CATHOLIC HIGH SCHOOL
PRIMARY 3
SEMESTRAL EXAMINATION 1
2012

SCIENCE

Name: _____ ( )

Class: Primary 3 _____

Date: 15 May 2012

BOOKLET A

30 Questions
60 Marks

Total Time for Booklets A & B: 1 hour 30 minutes

Instructions to Candidates

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

3044

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Section A : Multiple Choice Questions (60 marks)

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

1. Which one of these examples cannot be used to show the characteristics of living things?

   (1) A caterpillar eating leaves.

   (2) A puppy growing into a dog.

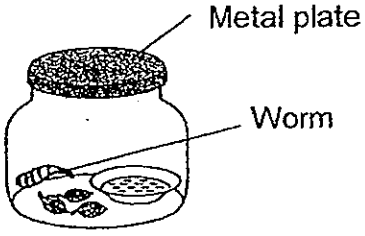
   (3) A car moving from place to place.

   (4) A horse giving birth to its young alive.

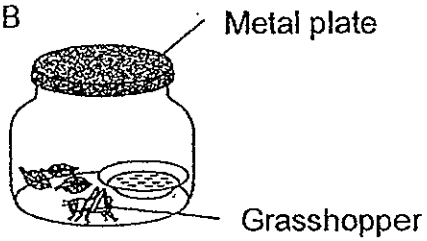
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2. Jacob wants to find out if living things need air. Which of the following set-ups should he use?

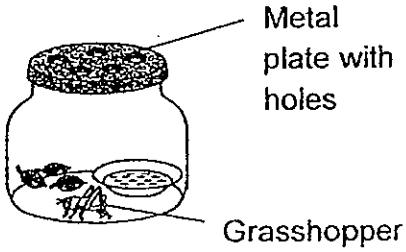
A



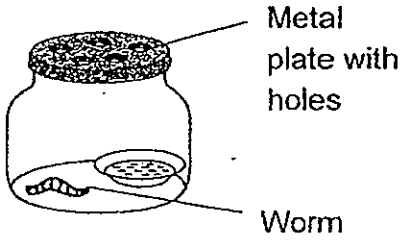
B



C



D



(1) A and B

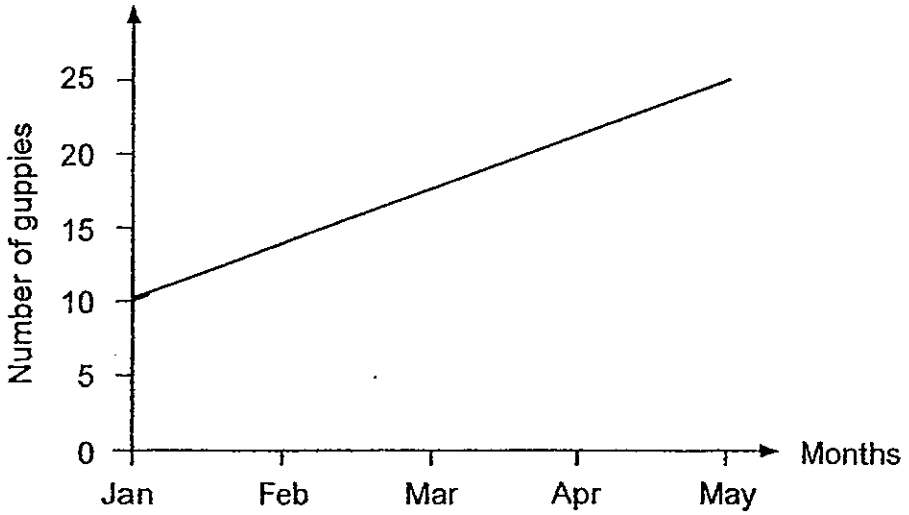
(2) A and D

(3) B and C

(4) C and D

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3. Caleb puts ten guppies into an aquarium and feeds them everyday. He does not put any more guppies into the aquarium. The graph below shows how the number of guppies in the aquarium changes over the next few months.



The graph shows that living things _____.

(1) grow

(2) reproduce

(3) respond to changes

(4) needs air, food and water to survive

3

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4. Study the classification table below carefully.

Group L	Group M
Glass	Car tyre
Diamond	Rubber band
Gold watch	Wooden chopstick
A	B

Which one of the following pairs of objects correctly represents A and B?

	A	B
(1)	Brick	Silver bracelet
(2)	Apple	Book
(3)	Stone	Woollen sweater
(4)	Bottle cap	Aluminium foil

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5. Aaron placed four organisms into four cages, one in each cage, A, B, C and D. Every day, he places a bowl of water, together with 200g of meat and 200g of leaves into each cage. He observed them for five days and recorded the amount of meat and leaves left in each cage as shown in the table below.

	Cage A		Cage B		Cage C		Cage D	
Day	Meat /g	Leaves /g	Meat /g	Leaves /g	Meat /g	Leaves /g	Meat /g	Leaves /g
1	50	200	200	200	80	100	200	40
2	35	200	200	200	60	150	200	18
3	20	200	200	200	37	116	200	52
4	37	200	200	200	54	96	200	37
5	32	200	200	200	48	65	200	50

Which of the following sentences are correct?

A The organism in Cage A was an animal-eater.

B The organism in Cage B was a plant-eater.

C The organism in Cage C was an animal and plant-eater.

D The organism in Cage D was a plant-eater.

(1) A and C only

(2) A, C and D only

(3) B, C and D only

(4) A, B, C and D

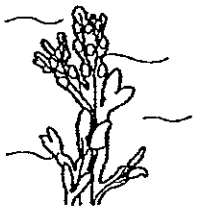
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6. The diagrams below show a bird's nest fern and algae.



bird's nest fern



algae

What is the similarity between the bird's nest fern and algae?

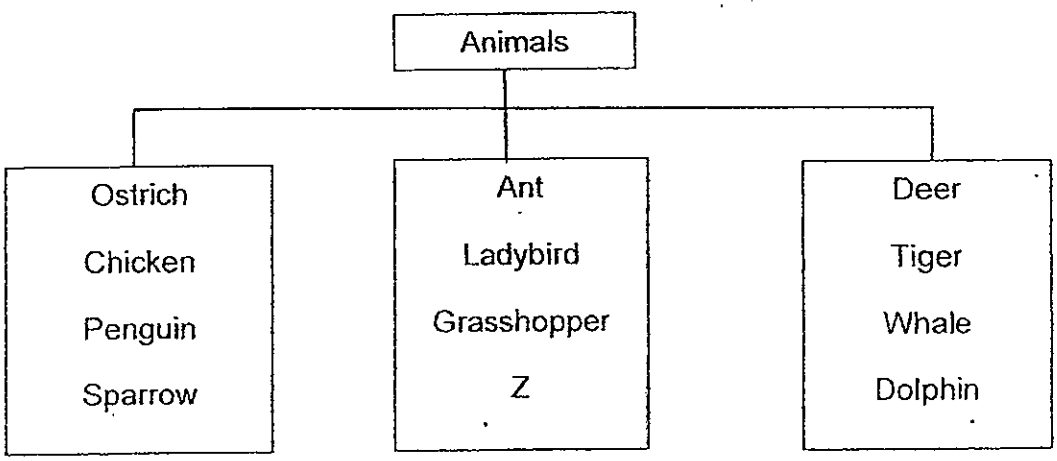
(1) They produce flowers.

(2) They are non-living things.

(3) They reproduce by spores.

(4) They cannot make their own food.

7. The classification table below shows how some animals are grouped.



Which one of the following animals represents Z?

(1) Goat

(2) Eagle

(3) Spider

(4) Mosquito

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8. Study the classification table below carefully.

Group A	Group B
Frog	Guppy
Chicken	Whale
Platypus	Dolphin

The animals in Groups A and B are grouped according to _____.

(1) the way they move

(2) their body coverings

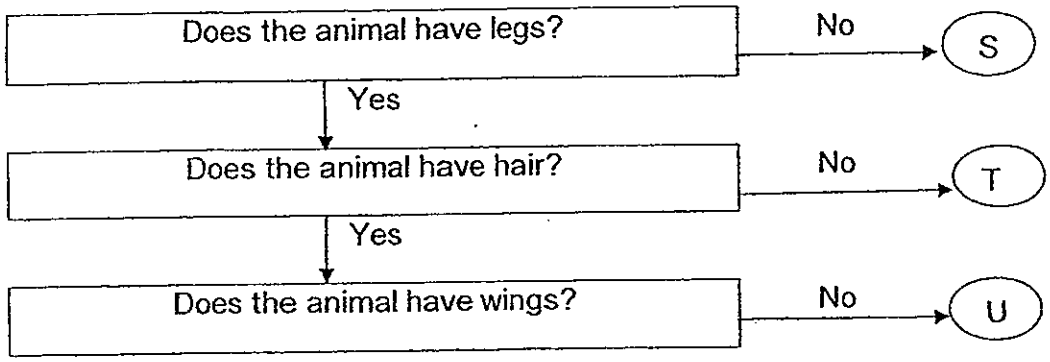
(3) the way they reproduce

(4) the types of food they eat

7

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9. Study the flow chart below carefully.



Based on the information above, which one of the following animals best represents U?

(1) Bat

(2) Crow

(3) Molly

(4) Platypus

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10. Asher classified some animals into 2 groups, G and H, as shown below.

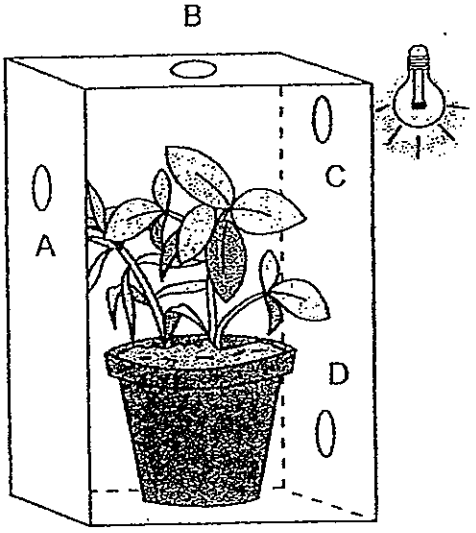
Group G	Group H
Lion	Pig
Wolf	Man
Kingfisher	Duck

Which one of the following headings correctly represents Group G and Group H?

	Group G	Group H
(1)	Animal and plant eaters	Animal eaters
(2)	Plant eaters	Animals eaters
(3)	Animal and plant eaters	Plant eaters
(4)	Animal eaters	Animal and plant eaters

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11. A young plant was placed in a thick cardboard box as shown below. Four holes, A, B, C and D, were made on the sides of the box to allow light to enter. Which one of the holes would the plant most likely grow towards?



(1) Hole A

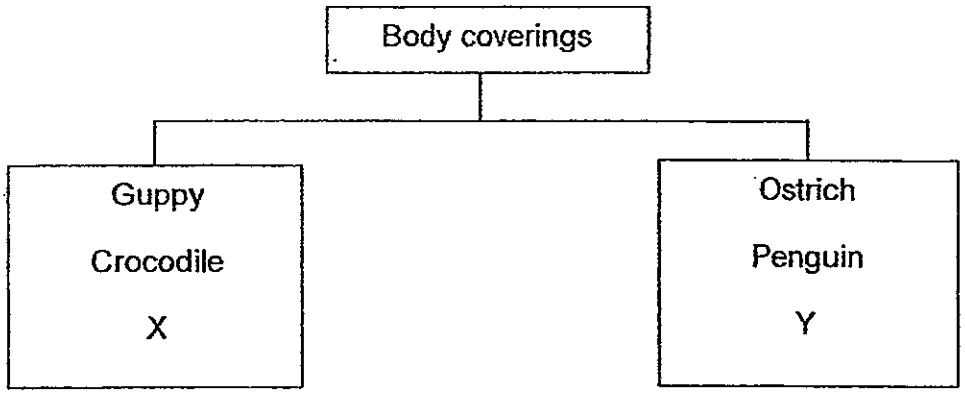
(2) Hole B

(3) Hole C

(4) Hole D

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12. Study the classification table below carefully.



Which one of the following pairs of animals correctly represents animals X and Y?

	Animal X	Animal Y
(1)	Duck	Lizard
(2)	Prawn	Sparrow
(3)	Snake	Eagle
(4)	Dolphin	Peacock

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13. Four friends, A, B, C and D, each made a comment about insects.

A All insects can fly.

B All insects lay eggs.

C All insects have 6 legs.

D All insects have 3 body parts.

Which friends have made the correct comments about insects?

(1) A and B only

(2) C and D only

(3) A, B and D only

(4) B, C and D only

14 Some leaves and minced meat are put into a box where Animal C is kept. The table below shows the mass of the leaves and minced meat after 6 days.

	Mass of leaves/g	Mass of minced meat/g
Beginning	80	80
After 2 days	71	80
After 4 days	60	80
After 6 days	50	80

Animal C is probably a _____.

(1) frog

(2) spider

(3) caterpillar

(4) centipede

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15. David planted four balsam plants, A, B, C and D, in 4 similar pots. He placed the pots under different conditions as shown in the table below.

	Conditions			
Plant	Air	Sunlight	Water	Fertiliser
A	✓	✓	✓	×
B	×	✓	✓	✓
C	✓	×	×	✓
D	×	✓	×	✓

Which one of the following plants will live the longest?

(1) Plant A

(2) Plant B

(3) Plant C

(4) Plant D

13

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16. Study the characteristics of three objects A, B and C as shown below.

Materials / Property	A	B	C
Can be scratched easily by a metal nail		✓	✓
Absorbs water			✓
Bends easily	✓	✓	✓

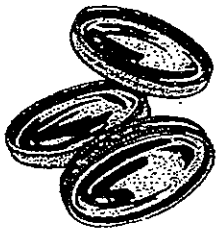
Which one of the following sets of objects best fits the description in the table above?

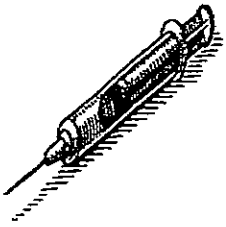
	A	B	C
(1)	Plasticine	Paper	Rubber band
(2)	Paper	Plasticine	Rubber band
(3)	Rubber band	Plasticine	Paper
(4)	Paper	Rubber band	Plasticine

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17. Which of the following objects are made from one material only?


A: Shoe


B: Coin


C: Syringe

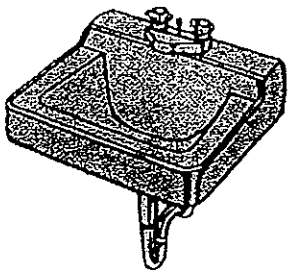

D:Key

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

15

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18. The sink is made of ceramic. What properties does the sink have in order to function properly?



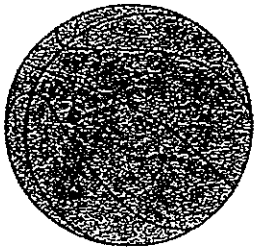
A It must be hard.
B It must be strong.
C It must be waterproof.
D It must be able to float.

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

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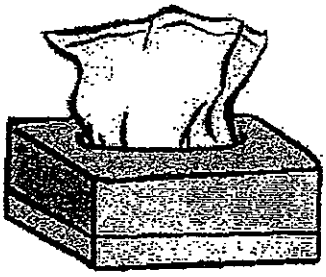
19. Martin is deciding to bring objects that are made of natural material only to school. Which of the following objects should he choose?

A



Basketball

B



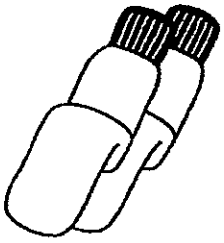
Tissue Box

C



Guitar

D

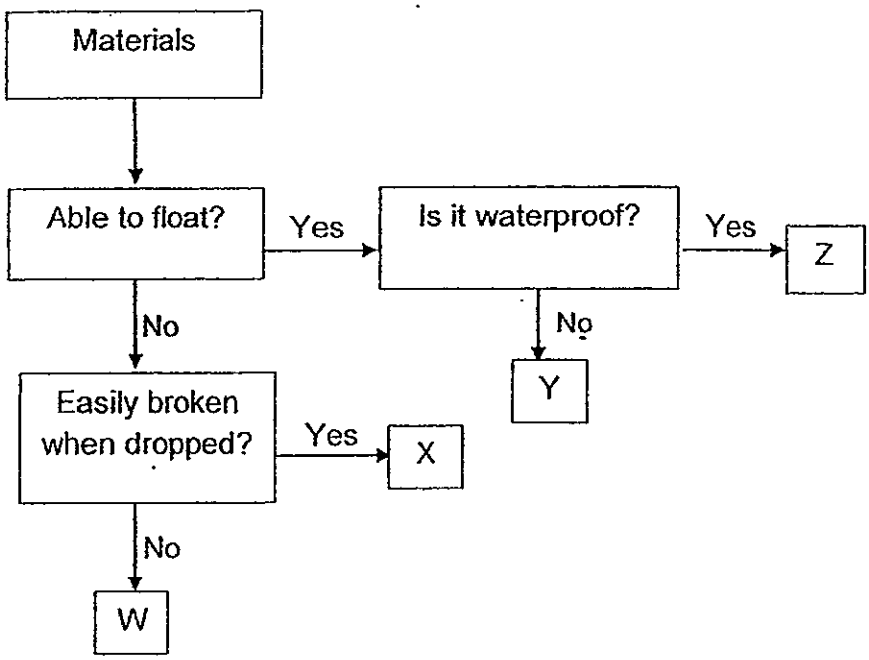


Woollen Socks

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

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20. Study the flowchart below.



Which of the following materials can W, X, Y and Z be?

	W	X	Y	Z
(1)	Window pane	Car key	Disposable chopsticks	Soccer ball
(2)	Car key	Window pane	Soccer ball	Disposable chopsticks
(3)	Disposable chopsticks	Soccer ball	Car key	Window pane
(4)	Car key	Window pane	Disposable chopsticks	Soccer ball

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21. Patrick recorded the mass of individual materials A, B, C and D of similar sizes before putting them into 4 beakers containing equal amounts of water. After 20 minutes, each sheet was weighed again. Their masses were recorded in the table below.

Material	Mass at the start/g	Mass after 20 minutes/g
A	7	13
B	9	14
C	13	14
D	15	18

Which material absorbs the least amount of water?

(1) A

(2) B

(3) C

(4) D

19

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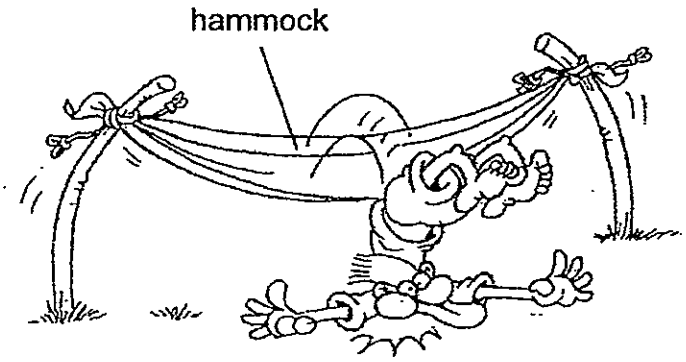
22. Sam wants to go to a country with a cold climate. The temperature is about 20°C. He has the following shirts made of different materials in his drawer. Which shirt is the best for him to take along?

Shirt	Property
	Cotton fabric: Absorbs sweat easily
	Nylon fabric: Strong but traps heat
	Silk fabric: Slow to dry but comfortable to wear
	Polyester fabric: Strong and does not absorb sweat

(1) Silk shirt
(2) Nylon shirt
(3) Cotton shirt
(4) Polyester shirt

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23. Fitroy wants to make a hammock so that he can have a relaxing rest on it. Which physical properties of materials must he consider?



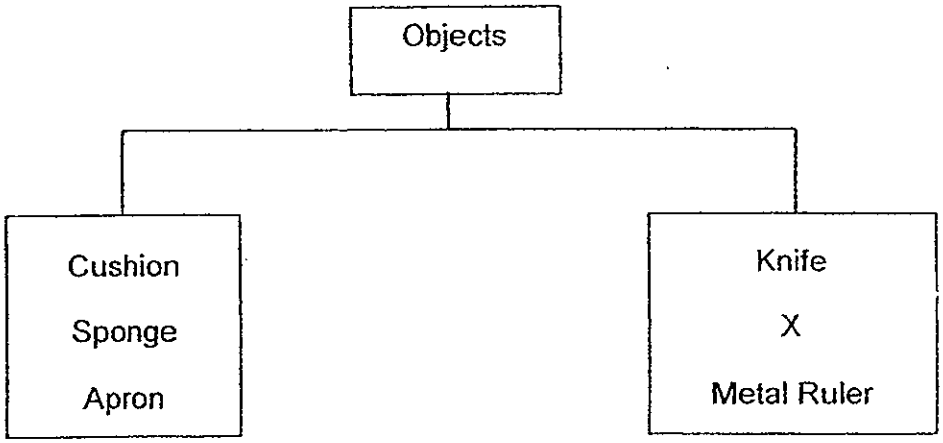
The material must be _____.

A Hard
B Strong
C Flexible
D Waterproof

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

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24. The objects below are grouped according to their properties.



Object X must be a _____.

(1) table cloth
(2) bath towel
(3) pair of scissors
(4) pair of fabric gloves

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25. Elroy wanted to make a toy for his baby brother to play with during his bath. He decided that it should be soft, light and can bend easily.
He tested the properties of 3 materials A, B and C and recorded his results in the table below:

Properties	Material A	Material B	Material C
Hard	✓	×	×
Flexible	✓	×	✓
Float on water	×	✓	✓

Which of the following material(s) would be most suitable for him to make the toy?

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

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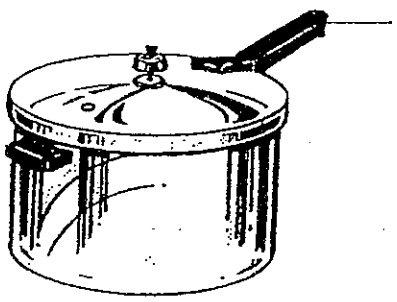
26. Harold was given four materials named A, B, C and D. He used one material to scratch another. The table below shows the result.

Materials that were used to scratch each other	Result observed
A and B	Scratches made on A
A and C	Scratches made on C
B and D	Scratches made on D
C and D	Scratches made on D

Which one of the following materials is the hardest one?

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

27. Kate is able to hold the pot of hot water by the plastic handle because plastic is a _____.



(1) light material
(2) hard material
(3) poor conductor of heat
(4) good conductor of heat

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28. Dora was studying the two groups of objects below carefully.

Group 1	Group 2
Basketball	Metal nail
Plastic cup	Frying pan
Disposable spoon	Ceramic spoon

The objects are grouped according to _____.

(1) their uses
(2) their mass
(3) their ability to float in water
(4) the type of materials they are made of

29. Auntie May wants to prepare milk for her 3-year-old son. She has 3 types of cups to choose from: a glass cup, a plastic cup and a ceramic cup. She chooses the plastic cup. Why do you think she chooses it?

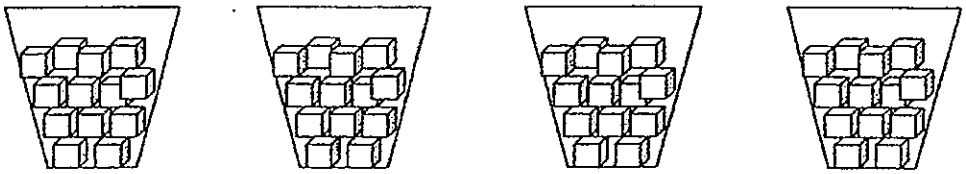
A The glass and ceramic cups are heavier than the plastic cup.
B The glass cup is waterproof whereas the other cups do not.
C The plastic cup floats while the other cups sink.
D The plastic cup does not break easily unlike the other two.

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

25

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30. Peter placed an equal number of ice cubes in each of the 4 cups shown below. The 4 cups are similar in size but made of different materials. The cups are all placed in the same room.



Plastic cup Glass cup Paper cup Copper cup

In which cup will the ice cubes take the shortest time to melt completely?

(1) Plastic
(2) Glass
(3) Paper
(4) Copper

- End of Section A-

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CATHOLIC HIGH SCHOOL
PRIMARY 3
SEMESTRAL EXAMINATION 1
2012

SCIENCE

Name: _____ ( )

Class : Primary 3 _____

Date : 15 May 2012

BOOKLET B

14 Questions
40 Marks

Total Time for Booklets A & B: 1 hour 30 minutes

Instructions to Candidates

Follow all instructions carefully.
Answer all questions.

Score	
Section	60
Section B	40
Total	100

Parent's Signature:_____

Date: _____

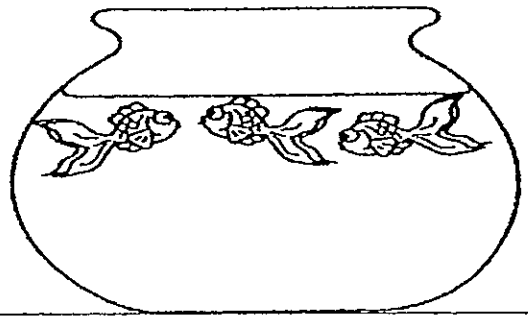
27

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Section B : Open-Ended Questions (40 marks)

Read the following questions carefully and write your answers in the space provided. The maximum marks that can be awarded are shown at the end of each question or part-question.

31. Nelson placed 3 goldfish into a fish bowl. The next day, he noticed that the goldfish were swimming near the water surface for air as shown below.



(a) What can Nelson do so that the goldfish need not swim to the water surface for air? [1]

_____

_____

(b) Based on the diagram above, what characteristic of living things does it show? [1]

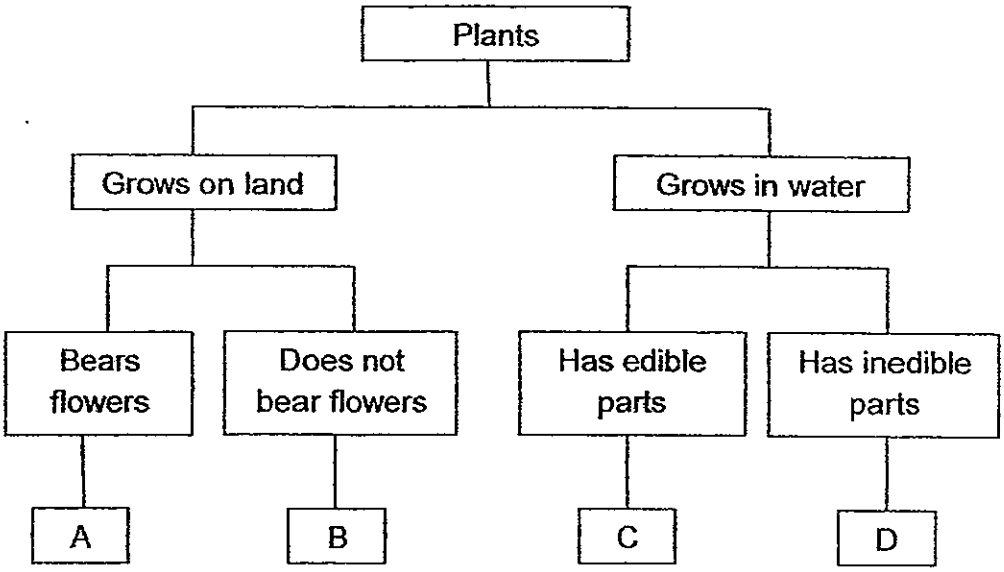
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_____

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32. Study the classification table below carefully.



(a) Write down 2 characteristics of Plant B. [2]

_____

_____

(b) State 1 difference between Plant A and Plant C. [1]

_____

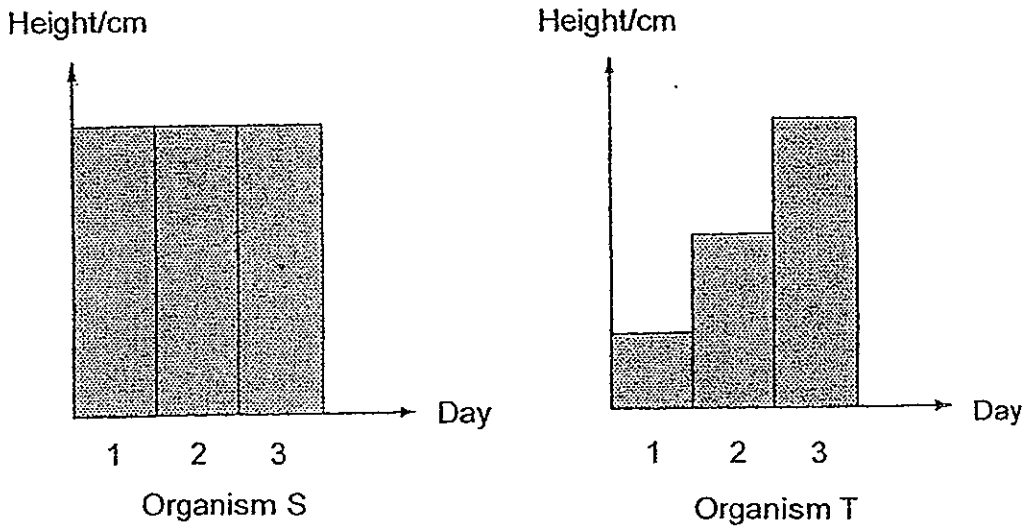
_____

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33. Benjamin observes 2 organisms, S and T, over a period of 3 days. He records their heights in a graph as shown below.



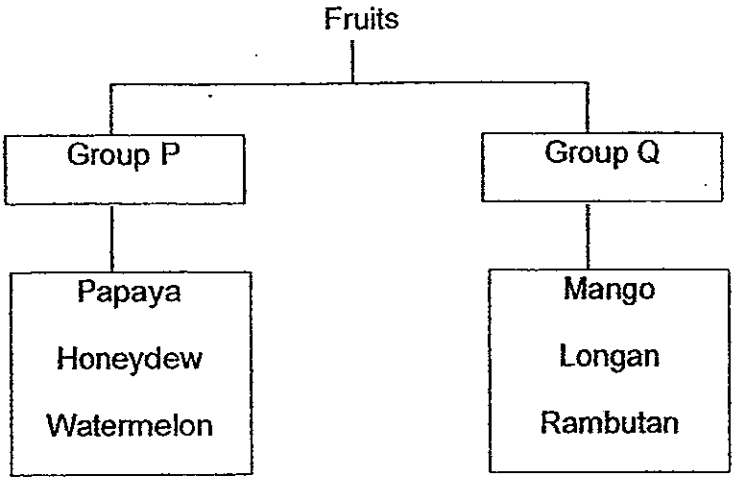
State whether each of the following statements is "True", "False" or "Not possible to tell". Put a tick (✓) in the boxes below. [3]

	Statement	True	False	Not possible to tell
(a)	Organism T can be a living thing.			
(b)	Organism T is heavier than Organism S.			
(c)	Organism S was taller than Organism T at first.			

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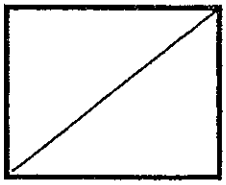
34. The fruits below have been classified into 2 groups, P and Q.



(a) Classify the following fruits under the appropriate headings, P or Q. [1]

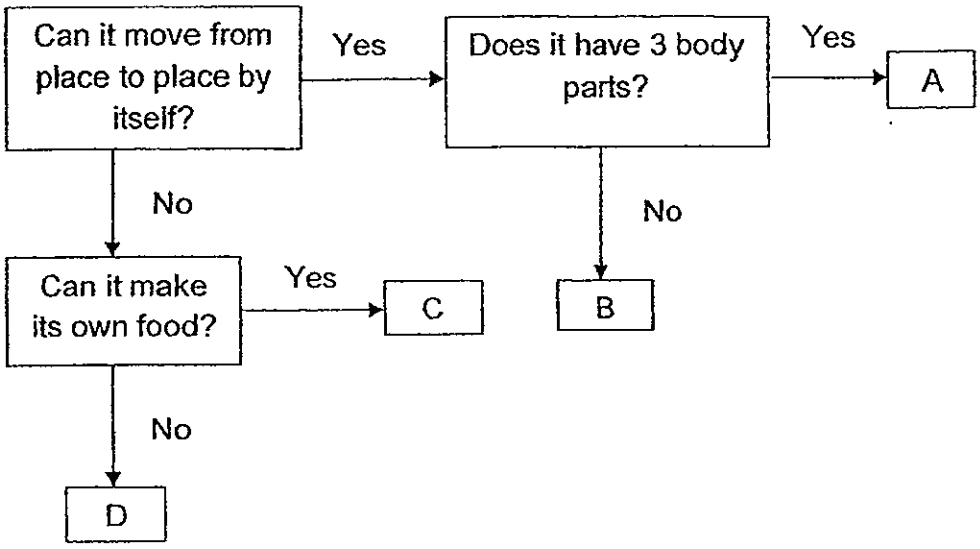
Apple : _____

Cherry: _____



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(b) Study the flowchart carefully.



Based on the flowchart above, write the letters A, B, C and D which correctly represents each organism. [2]

(i) Mushroom : _____

(ii) Butterfly : _____

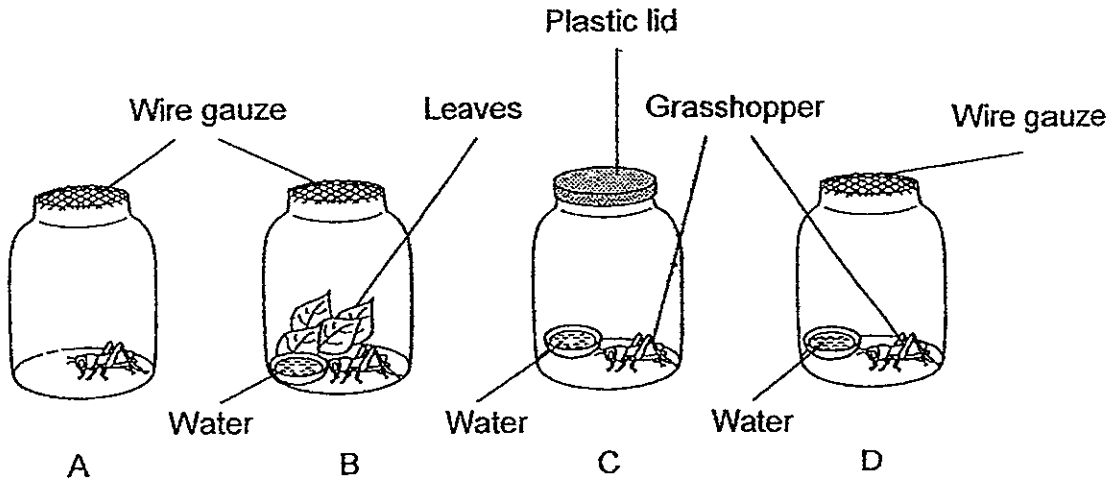
(iii) Sunflower : _____

(iv) Penguin : _____

2

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35. Four grasshoppers, A, B, C and D, of similar size were placed into 4 identical containers, with a grasshopper in each container.



(a) Arrange the grasshoppers in order, starting with the one that would die first. [1]

_____, _____, _____, _____

(b) Explain why the grasshopper in part (a) was able to live the longest. [1]

_____

_____

(c) Suggest one way to let the grasshopper in container C live longer. [1]

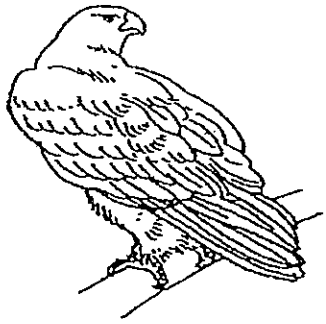
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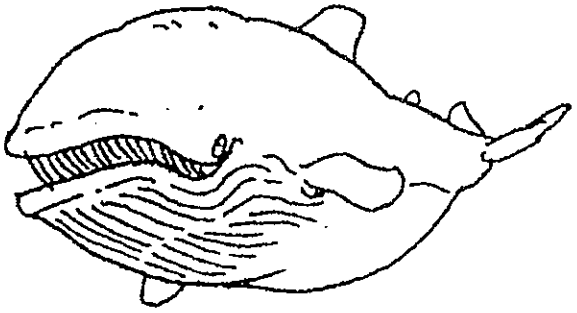
3 33

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36. Look at the 2 animals below carefully.



Animal S



Animal T

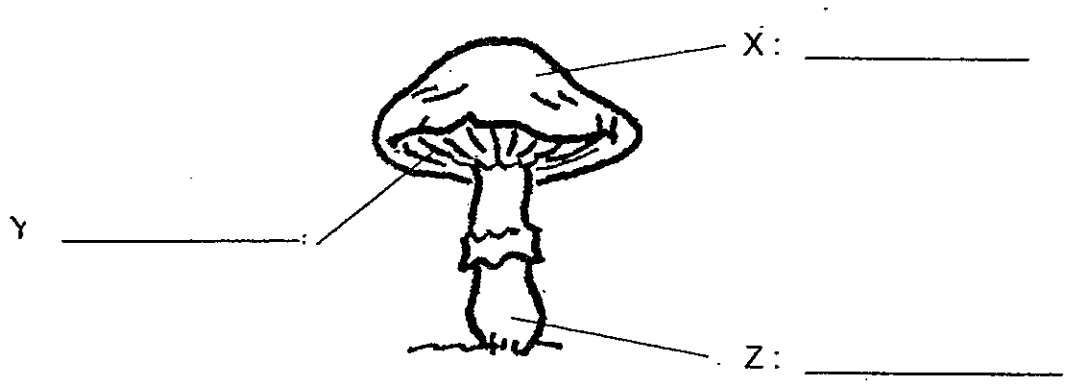
Fill in their differences in the boxes below. [3]

Animal S		Animal T
	Movement	
	Body Covering	
	Method of Reproduction	

3

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37. Study the fungus shown below.



(a) Identify the parts labelled X, Y and Z. [1.5]

(b) Bread mould belongs to a group of organisms called fungus. State how bread mould reproduce. [1]

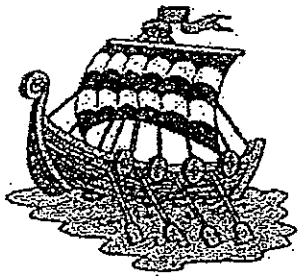
(c) Micro-organisms are tiny living things which we cannot see with our eyes alone. State the instrument we can use to help us see them. [0.5]

3

35

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38.

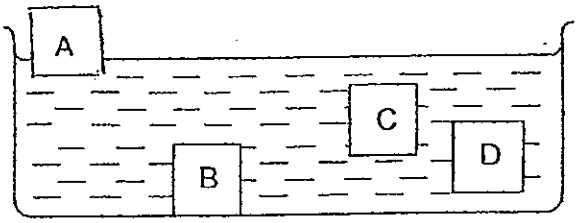


Boat



Anchor

Captain Noah wants to build a simple boat. He tested four materials for their suitability to be used for building a boat. He sets up an experiment as shown below:



(a) Which property is tested in this experiment? [1]

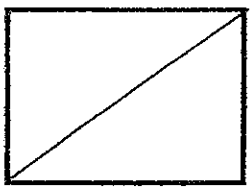
_____

(b) Which material A, B, C or D is most suitable to be used to build the boat? [1]

_____

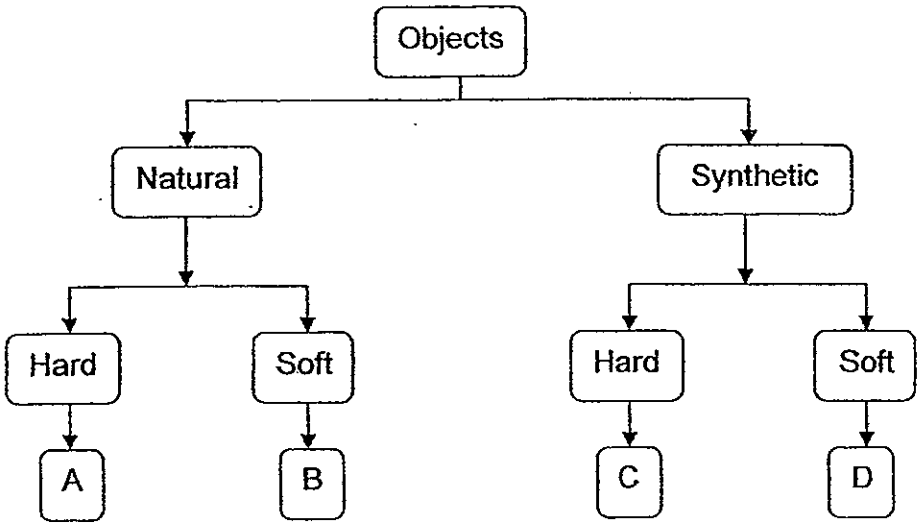
(c) Which material A, B, C or D is most suitable to be used as an anchor for the boat? [1]

_____



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39. The classification table below shows the characteristics of 4 different objects represented by A, B, C and D.



(a) Based on the classification table, state the characteristics of object B. [1]

_____

(b) Based on the classification table, state one similarity between object A and object C. [1]

_____

(c) Which object A, B, C or D best describes a ceramic tile? [1]

_____

3

37

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40. The four items in the table below were put into a tank of water. They were then classified into the two groups

Group A	Group B
cork	marble
rubber duck	safety pin

(a) Write a suitable heading for each group. [1]

A: _____

B: _____

(b) What is another suitable heading for these groups? [1]

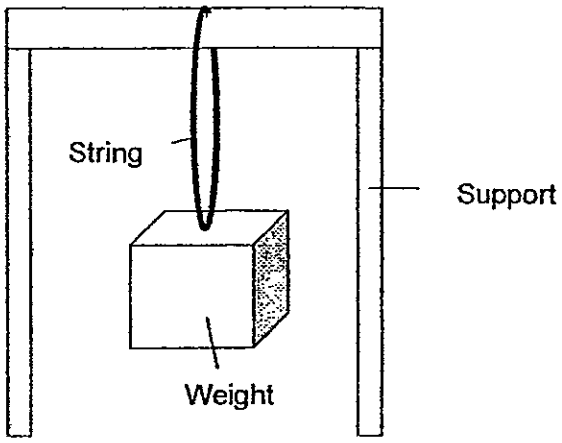
A: _____

B: _____

2

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41. Maverick carried out an experiment as shown below. He used 3 different strings, A, B and C and added weights to each string until it broke.



String	Maximum weight before string broke/kg
A	38
B	7
C	22

(a) Which string can withstand the least and most weight respectively? [1]

Least :_____

Most : _____

(b) Maverick wants to hang a family photo frame which weighs 19 kg.
Which string(s) is/are most suitable? Explain why. [2]

_____

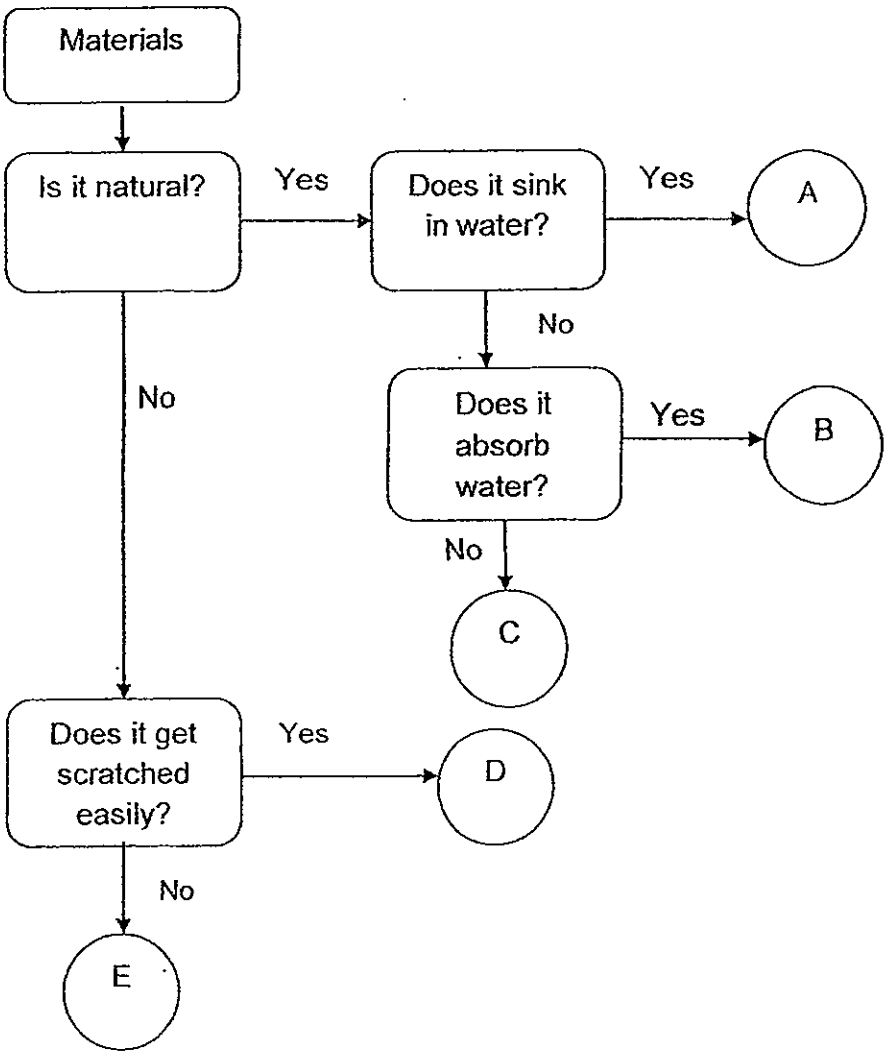
_____

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42. Study the flow chart carefully. A, B, C, D, and E represent some materials.



(a) What common property do materials A and C have? [1]

_____

(b) What is the difference between materials D and E? [1]

_____

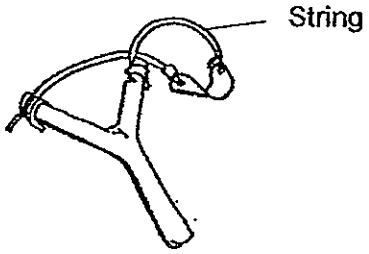
(c) Which material (A, B, C, D or E) is most suitable to make a ceramic vase? [1]

_____

3

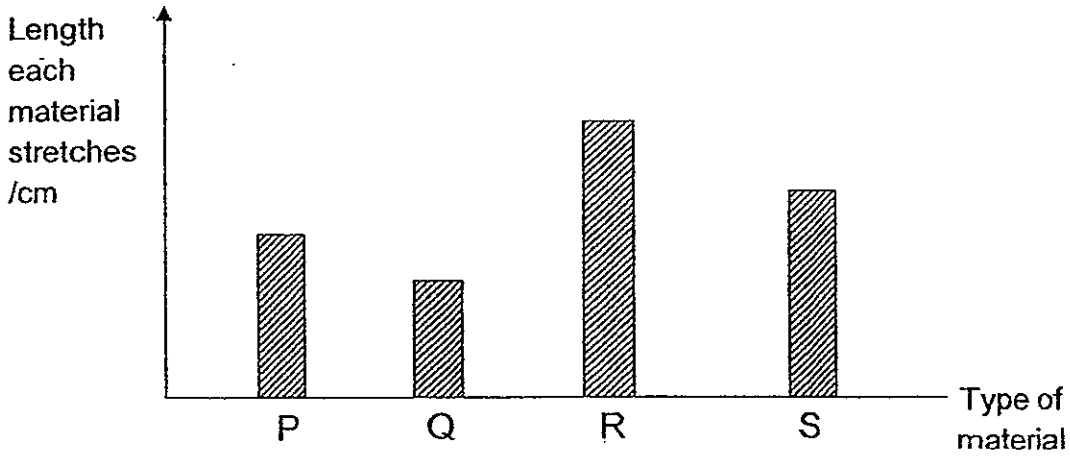
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43. Adele carried out an experiment to see which material is suitable to make the string of a catapult.



Catapult

She recorded the length that each material stretches when 1 kg weight is placed as shown below:



(a) Which material will she choose? Explain the reason. [2]

_____

(b) Which property of materials is she testing? [1]

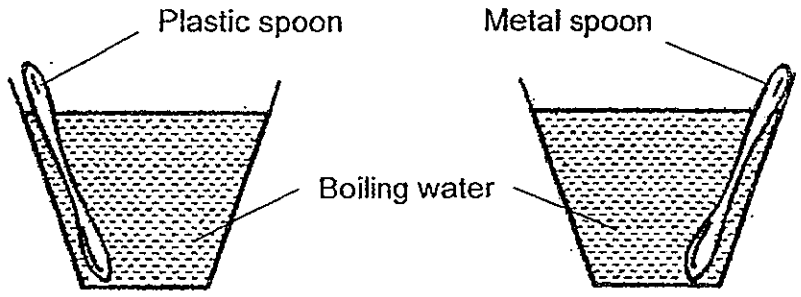
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41

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44. Jessie conducted an experiment by placing a metal spoon in one bowl and another similar spoon made of plastic in the other bowl. She poured boiling water into the two identical bowls at the same time as shown in the diagrams below.



A few minutes later, she lifted both spoons and found that the metal spoon was hotter than the plastic spoon.

(a) Explain why the metal spoon was hotter than the plastic spoon? [1]

_____

(b) Which material, plastic or metal, is best used to make a cup that keeps the coffee hot for the longest time? [1]

_____

(c) Name another material that is suitable to make a cup that keeps the coffee hot. [1]

_____

- End Of Paper -

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ANSWER SHEET

EXAM PAPER 2012

SCHOOL : CATHOLIC HIGH
SUBJECT : PRIMARY 3 SCIENCE

TERM : SA1

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

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

31)a)Nelson can put an air pump into the fish bowl.
b)Living things need air.

32)a)Plant B is a non-flowering plant that grows on land.
b)Plant A grows on land but Plant C grows in water.

33)a)T b)Not c)T

34)a)Apple: P Cherry: Q
b)i)D ii)A iii)C iv)B

35)a)C , A , D , B
b)All living things need air, food and water. Grasshopper B has air, food and water, so it would like the longest.
c)Poke holes in the plastic lid of the container C.

36)Fly ⟷ Swim
Feathers ⟷ Hair
Lay eggs ⟷ Give birth to young alive

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37)a)X: Cap Y: Gills Z: Stalk
b)Bread would reproduce by spores.
c)Microscope.

38)a)The ability to float.
b)A.
c)B.

39)a)It is a natural object that is soft.
b)Both are hard.
c)C.

40)a)A: Float on water.
B: Sink in water.
b)A: Natural.
B: Synthetic.

41)a)Least: B
Most: A
b)A and C. A and C can holes the weight of photo frame without breaking.

42)a)Both are natural.
b)Material D gets scratched easily but Material E does not .
c)E.

43)a)Material R. Material R can be stretched the most.
b)The elasticity of the materials.

44)a)Metal spoon is a better conductor of heat than the plastic spoon.
b)Plastic.
c)Styrofoam/ Rubber.

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