



NANYANG PRIMARY SCHOOL

**PRIMARY 3 SCIENCE
SEMESTRAL ASSESSMENT 1
2015**

BOOKLET A

**Date : 12 May 2015
Duration : 1 h 20 min**

Name : _____ ()

Class: Primary 3 ()

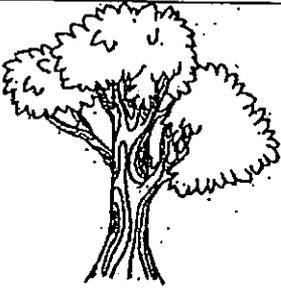
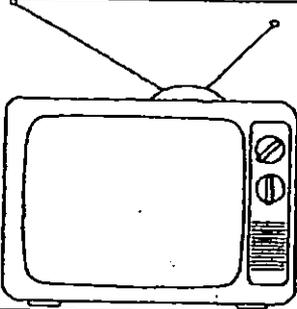
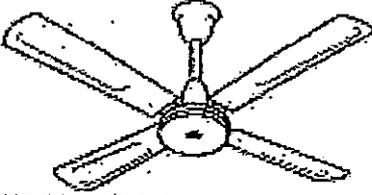
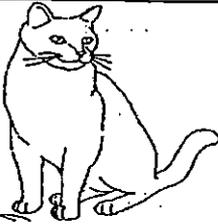
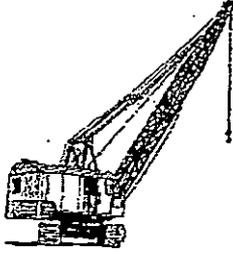
**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.**

Booklet A consists of 14 printed pages including this cover page

Section A (24 x 2 marks = 48 marks)

For each question from 1 to 24, 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. Amil has to classify the items below into living things and non-living things.

	
tree	television
	
ceiling fan	bacteria
	
cat	crane

Which one of the following shows the correct way to classify the items?

	Living things	Non- living things
(1)	tree, television, cat	ceiling fan, bacteria, crane
(2)	television, ceiling fan, cat	bacteria, tree, crane
(3)	ceiling fan, bacteria, cat	television, tree, crane
(4)	tree, cat, bacteria	crane, ceiling fan, television

2. James observed X for a week and recorded his observations in the table below.

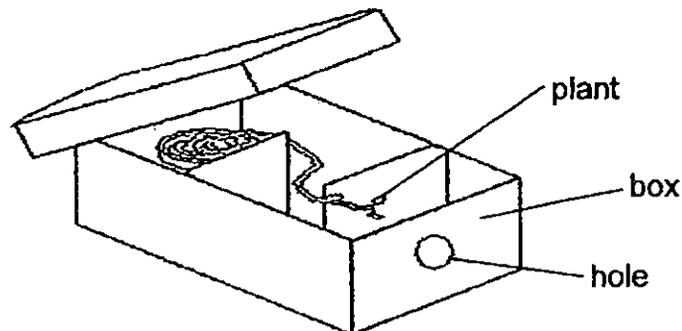
Days	Height of object X
1	8cm
2	8cm
3	9cm
4	9cm
5	11cm
6	11cm
7	12cm

He then made the following statements about object X.

- A X can grow.
- B X can reproduce.
- C X responds to changes around it.

Based on his observations, which of his statements is/are **true**?

- (1) A only
 - (2) B only
 - (3) B and C only
 - (4) A, B and C
3. Zhi Rui placed a plant in a box. He created a hole in the box and left it to grow for a week. After a week, he opened the box and found the plant growing sideways instead of upright, as shown in the diagram below.



Based on the results, which one of the following statements explains the characteristic of the plant?

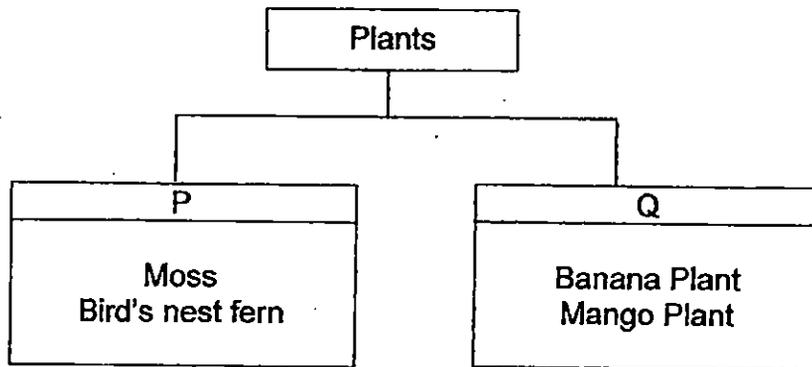
- (1) The plant can reproduce.
- (2) The plant needs air to survive.
- (3) The plant can move freely from one place to another.
- (4) The plants can respond to changes in its surroundings.

4. Ron wrote a few statements about plants. Which of the following statements are **true**?

- A All plants reproduce by seeds.
- B All plants can make their own food.
- C All plants need air, food and water to survive.
- D All plants have stems, roots, flowers and leaves.

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

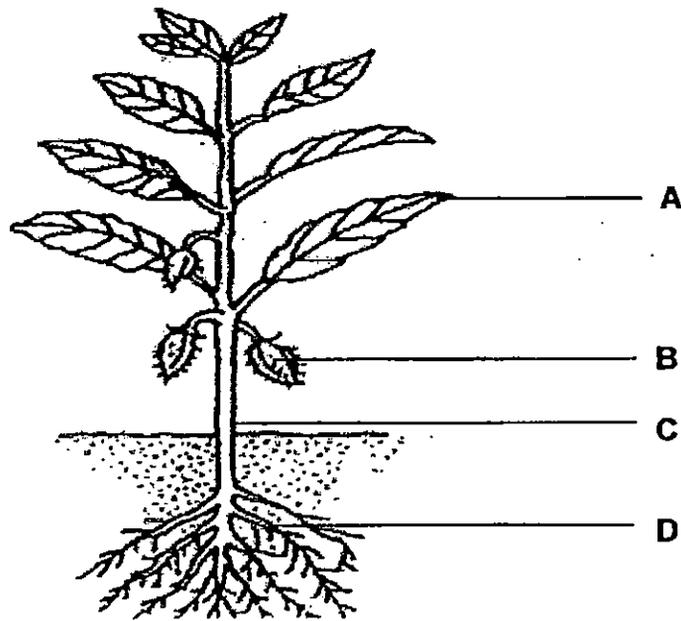
5. Study the chart below.



Which of the following sets of **headings** can represent P and Q?

	P	Q
(1)	Grow on land	Grow in water
(2)	Bear fruits	Does not bear fruits
(3)	Cannot make food	Can make food
(4)	Non-flowering plant	Flowering plant

6. Willy saw a plant in the garden as shown in the diagram below.



He observed the plant parts and concluded that it is a flowering plant.

Which part of the plant suggests that his conclusion is correct?

- (1) A
- (3) C

- (2) B
- (4) D

7. Ralph took photographs of some plants growing at the school garden as shown below.



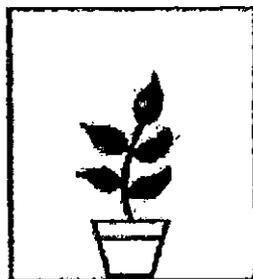
Moss



Fern

Mosses and ferns are similar in many ways. Which one of the statements describes their similar characteristic?

- (1) They produce fruits.
 - (2) They reproduce by spores.
 - (3) They feed on other living things.
 - (4) They grow well in dark, moist and warm places.
8. During a science experiment, Kristie prepared two identical potted plants and placed them separately in a glass box and a wooden box. She watered the plants and left both set-ups at a sunny place.



Glass box.



Wooden box.

What was Kristie trying to find out from her experiment?

- (1) To find out if plants need air to survive
- (2) To find out if plants need water to survive
- (3) To find out if plants need warmth to survive
- (4) To find out if plants need sunlight to survive

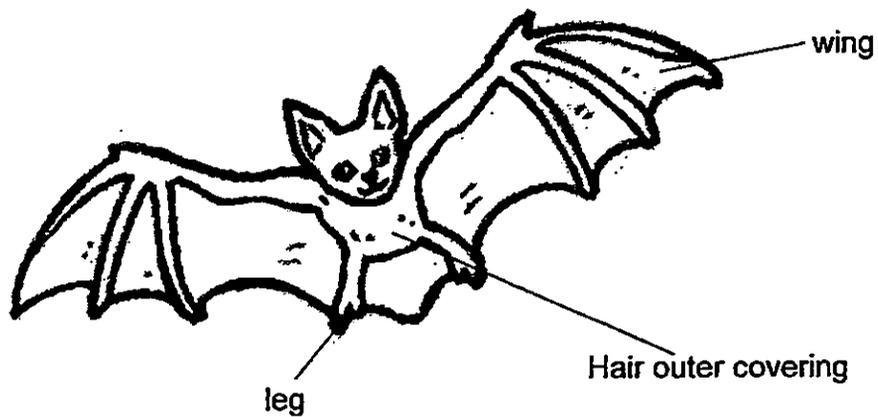
9. Ranveer was sitting by a river and found an animal.
He made the following observations about the animal.

- It has a tail.
- It has moist skin.
- It lays its egg in the water.
- It is able to swim in the water.

Which one of the following groups of animals does the animal most likely belong to?

- | | |
|-------------|----------------|
| (1) Fish | (2) Reptile |
| (3) Mammals | (4) Amphibians |

10. Sameer shared a picture of an animal that lives on land with his friends.



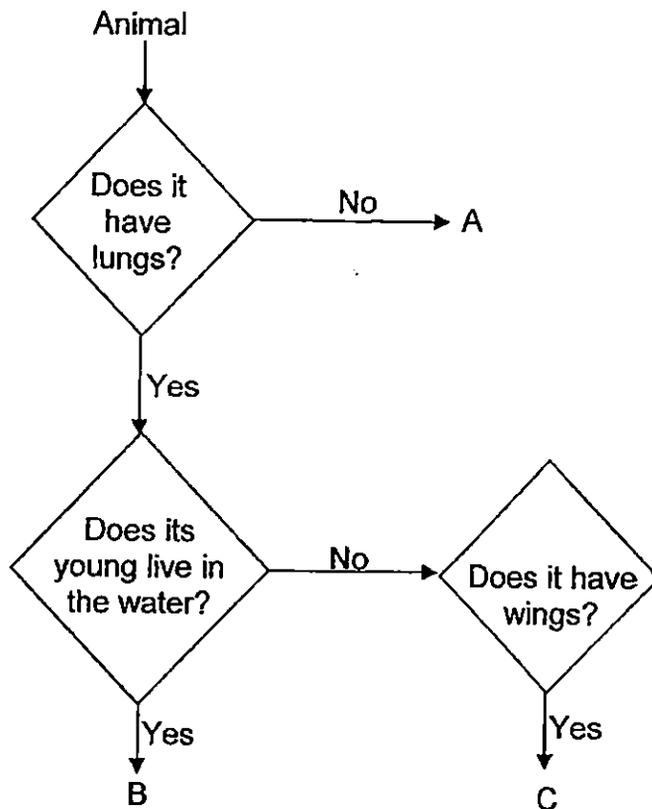
Based on the picture above and the information provided, his friends made the following statements.

- Agil : The animal is a bird because it has wings.
Bablu : The animal is a mammal because it lives on land.
Cayden : The animal is a bird because it has a pair of legs.
Dandy : The animal is a mammal because its outer covering is hair.

Who had made the correct statement?

- | | |
|------------|-----------|
| (1) Agil | (2) Bablu |
| (3) Cayden | (4) Dandy |

11. Study the flow chart below.



Based on the flowchart, which one of the following animals could represent A, B and C correctly?

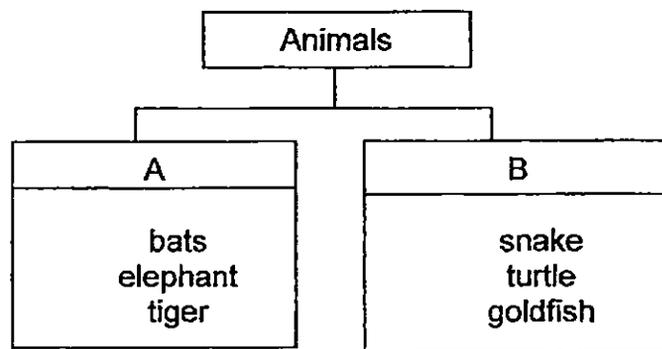
	A	B	C
(1)	shark	dolphin	bat
(2)	dolphin	tiger	bat
(3)	dolphin	cat	goldfish
(4)	shark	tiger	parrot

12. Which of the following statements are **true** about fish?

- A Most fish give birth to their young alive.
- B Fish have fins to help them move in water.
- C Fish have moist skin to help them breathe in water.
- D Scales are hard so they can protect the fish's soft body.

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

Study the chart below and answer questions 13 and 14.



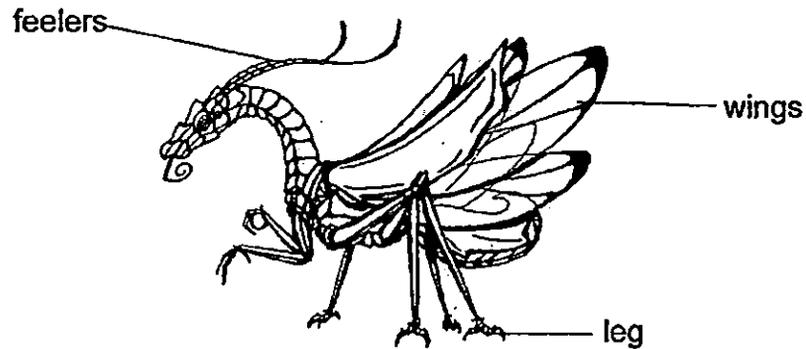
13. Which one of the following best represents A and B?

	A	B
(1)	Have legs	Have fins
(2)	Mammals	Reptiles
(3)	Lives on land	Lives in the sea
(4)	Covered in hair	Covered in scales

14. Which of the following animals can be classified in group B?

- (1) lizard
- (2) whale
- (3) mosquito
- (4) cat

15. Hong Rui found the unusual animal shown below.



He observed the animal and recorded the following characteristics:

- A It has wings.
- B It has feelers.
- C It has six legs.
- D It lives on land and water.
- E It has a hard outer covering.

Which of the observations above would help Hong Rui to classify the animal as an insect?

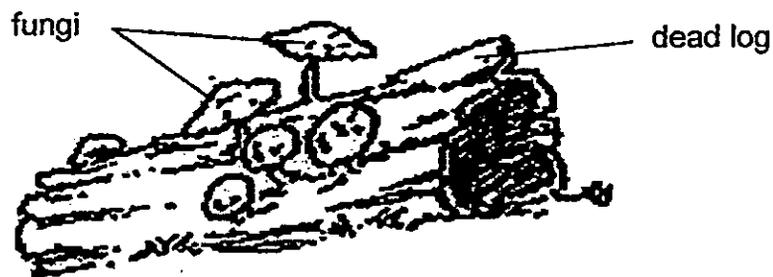
- | | |
|---------------------|---------------------|
| (1) A, B and C only | (2) A, B and D only |
| (3) A, D and E only | (4) B, C and E only |

16. Which of the following explains the function of feathers as an outer-covering?

- A It protects the bird.
- B It helps the bird to fly.
- C It keeps the bird warm.

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

17. Marie observed some fungi growing on a dead log as shown below. After a few weeks, she noticed the log getting smaller but the fungi getting bigger.



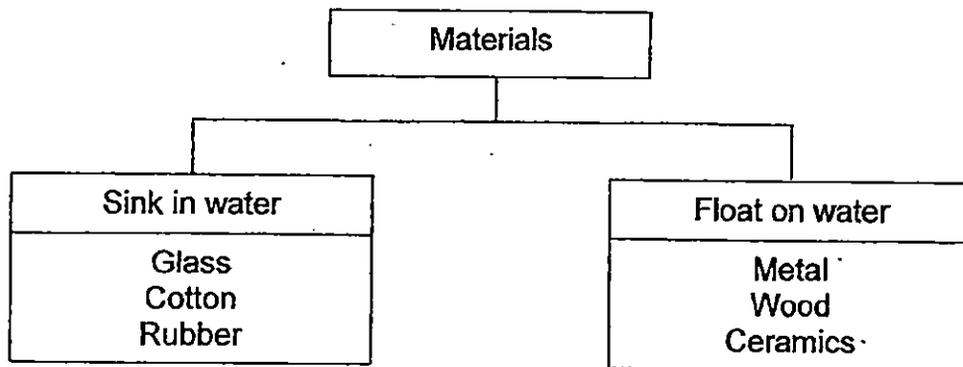
Based on her observation, which of the following statements about fungi is **true**?

- (1) The fungi grow when there is light
 - (2) The fungi get food from the dead log.
 - (3) The fungi make food from the dead log.
 - (4) The fungi get air and water from the dead log.
18. Four children made the following statements about the characteristics of bacteria.

Which one of the following statements is **correct**?

- (1) All bacteria are harmful.
- (2) All bacteria can reproduce.
- (3) All bacteria can only be found in dirty places.
- (4) All bacteria can be seen with our naked eyes.

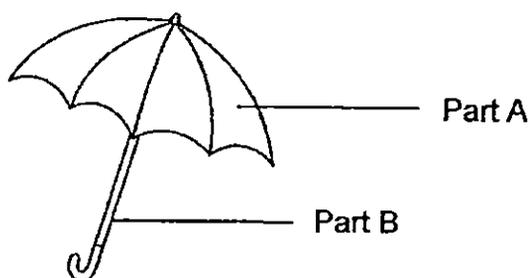
19. Study the following classification chart.



Which of the materials had been **wrongly** classified?

- | | |
|---------------------------|-----------------------------|
| (1) Glass and rubber only | (2) Rubber and wood only |
| (3) Cotton and metal only | (4) Metal and ceramics only |

20. Jamie is looking for a suitable material to make part A and B of an umbrella as shown below.



Which are the **most** suitable materials for making the umbrella?

	Part A	Part B
(1)	Metal	Fabric
(2)	Wood	Paper
(3)	Plastic	Metal
(4)	Glass	Plastic

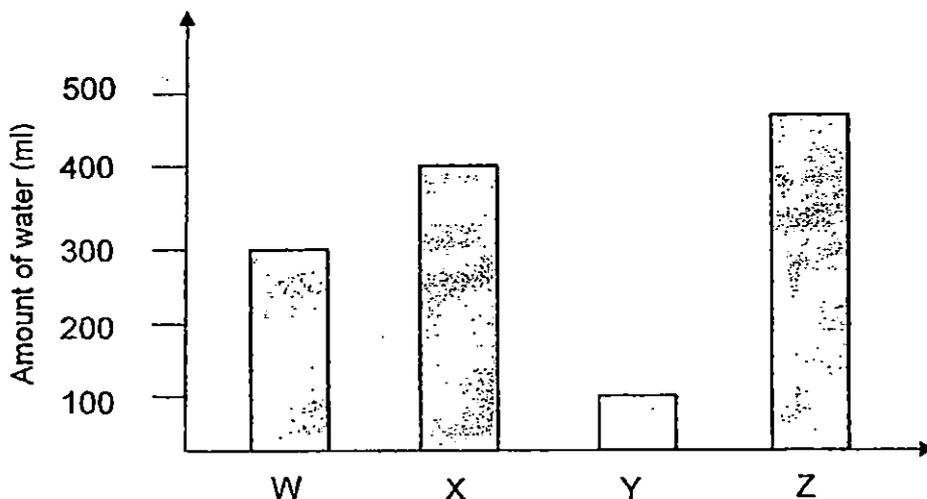
21. David was given an unknown object. He recorded the following properties of the object after conducting some tests.

- It is strong.
- It sinks in water
- It does not allow light to pass through

Which of the following is most likely to be made from the same material as the unknown object?

- | | |
|--------------------|------------------|
| (1) Ping pong ball | (2) Metal fork |
| (3) Glass | (4) Wooden spoon |

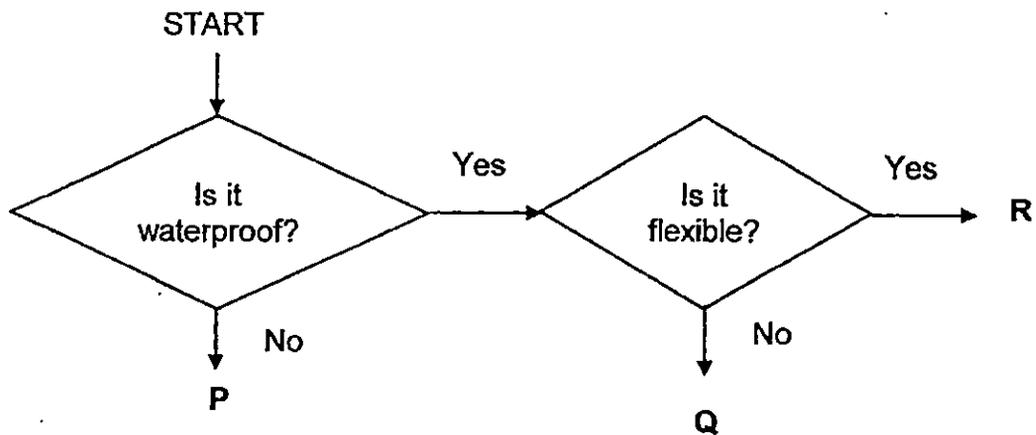
22. Johan carried out an experiment with four thin sheets made of different materials. They are of the same size and thickness. Johan placed four thin sheets into four different pails, W, X, Y and Z, each containing 500ml of water. After he removed the thin sheets from the pails, he measured the amount of water left in the pails and plotted a bar graph as shown below.



Which one of the pails had contained the material which could absorb the least amount of water?

- | | |
|-------|-------|
| (1) W | (2) X |
| (3) Y | (4) Z |

23. Study the flowchart below.



Which of the following could represent objects P, Q and R?

	P	Q	R
(1)	Cotton Wool	Window pane	T-shirt
(2)	T-shirt	Ceramic cup	Raincoat
(3)	Raincoat	Window pane	Cotton Wool
(4)	Eraser	Cotton Wool	Ceramic cup

24. Why is metal generally considered a strong material?

- (1) It sinks in water.
- (2) It does not absorb water.
- (3) It can bend easily without breaking.
- (4) It can support a large amount of mass without breaking.



NANYANG PRIMARY SCHOOL

PRIMARY 3 SCIENCE

**SEMESTRAL ASSESSMENT 1
2015**

BOOKLET B

Date : 12 May 2015

Duration : 1 h 20 min

Name : _____ ()

Class: Primary 3 ()

Marks Scored:

Booklet A:		48
Booklet B :		32
Total :		80

Any query on marks awarded should be raised by 21 May 2015 . We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

Parent's signature:

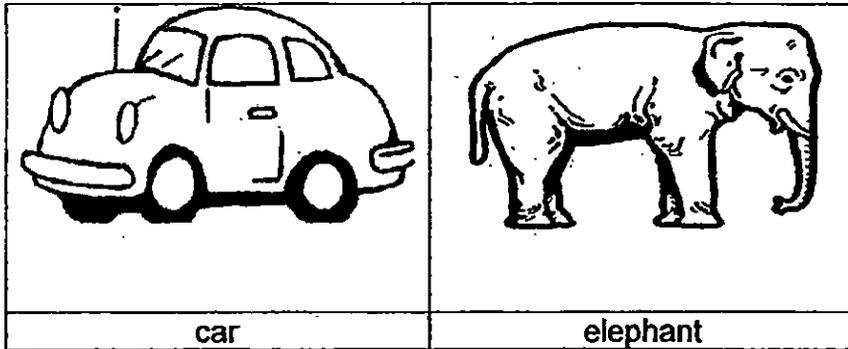
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Booklet B consists of 12 printed pages including this cover page.

Section B (32 marks)

Write your answers to questions 25 to 34 in the spaces provided.

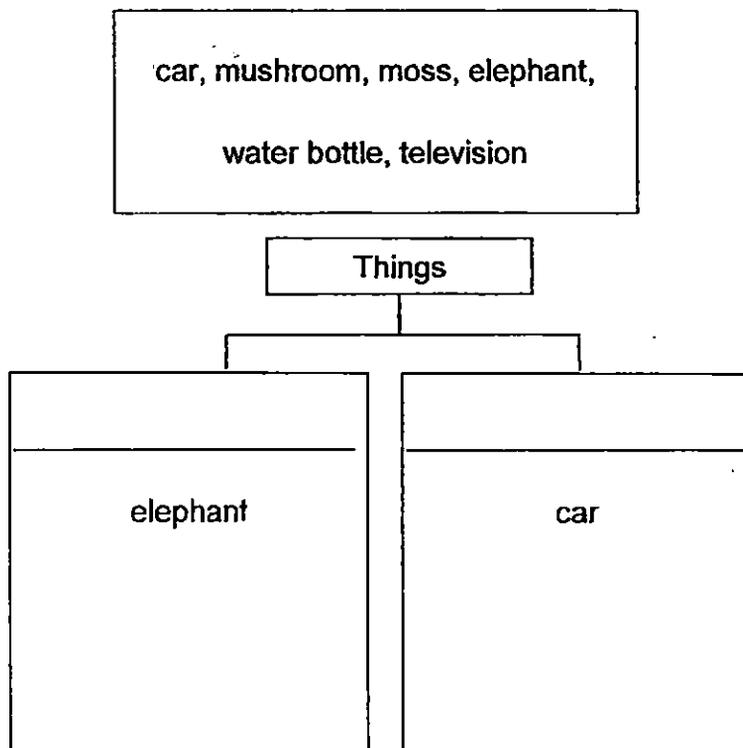
25. Alex compared a car and an elephant.



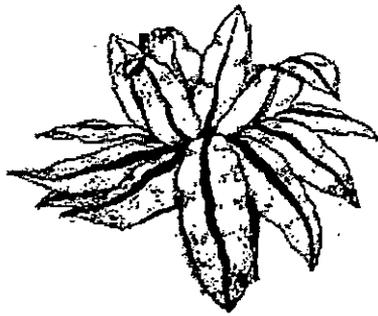
Alex observed that both the car and the elephant are living things because they can move.

(a) Based only on the characteristic provided, explain why he is wrong. [1]

(b) Classify the items below and complete the classification chart with proper headings. The 'car' and 'elephant' had been classified for you. [2]



26. Study the plants below.



Bird's nest fern



Rose Plant

(a) State one **difference** between the two plants.
(Do not compare shape, size and colour)

[1]

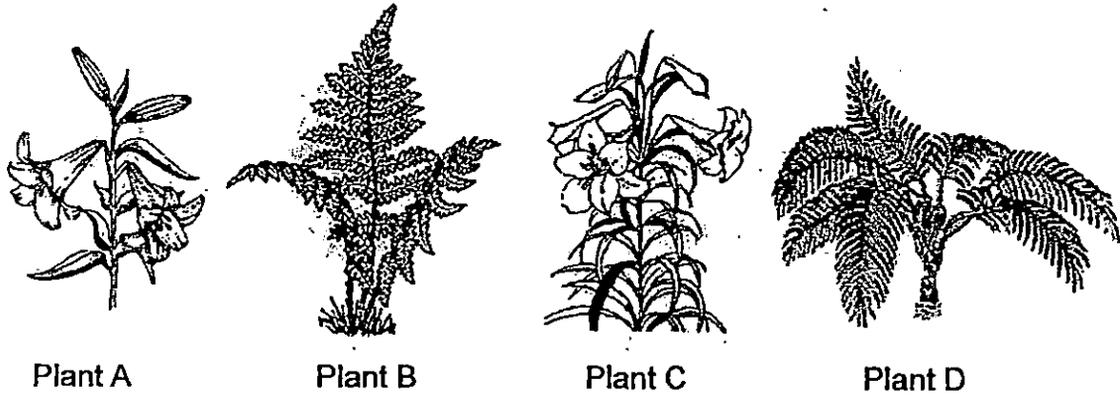
(b) How do the rose plants reproduce?

[1]

(c) Brian classified "mushroom" in the same group of living things as "bird's nest fern". Explain why he is wrong.

[1]

27. Study the diagram of the four different types of plants shown below.



(a) Based on the diagrams, classify plants A, B, C and D into 2 groups in the table below. Give a suitable heading for your table. [2]

(b) Based on plants A and B only, state whether the following statements is True (T) or False (F). [2]

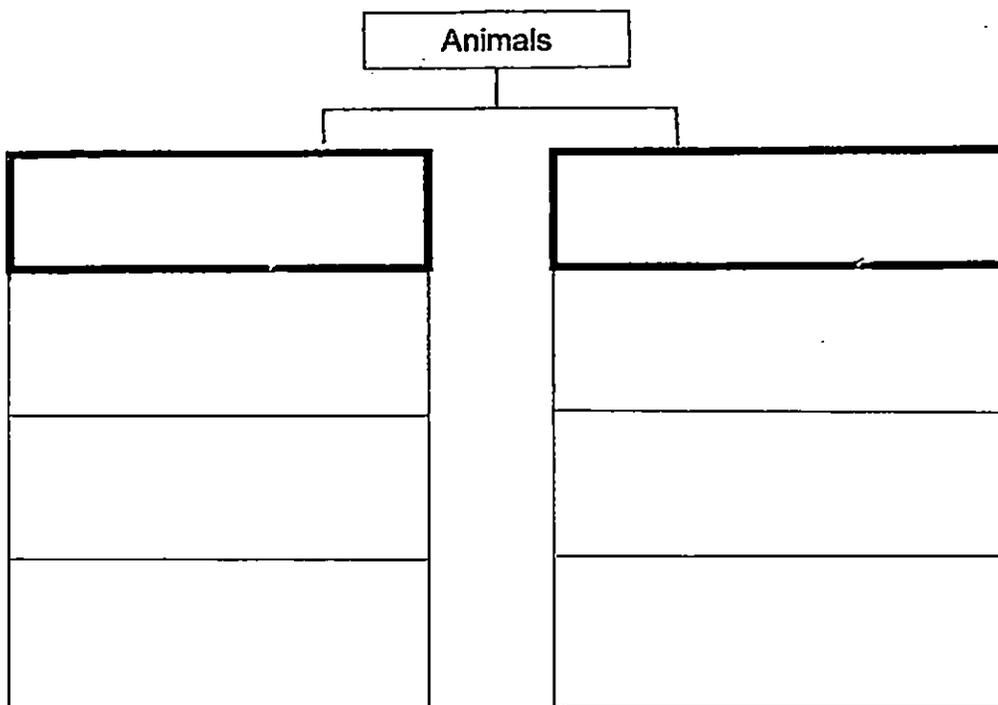
Statements	True/ False
i. Plant A can move freely on its own but plant B cannot.	
ii. Plant A can bear fruits but plant B cannot.	
iii. Plant A can make its own food but plant B cannot.	
iv. Plant A and plant B do not respond to surrounding changes.	

28. Study the table below.

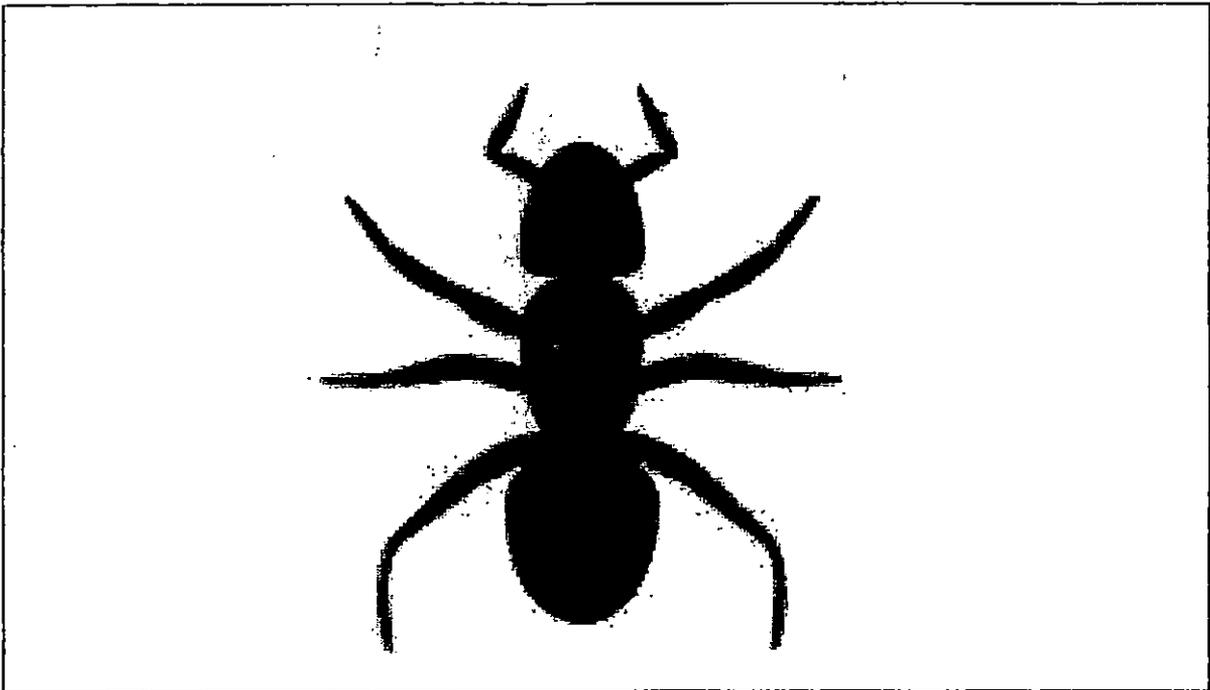
turtle	crocodile
bat	goldfish
orang-utan	seal

- (i) Classify the animals into **two** groups, with 3 animals in each group.
(ii) Give the correct heading for each group.

[3]



29. Study the picture below.



(a) Label the 'feeler' and 'leg' in the diagram above [1]

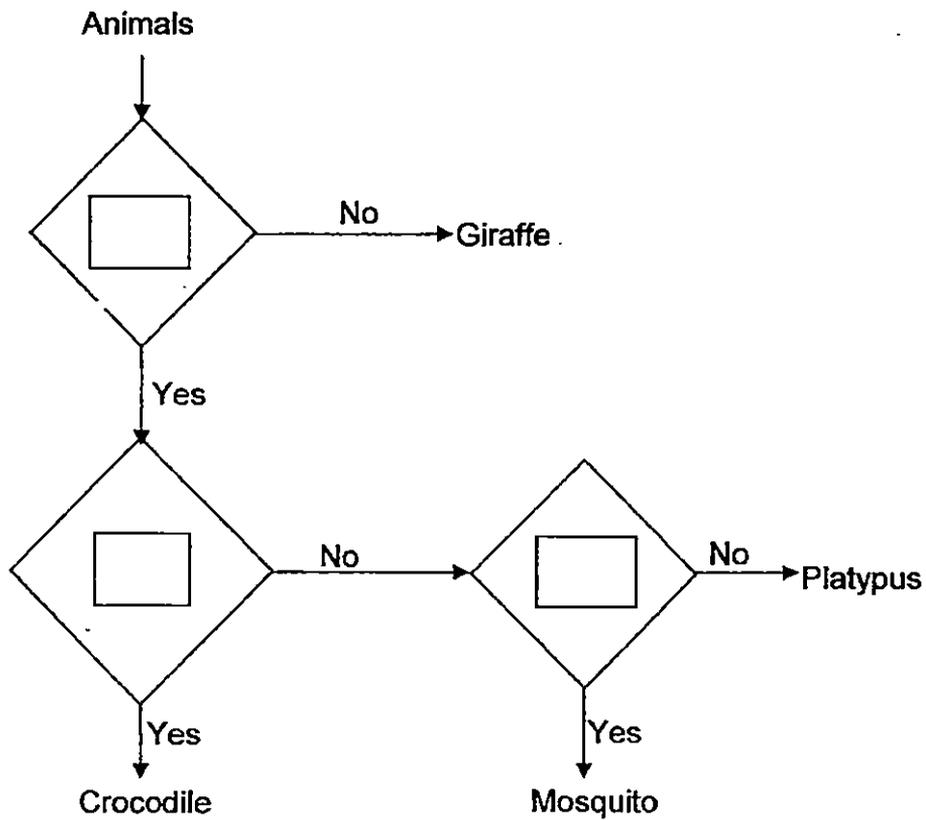
(b) What is the outer covering of the animal above? [1]

(c) State one function of the outer covering of the above animal above. [1]

30. Study the flowchart below. The questions in the flow chart below had been removed. The 3 questions asked are shown in the box below.

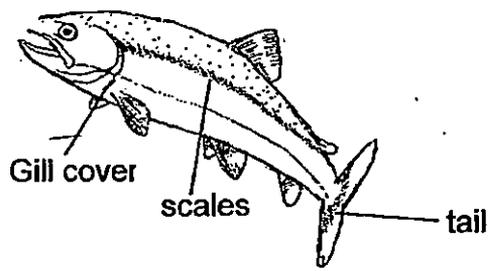
Alphabets	Question
A	Does it fly?
B	Does it lay eggs?
C	Does it have scales?

(a) In the flow chart above, write down the questions A, B or C, into the boxes. [3]

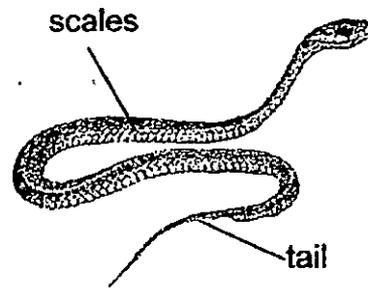


(b)

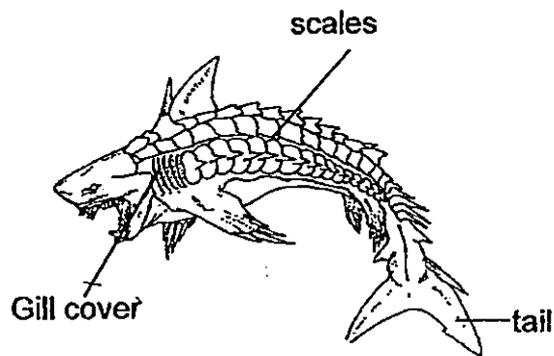
Zack was given an unknown animal X as shown below:



Fish



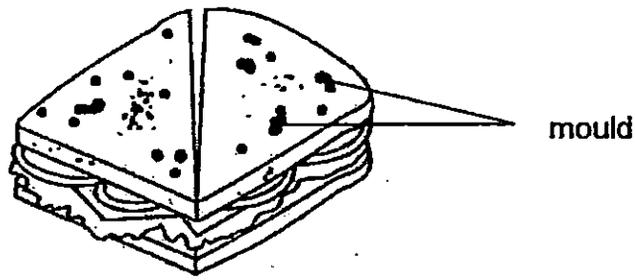
Reptile



Lucas said that animal X is a reptile. Based on the diagrams above, explain why he is wrong.

[1]

31. Denise was cleaning her locker and found a sandwich which she had forgotten for a week. She noticed that green patches of bread mould had grown on the bread.

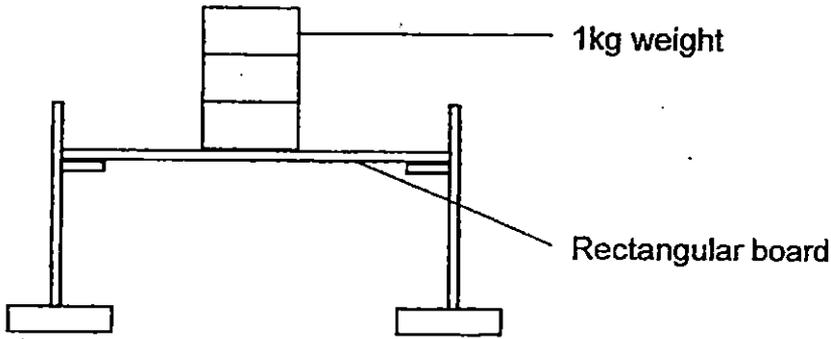


- (a) What are the conditions that allowed the mould to grow well in the locker? [1]

- (b) How did the mould reproduce on the bread? [1]

- (c) Based on the diagram, where did the mould get its food from? [1]

32. Nathan conducted an experiment using three rectangular boards, A, B and C, which were made of different materials. Using the set-up shown below, he kept adding 1 kg weights onto the board until it breaks. He then recorded the amount of weights that each board could support before breaking.

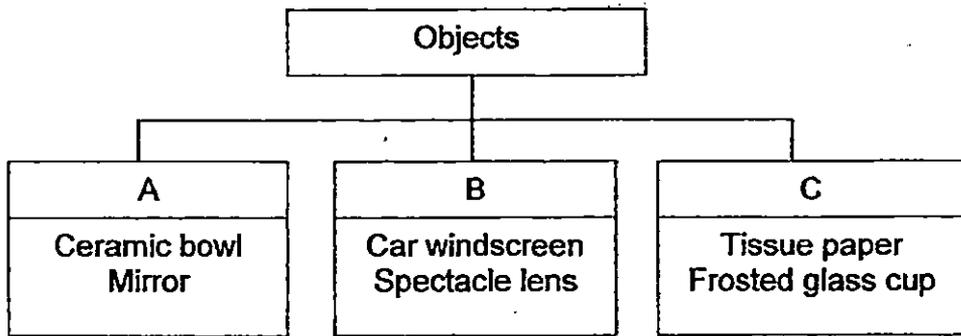


Rectangular boards	Amount of weights it could support
A	1 kg
B	4 kg
C	3 kg

- (a) Which property of the rectangular board was he testing for? [1]

- (b) Which board is the most suitable for making a book shelf? Explain your answer. [1]

33. Study the classification chart below.



Give suitable headings to represent the properties of the objects in the classification chart above.

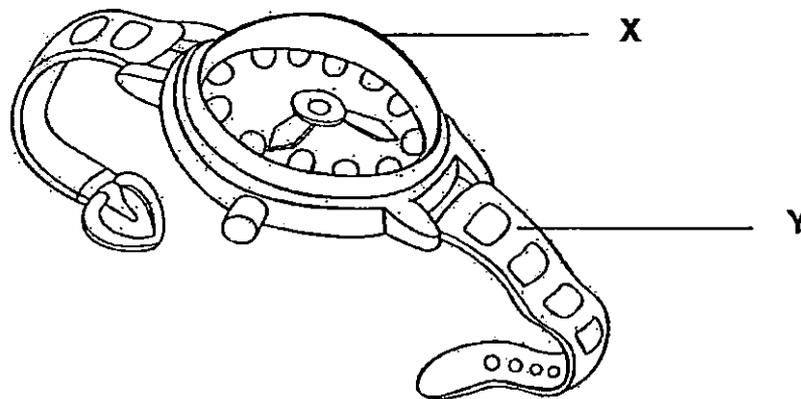
[3]

A: _____

B: _____

C: _____

34. Study the diagram of the watch below.



(a) State a suitable material that can be used to make part X.
Give a reason for your answer .

(i) X: _____ [1]

(ii) Reason : _____ [1]

(b) State a suitable material that can be used to make part Y.
Give a reason for your answer .

(i) Y: _____ [1]

(ii) Reason : [1]



2015 P3 SA1 Answer Key Analysis

Booklet A

1	4	11	1	21	2
2	1	12	2	22	4
3	4	13	4	23	2
4	2	14	1	24	4
5	4	15	4		
6	2	16	4		
7	2	17	2		
8	4	18	2		
9	4	19	4		
10	4	20	3		

Booklet B – Analysis for Selected Questions

25a.

Concept : Living things can move on their own but non-living things cannot move on their own.

Answer : Car **cannot move on their own** but elephant **can move on their own**.

Focus : There must be comparison between the 2 objects given. Comparison must be the characteristic given and highlighted in question stem.

25b.

Focus : Characteristics used to classify the items must be the same. In this case it can only be “Living Things” and “Non-Living Things”.

Note : It is more correct to put the full heading down instead of just “Living” and “Non-Living”.

26a.

Answer : Bird’s nest fern does not bears flowers but the rose plant bears flowers.

Focus : Answer must show comparison. Complete answer will give details of each plant.

Note : Even though how each plant reproduces can also be accepted as an alternative answer, pupils should write down what they can see from the picture Instead of going a further step to deduce how each plant can reproduce.

26c.

Answer : Mushroom is a fungi that **cannot make its own food and gets food from the organism it is growing on**, but bird’s nest fern is a plant that **can make its own food**.

Focus : Answer must show comparison.

Note : Do not just stop at mentioning “Mushroom cannot make its own food...” complete answer should include how mushroom get their food.

28

Focus : Characteristics used to classify the items must be the same and **specific**.

Correct : “covered with hair” and “covered with scales”

Incorrect : “covered with hair” and “NOT covered with hair”

Note : It is more correct to put the full heading down instead of just “hair” and “scales”.

29c.

Answer : It protects the soft body of the animal. / It gives the animal its shape.

Note : It is more correct to write down " It protects the soft body of the animal" instead of " It protects the animal from predator".

30a.

Concept : Use of a flow chart.

Answer : B/C/A.

Note : First box can **only** be "B". That will mean that all the animals below the diamond are animals that lay eggs. If first box is not "B", the rest of the flow chart will not stand.

30b.

Answer : Animal X has gill cover (**characteristic**), just like the fish (**explanation**).

OR
Animal X has gill cover (**characteristic**) but the reptile does not have gill cover, it has lungs instead (**explanation**).

31a.

Concept : Mould is a living thing so it needs air, water and food. But in order to grow WELL, mould needs to have additional conditions of warmth and moisture.

Answer : Mould needs moisture and warmth to grow well.

Note : Dark is not a condition for mould to grow well.

31c.

Concept : Mould gets its food from the **organism** it is growing on.

Answer : The mould gets its food from the **bread** it is growing on.

Note : Relate answer to question, "bread" is used in the answer instead of "organism"

32b

Answer : B(**choice**), it can hold the most weights without breaking(**data**) so it is the strongest board(**explanation**).

Focus : Data given in the question must be used for such question. Complete answer should consist of 3 parts: Choice, Data, Explanation.

Note : However, since this the Science written assessment, we give the full mark if Choice and Data or Choice and explanation is given.

33

Concept : Opaque : does not allow light to pass through

Transparent : allows MOST light to pass through

Translucent : allows SOME light to pass through

Focus : The same property of all the items, Transparency, is used to classify them into 3 groups.

Note : Use the correct term and description.

Transparent material DOES NOT allow ALL light to pass through.

34ai.

Note : When giving reason for selecting certain material, there are 2 parts to the answer : Property and Explanation of uses.

Answer : Glass is used because it is transparent(**property**) so we can see the time on the watch's face(**explain use**).

Suggested Answers for Booklet B

25 (a)	The elephant can move on its own but the car needs someone to move it. *Avoid saying "...but the car cannot" as this is a partial answer which deserves partial mark.
25 (b)	Living things: elephant, mushroom, moss Non-living thing: car, water bottle, television *headings MUST always be a pair based on the same characteristics/properties
26 (a)	Bird's nest fern is a non-flowering plant but the rose plant is a flowering plant. *Must show comparison when asked for difference. *Bird's nest fern DO have stems!
26 (b)	They reproduce by seeds
26 (c)	Mushroom absorbs food from its surroundings but bird's nest fern can make its own food.
27 (a)	Have flowers: Plant A, Plant C Does not have flowers: Plant B, plant D
27 (b)	i. False *Plants cannot move freely on its own. They only show growth movement. ii. True iii. False *All plants can make food iv. False *All living things can respond to surrounding changes
28	Lay eggs: crocodile, turtle, goldfish Give birth to young alive: bat, orang utan, seal *Headings must result in each group having only 3 animals. Headings must be a pair based on the same characteristics.
29 (a)	*Lines should not be crossed. Label in pencil. Many pupils forgot to answer this question!
29 (b)	Hard outer covering / exoskeleton
29 (c)	To protect its soft body
30 (a)	B C, A *As it is a flowchart, the answer to the first box must be correct before marks could be awarded. Otherwise, the error is carried forward to all the other organisms.
30 (b)	Animal X has gill cover like a fish but reptiles do not have gill cover. *Must show comparison. Do not just state what Reptiles/fish have. Answer must be linked to the observation of what the animal X has.
31 (a)	The locker is warm and moist. *Mould does NOT need darkness in order to grow well. *Food is not a condition of the locker.

31 (b)	Mould reproduce by spores.
31 (c)	It gets its food from the bread that it is growing on. *Be specific in the answer.
32 (a)	Strength
32 (b)	B. It could support the most weight without breaking. *Must show comparison between all 3 boards.
33	A: Does not allow light to pass through B: Allows most light to pass through C: Allows some light to pass through *Headings must be based on the same property of degree of transparency to light
34 (a)	If X is interpreted as the watch face:- i. Glass/Plastic ii. Glass/Plastic allows light to pass through so the user can see through it to tell the time. If X is interpreted as the casing of the watch face:- i. Metal/plastic/rubber ii. It is strong and will not break easily when dropped. *Reason must be based on property + function
34 (b)	i. Leather/plastic/rubber ii. It is flexible and allow the user to put it on the wrist easily/comfortably. OR i. Metal ii. It is strong and will not break easily when dropped. *Reason must be based on property + function