)It has a definite volume.

36)a)40ml
b)Marble occupies space and has a definite volume.

37)a)The air occupies space therefore preventing the water from going in.

b)Remove the finger.

38)P: Does not allow light to pass through.

Q: Allow light to pass through.

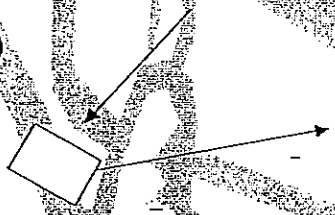
R: Does not allow light to pass through.

S: Not possible to tell.

39)a)Material Y.

b)It is translucent and allows only some light to pass through so people cannot see the inside of the room.

40)a)



b)Light can be reflected.

41)a)Move the doll closer to the screen to create a small and sharper shadow.

b)Shadow is form when the path of light is blocked by an opaque object.

42)a)Both has 3 stage of life cycles.

b)The young for life cycle A is a seedling while B is a nymph.

c)Crock roach.

43)a)Set-up B will germinate.

b)It has the right temperature and it has water.

44)a)They both do not lay eggs.

b)i)D ii)C iii)A iv)B

45)a)The lava of the mosquito lives in water but the larva of a butterfly lives on land.

b)They have four stages in their life cycles.

46)a)C→a→D→B→E

b)It gets its food from the seed leaves.