HENRY PARK PRIMARY SCHOOL

PRIMARY 3

SCIENCE

BOOKLET A (40 MARKS)

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Shade your answers on the Optical Answer Sheet (OAS) provided.

Name: _____ ( )

Class: Primary 3 ( )

Date

Total Time for Booklets A, B & C : 1 h 30 min

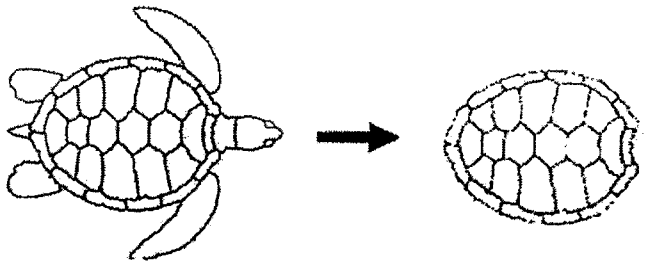
Booklet	Marks
A	/ 40
B + C	/ 40
Total (A+B+C)	/ 80

Parent's Signature: _____

Section A: (20 x 2 marks = 40 marks)

For each question from 1 to 20, 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. When John touched a turtle, it felt threatened and retreated into its shell, as shown in the diagram below.



Which one of the following characteristics of living things does the turtle show?

(1) Living things grow.
(2) Living things reproduce.
(3) Living things respond to changes.
(4) Living things need air, food and water.

( )

2. Look at the classification table below.

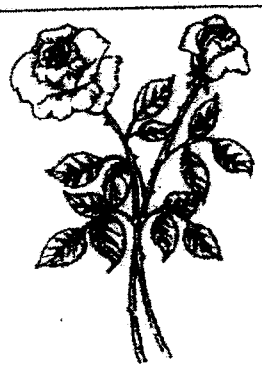
Group 1	Group 2
shorts	knife
skirt	shirt
towel	fork
pants	scissors

Which one of the following is classified wrongly?

(1) fork
(2) shirt
(3) knife
(4) scissors

( )

3. Study the classification table shown below.

Group X	Group Y
 rose plant	 bird's nest
 hibiscus	 rabbit's foot

How have the plants been classified?

	Group X	Group Y
(1)	land plants	water plants
(2)	flowering	non-flowering
(3)	strong stem	weak stem
(4)	reproduce by spores	reproduce by seeds

( )

4. Look at the two groups of animals.

Which one of the following characteristics is used to group the animals?

(1) size of body
(2) types of food
(3) body covering
(4) where they live

( )

5. Three students made the following statements on fungi.

Xin Yan : Yeast is a type of fungi.
Yasman : Fungi reproduce from spores.
Zachary : Fungi make their own food.

Which of the following statements about fungi are correct?

(1) Zachary and Yasman only
(2) Xin Yan and Yasman only
(3) Xin Yan and Zachary only
(4) Yasman, Xin Yan and Zachary only

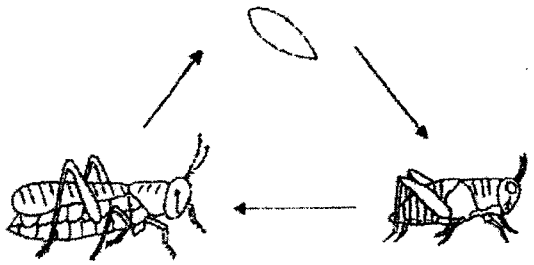
( )

6. Which of the following organisms can only be seen through a microscope?

(1) Bacteria and yeast
(2) Moss and yeast
(3) Mould and ferns
(4) Mushroom and bacteria

( )

7. The diagram below shows the life cycle of animal X.



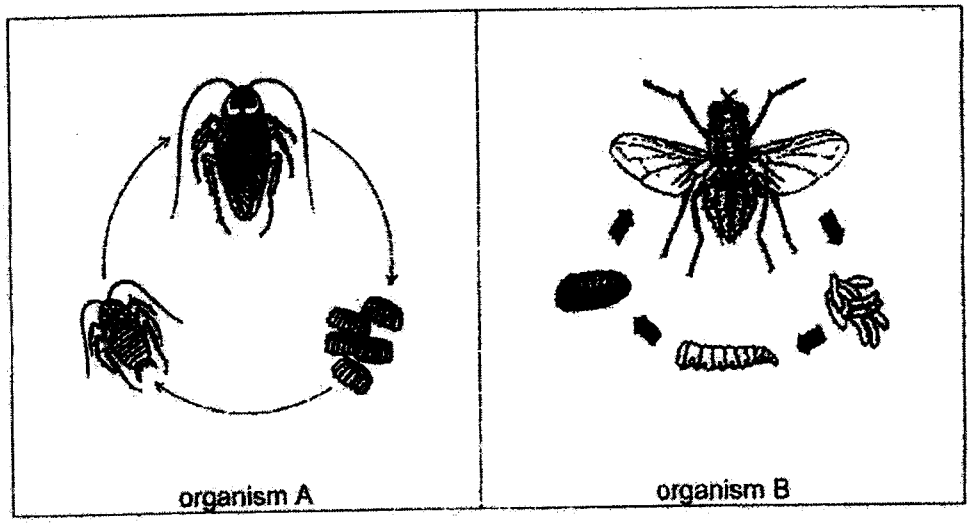
stage A

Which one of the following correctly describes animal X at stage A?

(1) Animal X does not eat at all.
(2) Animal X does not have wings.
(3) Animal X does not move around.
(4) Animal X does not respond to changes.

( )

8. The diagram below shows the life cycle of organism A and organism B.



organism A

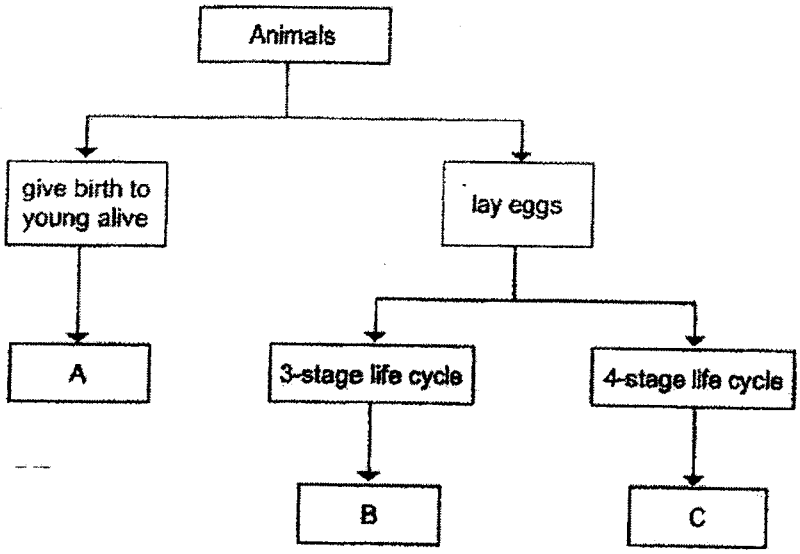
organism B

Which statement is **not** correct?

(1) Organism A has three stages in its life cycle.
(2) Organism B has four stages in its life cycle.
(3) The young of organism A resembles the adult.
(4) The young of organism B resembles the adult.

( )

9. Study the classification table below.

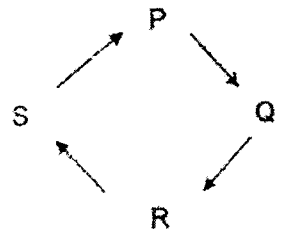


Which one of the following correctly identifies A, B and C?

	A	B	C
(1)	frog	cockroach	beetle
(2)	cat	mosquito	frog
(3)	horse	chicken	beetle
(4)	chicken	frog	cockroach

( )

10. The diagram below shows the life cycle of a butterfly.



Jenny observed and recorded the number of leaves eaten by a butterfly at the different stages, P, Q, R and S, in the table below.

Stage	Number of leaves eaten in a day
P	0
Q	0
R	0
S	8

Which stage is most likely the adult stage?

(1) P
(2) Q
(3) R
(4) S

( )

11. Michael has four objects K, L, M and N made of different materials. He measured the mass of each object before putting it in water. He recorded his observations in the table below.

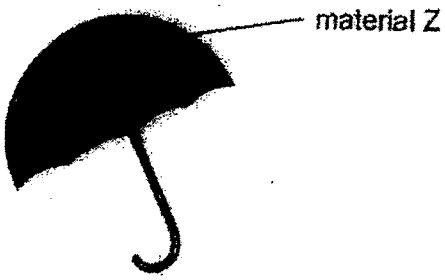
Object	Material	Mass (g)	Floats in water
K	metal	6	×
L	plastic	6	✓
M	wood	15	✓
N	plastic	18	×

Based on the information given, which one of the following statements is correct?

(1) Object N has the biggest mass.
(2) All objects made of plastic float.
(3) All objects with a small mass float.
(4) Object K has a bigger mass than object L.

( )

12. An umbrella protects the user from the Sun and rain.



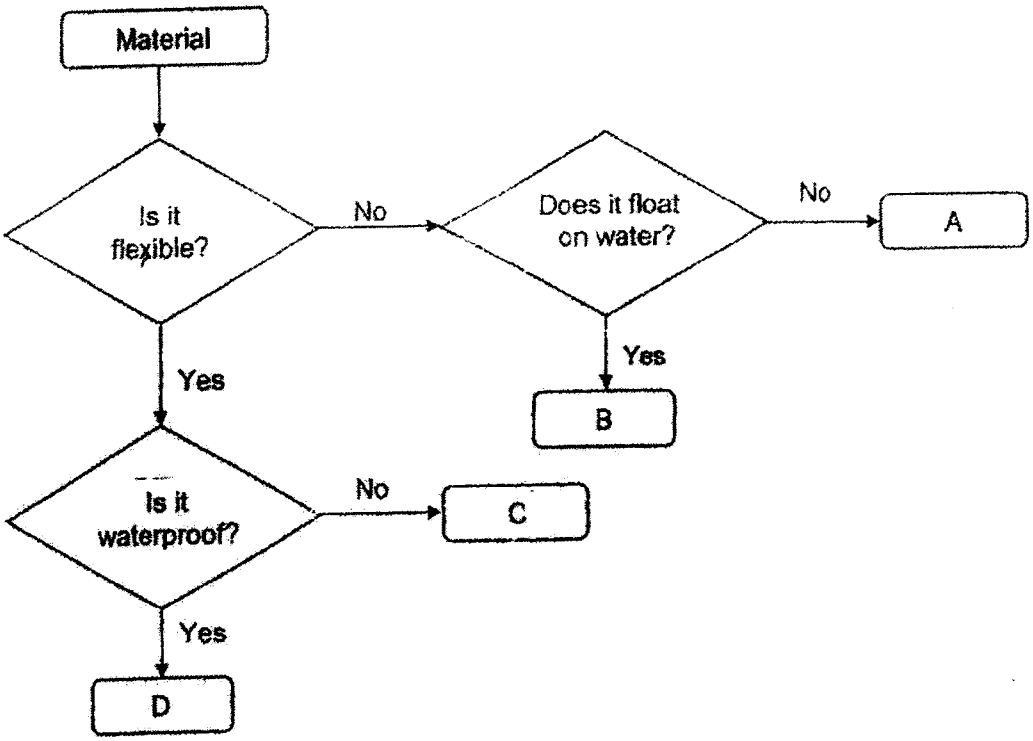
The table below shows some properties of materials.

	Properties
A	strong
B	waterproof
C	allows **most** light to pass through

Which of the following properties should material Z have?

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

13. Study the flowchart below.



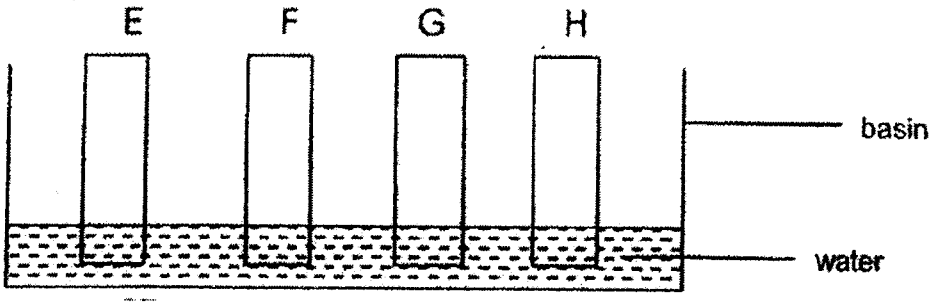
Based on the flowchart given, which material, A, B, C or D, is suitable for making part G of the camping tent shown below?

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

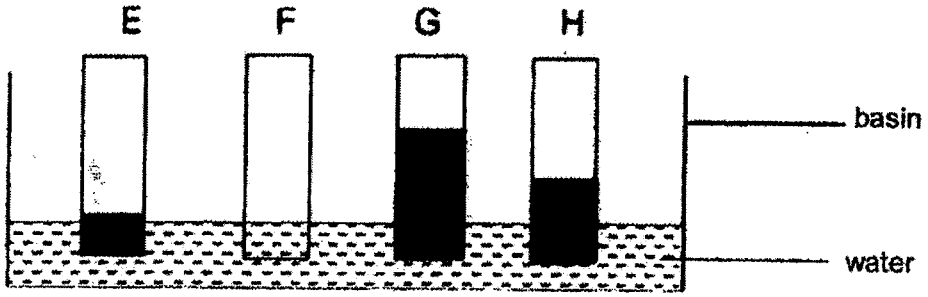
( )

14. Ahmad set up an experiment to find out which material, E, F, G or H absorbed the most amount of water.

He placed four similar strips of materials E, F, G and H into a basin of water as shown below.



The diagram below shows the strips of materials after 30 minutes. The black patches represent the water absorbed by the materials.

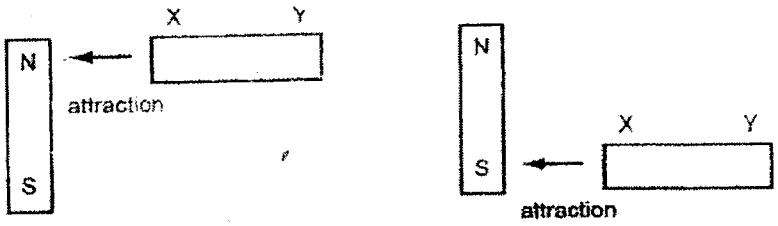


Which material is **most** suitable to make a bath towel?

(1) E
(2) F
(3) G
(4) H

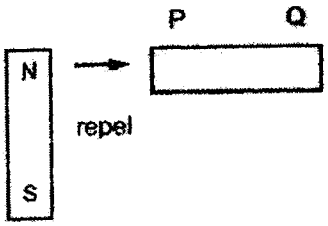
15. A metal rod XY is placed near a bar magnet.

End X is **attracted** when it is placed near to the North Pole (N) of the magnet, and also when it is placed near to the South Pole (S) as shown below.



Another metal rod PQ is also placed near the same bar magnet.

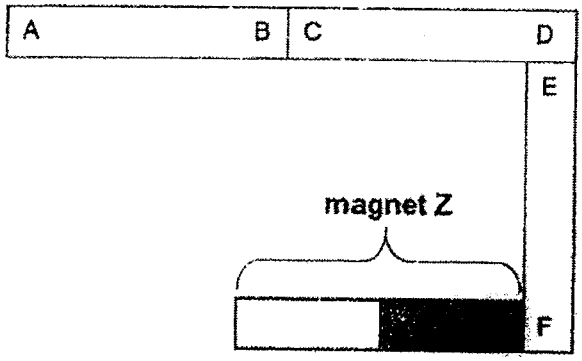
End P **repelled** when it is placed near to the North Pole (N) of the magnet as shown below.



Which of the following will be observed when **end Y** and **end P** are placed near to the South Pole (S) of the bar magnet?

	end Y near South Pole (S)	**end P** near South Pole (S)
(1)	attract	attract
(2)	attract	repel
(3)	repel	attract
(4)	repel	repel

16. Three similar bar magnets with their poles labelled A, B, C, D, E and F are arranged with the bar magnet Z as shown in the diagram below.



Which one of the following arrangements is possible?

(1) A B D C

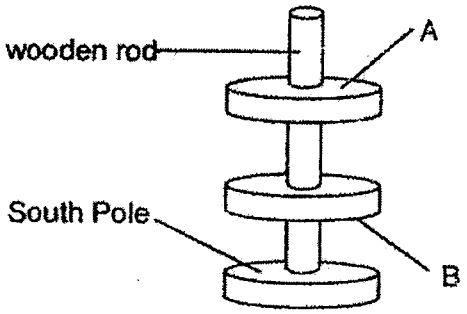
(2) C D F E

(3) F E A B

(4) C D A B

( )

17. The diagram shows the positions of 3 ring magnets when they are put through a wooden rod.

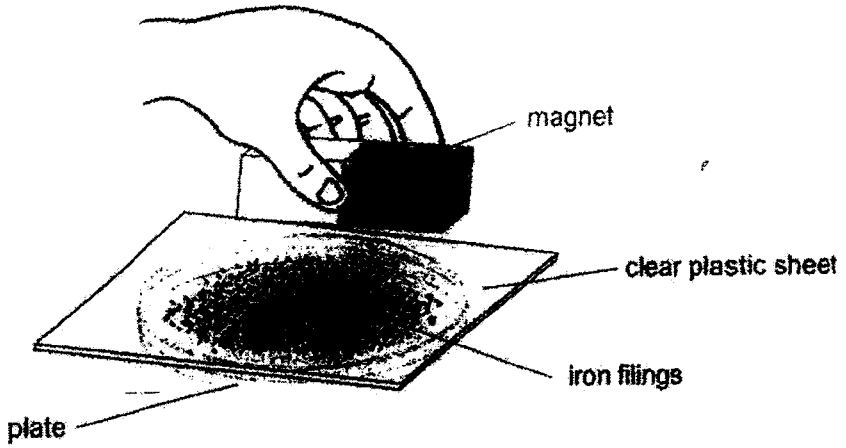


Which one of the following shows correctly the poles marked A and B?

	A	B
(1)	north	north
(2)	north	south
(3)	south	south
(4)	south	north

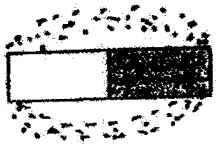
( )

18. Susan poured some iron filings into a plate and placed a clear plastic sheet over the plate as shown below. She then placed a bar magnet on the clear plastic sheet and observed that the iron filings were attracted to the magnet.

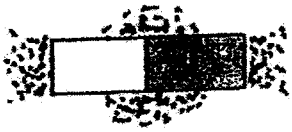


Which one of the following diagrams best shows what Susan would observe after some time?

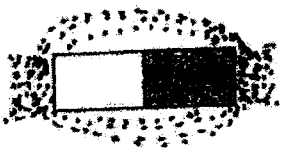
(1)



(2)



(3)



(4)

19. James conducted an experiment with magnets, S, T and U.

He brought each magnet 3 cm away from a container of paper clips and recorded the number of paper clips attracted to each magnet in the table below.

He then heated each magnet over a candle flame for 10 minutes and repeated the experiment.

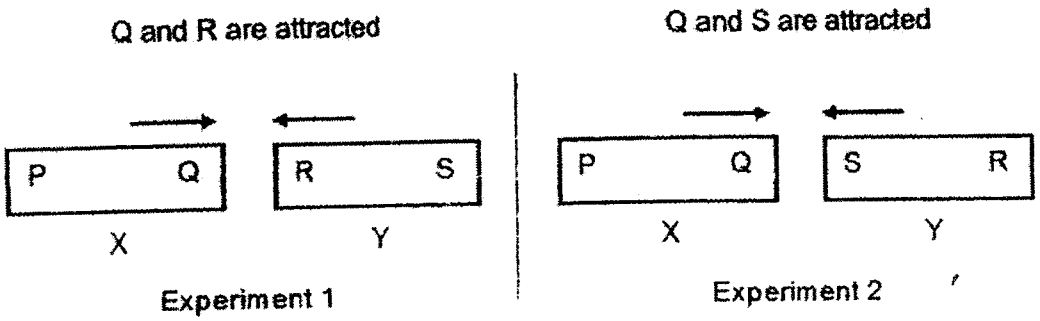
Magnet	Number of paper clips attracted	
	Before heating	**After heating**
S	7	0
T	13	0
U	5	0

Based on the results shown in the table above, what could James conclude?

A Magnet S is the weakest magnet before heating.
B Magnet T is the strongest magnet before heating.
C Magnet U is the strongest magnet after heating.
D All magnets lost their magnetism after being heated.

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

20. Two objects, X and Y, are placed side by side as shown in the diagrams below.



Based on the diagrams above, which of the following statement(s) is/are correct?

A : One of the objects (X or Y) is a magnet.
B : Q and R are **definitely** unlike poles.
C : Both objects, X and Y, are made of magnetic materials.

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

( )

End of Section A

HENRY PARK PRIMARY SCHOOL

PRIMARY 3

SCIENCE

BOOKLET B and C (40 MARKS)

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.

Name: _____ ( )

Class: Primary 3 (

Date:

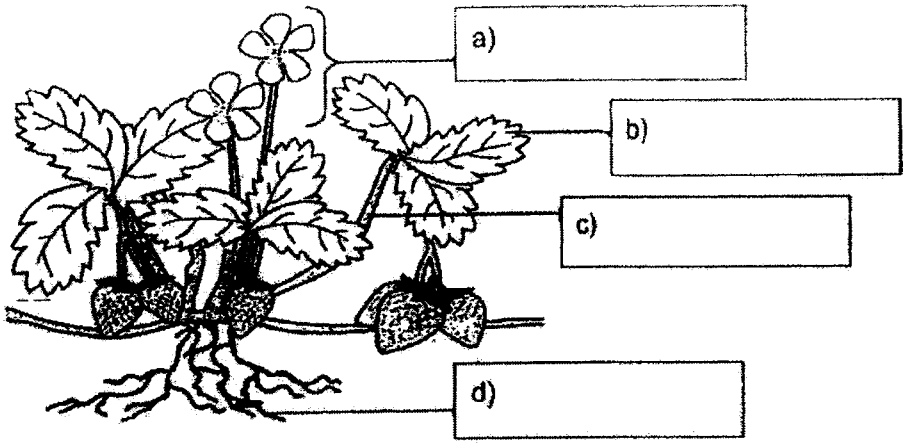
Total Time for Booklets A, B & C : 1 h 30 min

Marks for Booklet B and C: _____

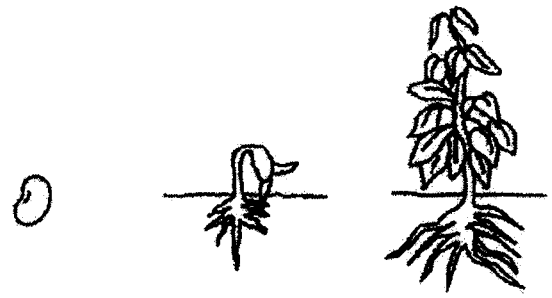
Section B : (8 x 2 marks = 16 marks)

Write your answers to questions 21 to 28 in the spaces given. Each question is 2 marks.

21. Identify and label correctly the parts of the plant shown in the diagram below. [2]



22. The diagram below shows the 3 stages in the life cycle of a bean plant.



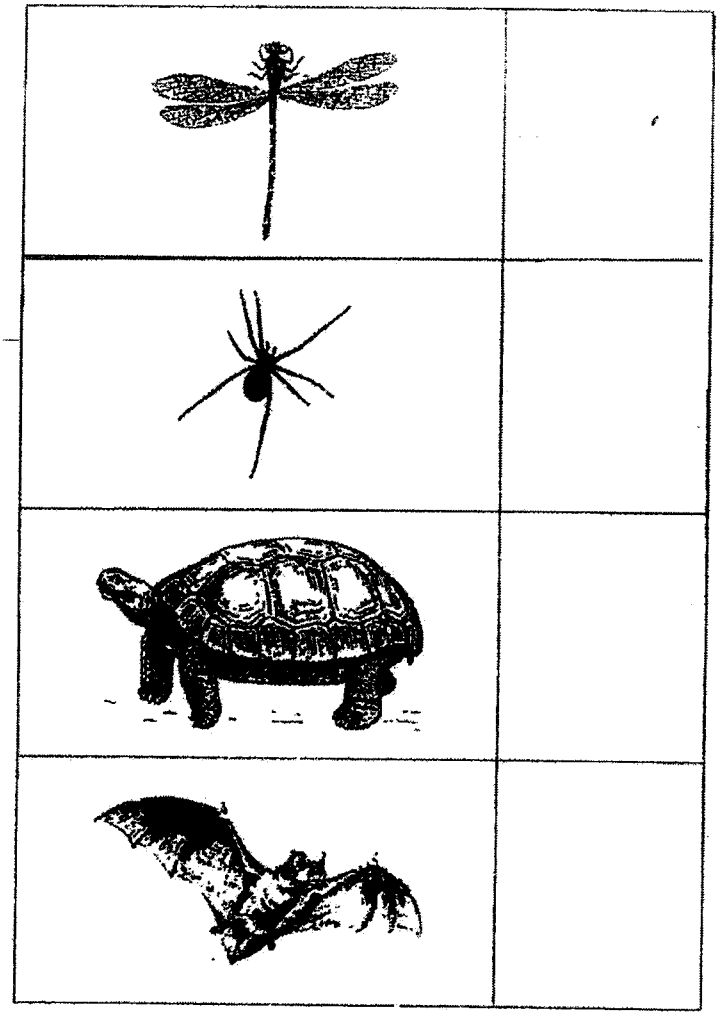
Name the stages **A** and **B** in the life cycle of the bean plant. [2]

A : _____ B : _____

23. A description of animal **A** is given below.

"I am a small animal. My body, which has a hard outer covering, is divided into three parts. I reproduce by laying eggs. What am I?"

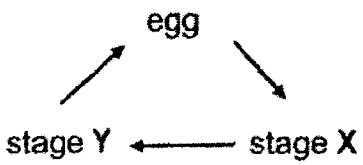
a) Study the diagrams given below and put a tick (✓) in the box that represents animal **A**. [1]



b) Put a tick (✓) beside the animal group that animal **A** belongs to. [1]

Animal group	Put a tick (✓) in the correct box
fish	
bird	
insect	
mammal	

24. The diagram below shows the life cycle of a frog.

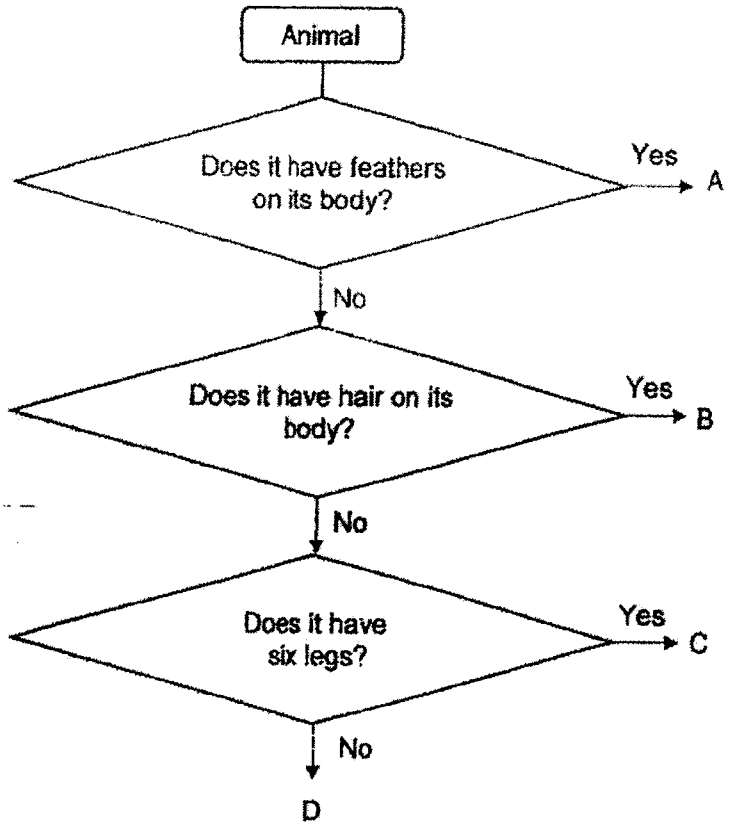


Name stages **X** and Y. [2]

Stage X : _____

Stage Y : _____

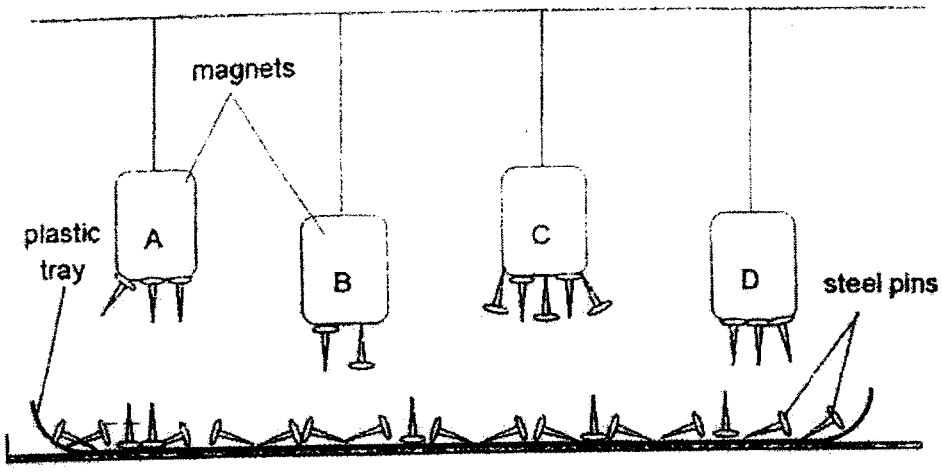
25. Study the flowchart below carefully.



Using the information in the flowchart, group the animals by writing the A, B, C or D in the correct boxes below. [2]

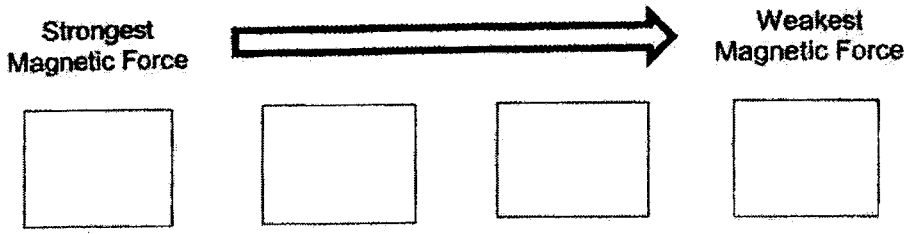
Animal	Letters
Cockroach	
Chicken	
Giraffe	
Frog	

26. Magnets A, B, C and D are hanging from strings of two different lengths as shown in the diagram below. A plastic tray of steel pins is placed below the magnets. Each magnet attracts different number of steel pins.

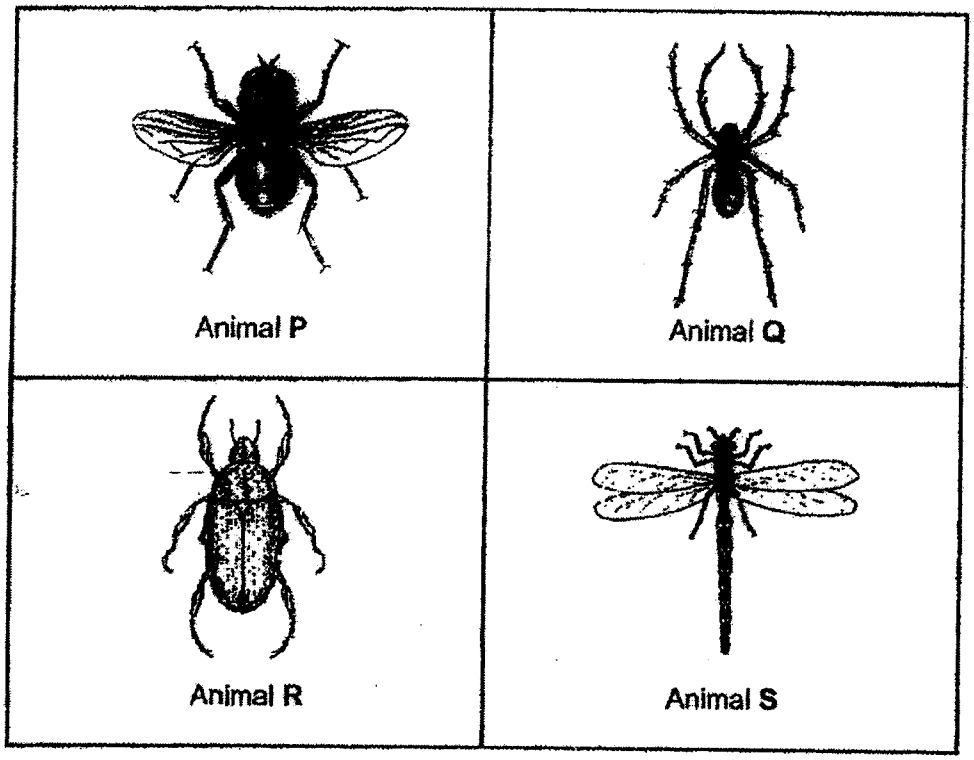


Based on the diagram above, arrange the magnets according to their magnetic force, from the magnet with the strongest magnetic force to the magnet with the weakest magnetic force.

Write A, B, C and D in the correct boxes provided below. [2]



27. Jane and Mary found four small animals (**P**, **Q**, **R** and **S**) as shown in diagram below.



The girls observed these animals and made a table about their observations.

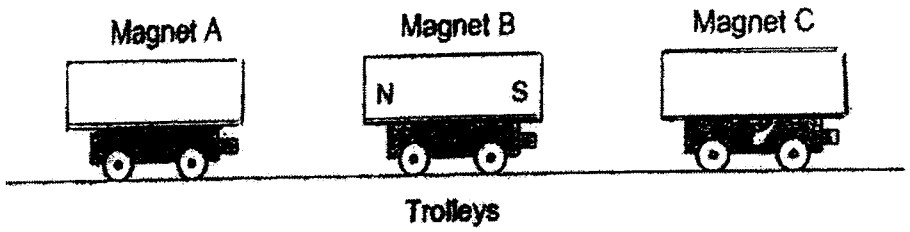
Complete the table below by adding the letters (**P**, **Q**, **R** and **S**) of the four animals in the correct boxes. [2]

Animal (Write P, Q, R or S)			Number of wings	Number of legs	Number of feelers
(a)			0	6	2
(b)			4	6	2
(c)			0	8	0
(d)			2	6	2

28. The diagram below shows three trolleys.

Paul put a bar magnet on each trolley. He pushed the trolleys together.

- Magnet B **attracted** magnet A.
- Magnet B **repelled** magnet C.



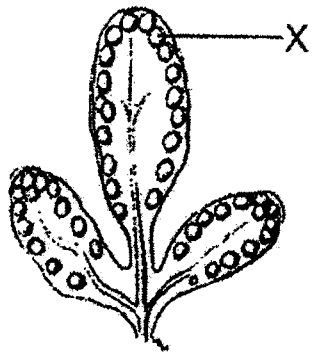
On the diagrams above, **write** the North and South poles of magnets **A** and **C** [2]
using the **letters N** and **S**.

End of Section B

Section C: (24 marks)

Write your answers to questions 29 to 35 in the spaces given. Each question carries 2 to 4 marks.

29. Tiffany found plant P in her garden. She observed the plant and recorded the following observations.

Observations of plant P	
• It is green in colour. • It has part X on the underside of its leaves which contains some brown powder. • It does not bear flowers.	

a) Name part X. _____ [1]

b) Can plant P produce fruit? Explain your answer. [2]

_____

_____

_____

30. Alex observed animals, D and E, over a period of time.

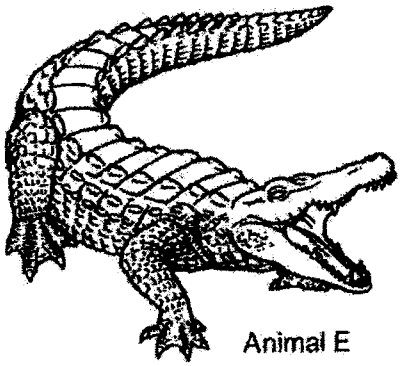
A young of animal D

Animal D has moist skin as outer covering. The adult lives on land and lays eggs on the surface of a pond.

A few weeks later, some of the eggs hatched and its young lived in the pond until they grow into adults.

a) Name the animal group that animal D belongs to. [1]

_____



Animal E

Animal E has scales and dry skin and lives on land. It lays eggs and its young were found near the water after they hatched from the eggs.

Alex concluded that animals D and E have many similar characteristics so they belong to the same animal group.

b) Do you agree with Alex's conclusion? Explain why. [2]

_____

_____

_____

31. The diagrams below show the stages in the life cycle of a plant. They are not arranged in order.

P Q R

Use the diagrams shown above to answer the following questions.

Observe the **parts** of the plant at stages **P** and **R**.

a) Based on your observation, state one **similarity** between the plant at stages **P** and **R**. [1]

_____

_____

b) Based on your observation, state one **difference** between the plant at stages **P** and **R**. [1]

_____

_____

32. The table below shows the properties of three materials E, F and G.

Material	Property			
	Waterproof	Flexible	Strong	Allow light to pass through
E	✓	✓		
F	✓		✓	✓
G		✓	✓	

a) Based on the information given in the table above, state two properties of material G. [2]

Property 1 : _____

Property 2 : _____

b) The diagram below shows a pair of reading glasses.

Which material, E, F or G, is most suitable for making part X?

Explain your answer. [2]

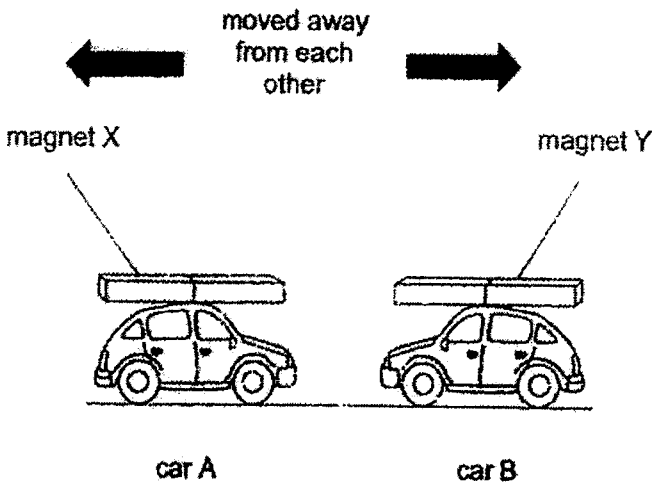
Material: _____

Explain: _____

_____

_____

33. Jett tied two similar magnets X and Y on two plastic toy cars, A and B.



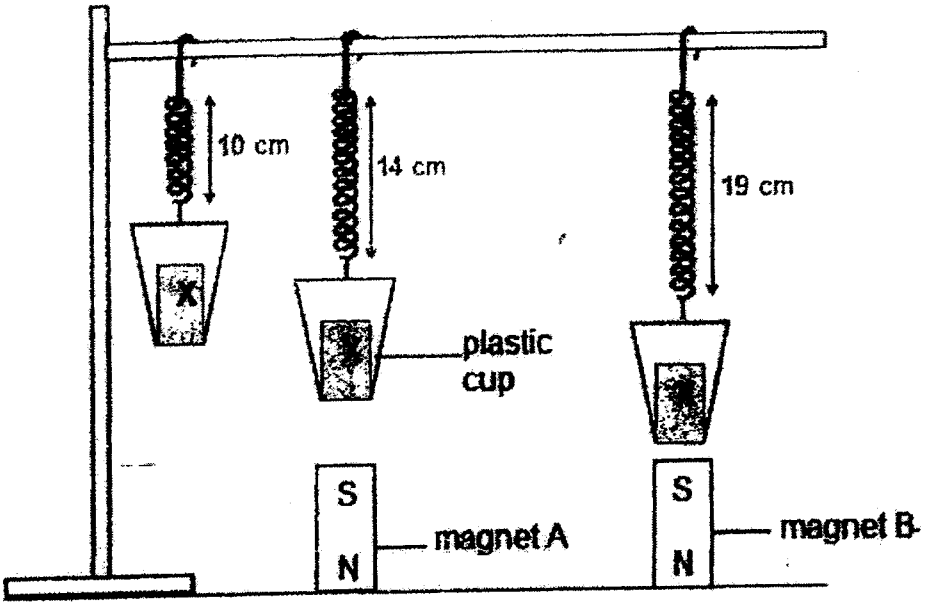
a) When the two plastic toy cars with the magnets were brought close to each other, they moved away from each other as shown in the diagram above.

Explain why this happened. [2]

b) What can Jett do to **magnet X** to make the two toy cars move towards each other? [2]

Explain your answer.

34. The diagram below shows three identical plastic cups with object X in each one of them. The cups are attached to three identical springs. Object X is made of iron.



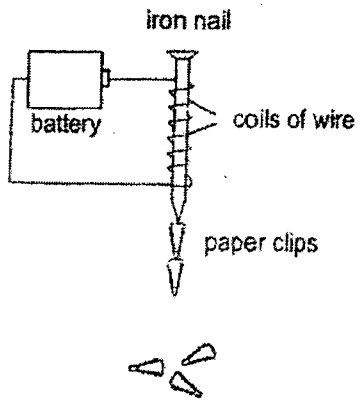
When magnets A and B were placed below the plastic cups, it was observed that the springs stretched longer.

a) Explain why the springs stretched longer. [2]

b) i) Which magnet, A or B, is stronger? [1]

ii) Based on the diagrams shown above, explain your answer in (bi). [1]

35. Mary prepared an experiment as shown in the diagram below.



a) Explain why the iron nail was able to attract the paper clips. [1]

_____

b) Suggest **two** ways Mary can increase number of paper clips attracted by the iron nail above. [2]

i) _____

ii) _____

An iron nail was used in the above experiment.

c) Besides iron, **name** another suitable material the nail can be made of. [1]

_____

End of Section C

ANSWER KEY

LEVEL : PRIMARY 3
SCHOOL : HENRY PARK PRIMARY
SUBJECT : SCIENCE
TERM : SA2

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	2	4	2	1	2	4	3	2
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	1	4	3	1	4	3	3	4	4

21) (a) Flower

(b) Leaf

(c) Stem

(d) Roots

22) A : Seed

B : Young plant

23) (a)

✓

(b) Insect ✓

24) Stage X : Young
Stage Y : Adult

25)

Animal	Letters
Cockroach	C
Chicken	A
Giraffe	B
Frog	D

26) C A D B

27) (a) R

(b) S

(c) Q

(d) P

28) Magnet A N S Magnet B N S Magnet C S N

29) (a) Spores

(b) Plant P cannot produce fruit as it is a non-flowering plant.

30) (a) Amphibians

(b) I do not agree with Alex's conclusion as animal D can live in land and water while animal E can only live on land.

31) (a) The plant in both stages of the life cycle have leaves.

(b) The plant in stage P has flowers and fruits while the plant in stage R does not.

32) (a) Property 1 : It is flexible.

Property 2 : It is strong.

(b) Material : F

Explain : Material F allows light to pass through as it allows the user to see clearly through the lens.

33) (a) The two like poles of magnet X and Y are facing each other that is why they repelled each other.

(b) Turn magnet X around so that the unlike poles will face each other and they would attract. The cars will then move towards each other.

34) (a) Object X is a magnetic material so the magnet would attract object X and the spring will stretch longer.

(b) (i) Magnet B

(ii) The spring stretched longer.

35) (a) The iron nail became an electromagnet.

(b) (i) She can increase the number of coils.

(ii) She can increase the number of batteries.

(c) Steel