



Ministry of Education, Youth and Information

Primary Exit Profile (PEP 6)

April 2022

Curriculum-Based Test Science

Time: 1 hour 30 minutes

Write your name and the name of your school below:

Name of Student

Name of School

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MOEYI/SAU/C Form 1110-202203-V1

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Instructions:

For items 1 to 34 there is only one (1) correct answer. Indicate your response to each item by shading the letter next to the answer you choose. An example is given below.

Example

Which of the following can be classified as a living thing?

- A stone
- B car
- C tree
- D chair

"C" is shaded because it is the only correct answer.

1. What name is given to an area where living and non-living things are found?

- A landscape
- B location
- C environment
- D marine

2. Which activity is **LIKELY** to have a positive effect on the environment?

- A urbanization
- B mulching
- C slash and burn
- D over-fishing

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Read the information below then use it to answer item 6.

For many years, members of the Queen’s Landing community have been dumping their garbage in nearby mangroves.

6. Which is a **LIKELY** effect this activity is having on the environment?
- (A) The fish and turtles are getting trapped in the garbage and dying.
 - (B) The garbage is blocking the sea from entering sections of the river.
 - (C) The garbage is releasing carbon dioxide into the air.
 - (D) Chemicals from the garbage are removing nutrients from the soil.

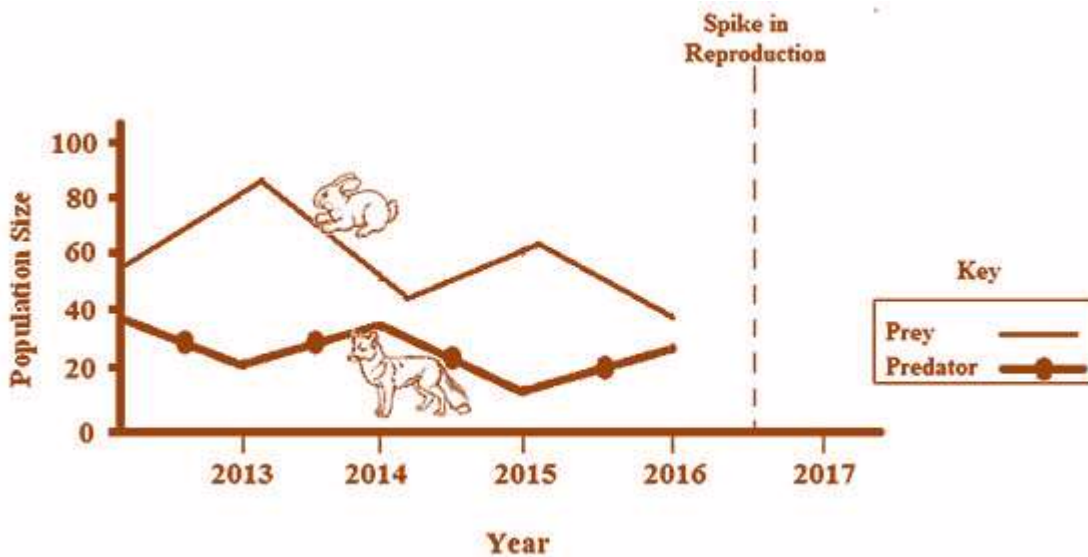
The poster below was seen on the wall of a community centre. Examine it then use it to answer item 7.



7. Which **BEST** tells the message being conveyed by the poster?
How to _____.
- (A) conserve paper
 - (B) stay healthy
 - (C) reduce water use
 - (D) reduce climate change

The graph below shows a relationship between a predator and its prey. Use it to answer item 8.

Graph Showing Changes in Predator and Prey Population Size Over Time



8. During 2016 there was a spike in predator reproduction, and their population size grew to 80. What would **LIKELY** happen to the population of prey? The prey population would _____.

- (A) begin to increase
- (B) fluctuate
- (C) continue to decrease
- (D) not change

9. Which statement **BEST** explains how plants help to prevent soil erosion? Plants _____.

- (A) stop water from passing through the soil
- (B) allow water to evaporate quickly from soil
- (C) stop the rain from falling on the soil
- (D) hold the soil firmly in position

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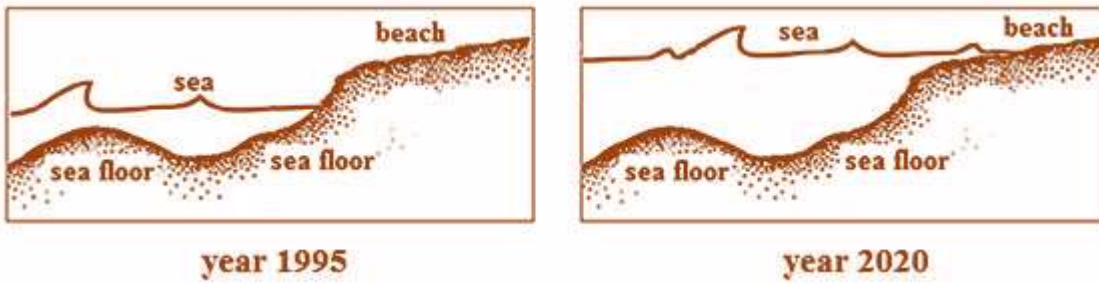
The sign below was seen on the front door of a supermarket. Use it to answer item 10.



10. What is the **MAIN** reason for the ban on single use plastic bags?
To help reduce_____.

- A the number of trees cut down
- B carbon dioxide emissions
- C a specific type of solid waste
- D the number of illegal dump sites

The diagrams below show how a beach can change over a period of 25 years. Examine the diagrams carefully then use them to answer item 11.

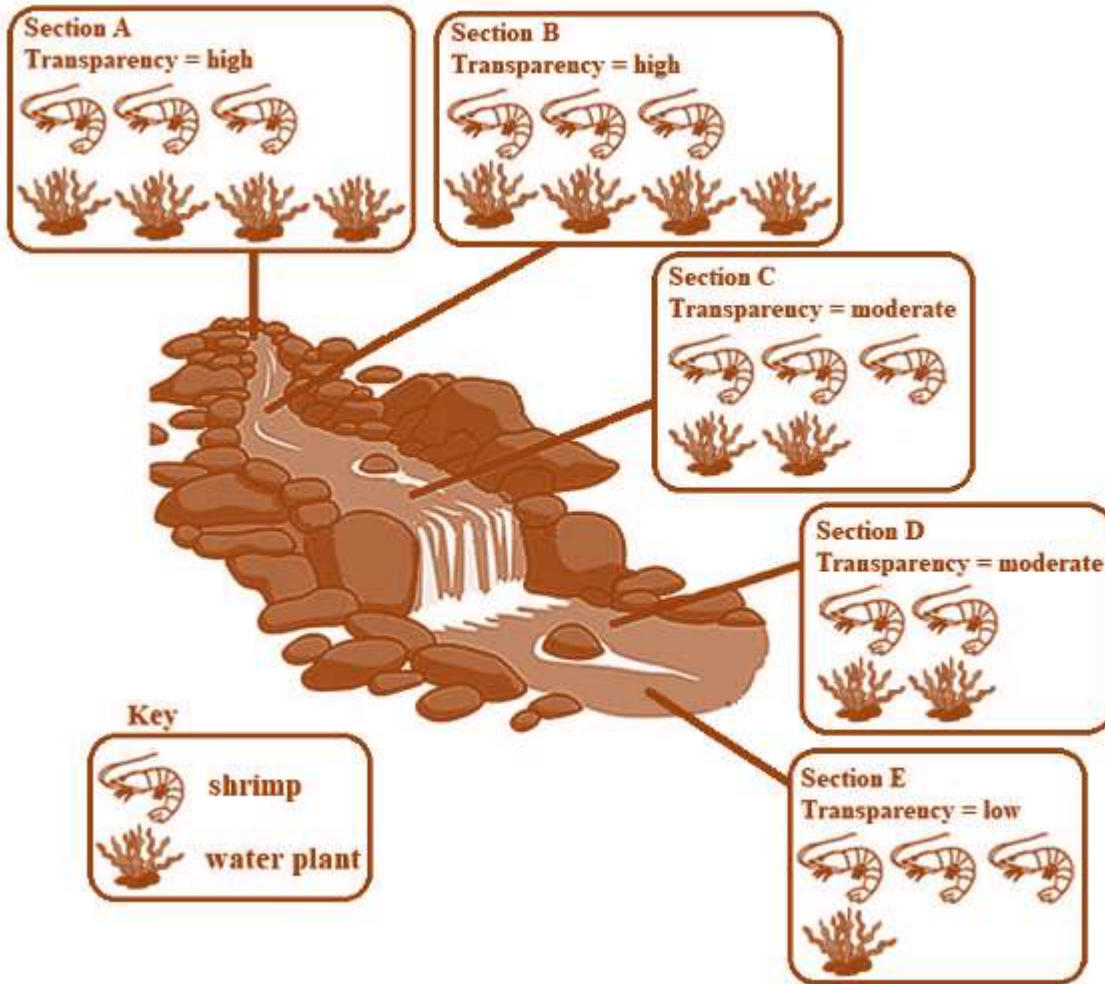


11. Which environmental problem could **most likely** lead to the change seen in the beach?

- A global temperature increase
- B heavy rainfall
- C dynamite fishing
- D rising of the sea floor

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51 The diagram below shows a river. At each section of the river, the transparency of the
50 water, the number of shrimp and the number of underwater plants were recorded. Use this
49 information to answer item 14.
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47 Diagram Showing River Sections and the Data Collected at each Section
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17 14. Based on the information given, which statement is **CORRECT**?

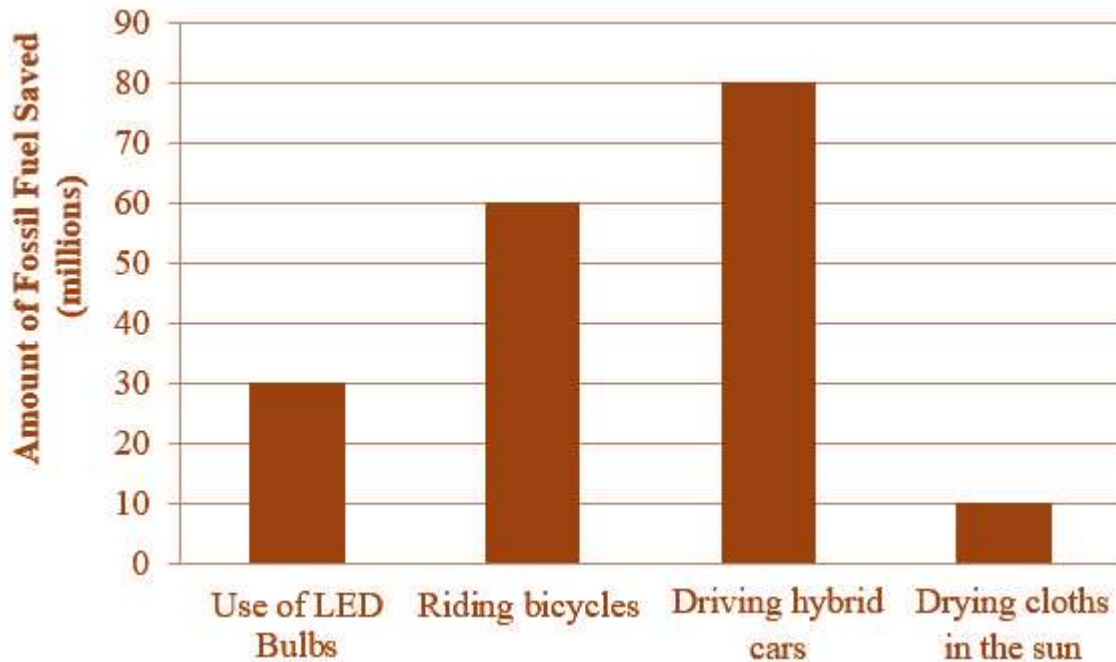
16 Changes in _____.

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14 (A) water transparency are affecting the number of shrimp in the river
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12 (B) water transparency are affecting the number of water plants in the river
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10 (C) the river sections are affecting the number of shrimp
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8 (D) the number of shrimp are affecting the number of water plants in the river
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The graph below shows the effect different activities have on the amount of fossil fuel saved globally. Examine the graph and use it to answer item 15.

Graph Showing the Effect Different Activities Have on the Amount of Fossil Fuel Saved



15. Which statement is supported by the data in the graph?
- (A) Riding bicycles is less effective than using LED's in reducing fossil fuel use.
 - (B) Driving hybrid cars is most effective in reducing fossil fuel use.
 - (C) Drying clothes in the sun is most effective in reducing fossil fuel use.
 - (D) Using LED bulbs is less effective than drying clothes in the sun in reducing fossil fuel use.

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Read the information below then use it to answer item 16.

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The Jones family realized that they were producing large amounts of plastics and food waste. This is bad for the environment and they want to reduce these types of waste.

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16. Which is the **most suitable** way that the family can reduce the amount of waste they produce?

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(A) Request that the government ban straws and plastic juice bottles.

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(B) Create a dump site for the plastic materials and food waste.

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(C) Reuse the plastic containers and use the food waste as fertilizer.

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(D) Burn the plastic materials and use the food waste as fertilizer.

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A student wrote the equation below to explain a process she observed. Use the equation to answer item 17.

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$$\text{solid} + \text{heat} = \text{liquid}$$

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17. Which process is represented by the equation?

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(A) melting

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(B) freezing

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(C) evaporation

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(D) condensation

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Read the information in the box below then use it to answer item 21.

Sue spilt some liquid on a glass table. The table was in front of a large window through which the midday sun shone in. When she returned a few hours later, she realized that the liquid had disappeared. No one cleaned up the spill.

21. Which statement is supported by the information?
The spilt liquid _____.

- A changed into a gas
- B was absorbed by a book leaf
- C flowed off the table
- D was absorbed by the table

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Read the statement below then use it to answer item 22.

A student wanted to use a glove to protect his hand as he cleaned up some liquid dye that had been spilt in the science lab.

22. Which property should the material used to make the glove have?
The material should be _____.

- A absorbent
- B light weight
- C smooth
- D waterproof

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23. Which sound could **BEST** be described as unpleasant?

- (A) the sound of a flowing river
- (B) the sound of a pencil hitting the ground
- (C) the sound of a lawn mower
- (D) the sound of leaves rustling in the wind

24. Which is an example of a luminous object?

- (A) bicycle reflector
- (B) a glow in the dark toy
- (C) a shiny ring
- (D) glitter glue

Read the statement below then use it to answer item 25.

“The sound I just heard was very similar to that of a squeaky door.”

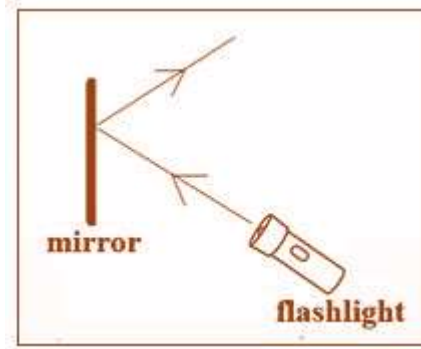
25. Which **BEST** describes the sound that was heard?

- (A) low volume
- (B) high volume
- (C) low pitch
- (D) high pitch



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The diagram below shows the set-up of an experiment. Use it to answer item 26.



26. What property of light is being demonstrated in the diagram?
- (A) reflection
 - (B) refraction
 - (C) absorption
 - (D) radiation
27. Which of the following does **NOT** explain why loud sounds are harmful?
- (A) Loud sounds can scare animals away from their environment.
 - (B) Long term exposure to loud sounds can cause ringing in the ears.
 - (C) Constantly listening to loud sounds can lead to hearing loss.
 - (D) Loud sounds can be heard from very far away.

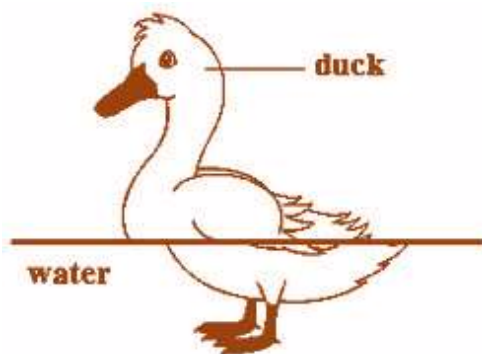
Read the observation below then use it to answer item 28.

When I looked at the image of my nose in the reflective surface it appeared much larger.

28. Which was a **LIKELY** characteristic of the reflective surface?

- (A) The surface was bumpy.
- (B) The surface was flat.
- (C) The surface was curved.
- (D) The surface was shiny.

The diagram below shows a duck paddling on the surface of water. Use the information to answer item 29.

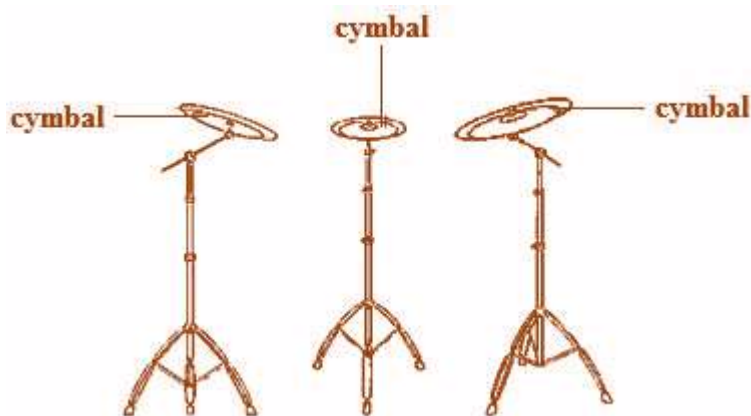


29. Which is responsible for the visual effect seen in the picture?
The _____.

- (A) absorption of light
- (B) refraction of light
- (C) reflection of light
- (D) scattering of light

Read the information below then use it to answer item 31.

It was observed that the cymbals in a drum set made sounds of different pitch when hit with the same force.



31. Which of the following is a hypothesis for the observation?
- (A) If the diameter of the cymbal changes then the pitch of the sound will change.
 - (B) To find out if the diameter of a cymbal affects the pitch of the sound it makes.
 - (C) As the diameter of the cymbal increased, the pitch of the sound it made increased.
 - (D) Will the pitch of the sound a cymbal makes change if its diameter changes?

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An equal force was used to pluck strings that had the same length, but different thickness. The table below shows the findings. Use it to answer items 32 and 33.

Table Showing Strings of Different Thickness and Pitch of Sound Made

String Name	Thickness	Pitch of Sound Made by String
A	Very Thin	Very high
B	Thin	High
C	Medium	Medium
D	Thick	Low

32. Which is a **LIKELY** aim of the investigation?
To find out if the _____.
- (A) thickness of a string affects the loudness of the sound it makes
 - (B) force with which a string is plucked affects the pitch of the sound it makes
 - (C) force with which a string is plucked affects the loudness of the sound it makes
 - (D) thickness of a string affects the pitch of the sound it makes
33. Which statement is supported by the information in the results table?
- (A) As the string gets thicker the pitch of the sound it makes decreases.
 - (B) Plucking the string with a strong force increases the pitch of the sound.
 - (C) As the string gets thicker the pitch of the sound it makes increases.
 - (D) Plucking the string with a weak force increases the pitch of the sound.



The aim for a fair test is written in the box below. The box also shows an incorrect step a student followed when carrying out the fair test. Use the information to answer item 34.

Aim:

To find out if the loudness of the sound a marble makes is affected by the thickness of the mat it falls onto.

Incorrect Step:

Using 3 different sized marbles, drop each marble onto a thick mat.

34. Which is a suitable **CORRECTION** for the student's incorrect step?
Using the same marble, _____.
- (A) drop it onto the same mat three times
 - (B) drop it onto mats of different shapes
 - (C) drop it onto three mats made from the same material
 - (D) drop it onto mats having different thickness

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Instructions:

For items 35 and 36 there is more than one (1) correct answer. Indicate your response to each item by shading the letters next to the answers you choose. An example is given below.

Example

Which two (2) of the following are characteristics of all living things?

All living things _____ and _____.

- A grow
- B run
- C reproduce
- D talk
- E walk

"A" and "C" are shaded because they are the only two correct answers.



A harbour manager wants to reduce the amount of plastic waste polluting the harbour. The table below shows different methods of reducing plastic waste. Examine the table then use it to answer item 35.

Table Showing Pros and Cons of Different Methods of Reducing Plastic Waste

Method	Pro	Con
Make polluters pay a fine	Moderately effective	Owners dump plastics further out in the sea.
Collect then burn plastic waste	Moderately effective	Melted plastic remains; produces toxic smoke
Increase the number of recycling bins	Highly effective	Expensive to buy recycling bins
Move plastic waste to dump site	Highly effective	Creates breeding sites for disease carrying organisms
Organise weekly harbour clean-ups	Highly effective	Clean-up crews may work at a slow pace.

35. Which **TWO (2)** methods would be **most suitable** for the harbour manager to use?

- (A) fine the polluters
- (B) burning plastic waste
- (C) increase number of recycle bins
- (D) move plastic to dump site
- (E) weekly harbour clean-ups

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36. Which **TWO (2)** statements are **TRUE** about light as it travels from its source?
It _____.

- (A) travels in a circular path
- (B) travels in a straight line
- (C) can bend around corners
- (D) can pass through any material
- (E) travels in all directions from its source

Instructions:

For items 37 and 38 indicate your response to each item by shading the appropriate letter in each row of the table given. Only one letter is to be shaded in each row. An example is given below.

Example

For each function listed in the table below, shade the appropriate letter in the row to indicate which sense organ is responsible for the function.

Function	Eye	Nose	Ear
Hearing & Balance	<input type="radio"/> (A)	<input type="radio"/> (B)	<input checked="" type="radio"/> (C)
Sight	<input checked="" type="radio"/> (A)	<input type="radio"/> (B)	<input type="radio"/> (C)
Smell	<input type="radio"/> (A)	<input checked="" type="radio"/> (B)	<input type="radio"/> (C)

The ear is responsible for hearing and balance so "C" is shaded.

The eye is responsible for sight so "A" is shaded.

The nose is responsible for smell so "B" is shaded.

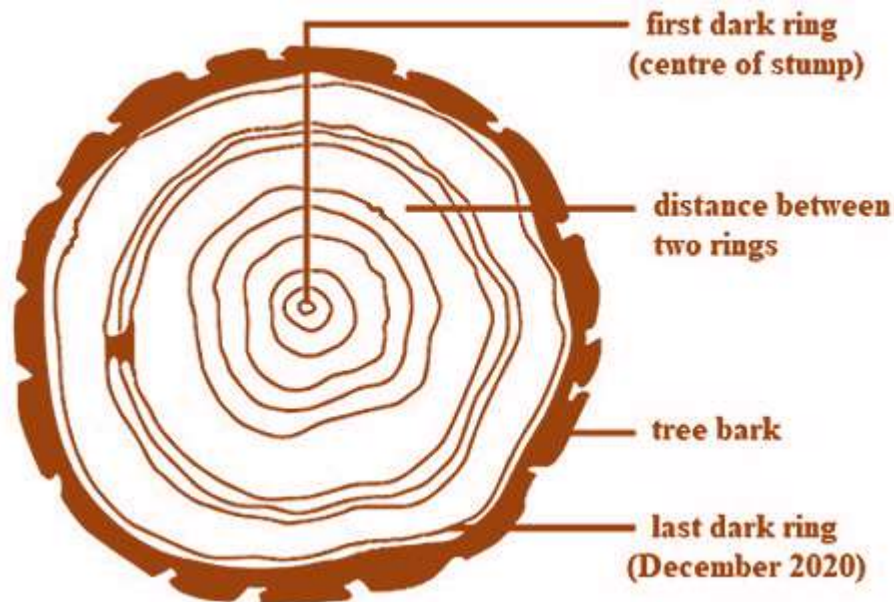


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Read the information and observe the tree stump below. Use them to answer item 37.

By observing the ring patterns on the top of a tree stump a scientist can:

- tell what the weather was like during each year of a tree’s life
- tell the age of a tree



Counting outwards from the centre, each dark ring equals one year added to the tree’s life. The distance between two rings is wider in warm, wet years, and narrower in years when it is cold and dry.

37. For each statement in the table below, shade the appropriate letter in the row to indicate whether the patterns on the tree stump **support** or **do not support** the statements.

Statement	Support	Do not Support
The ecosystem in which the tree was found experienced alternating rainy and dry years.	Ⓐ	Ⓑ
The tree has been around for more than 8 years.	Ⓐ	Ⓑ
If the picture of the stump was taken at the end of 2020, it means that 2016 and 2019 were years with a lot of rainfall.	Ⓐ	Ⓑ

Instructions:

For items 39 and 40 indicate your responses by shading the letter(s) in the sentence or paragraph that make(s) it correct. Each letter corresponds to a word/expression from a given list of options. Each option should be used only once. Not all options have to be used. An example is given below.

Example

Use the list of options below to complete the sentences that follow. Indicate your responses by shading the appropriate letters that make the paragraph TRUE.

- A. five B. six C. sight D. eye

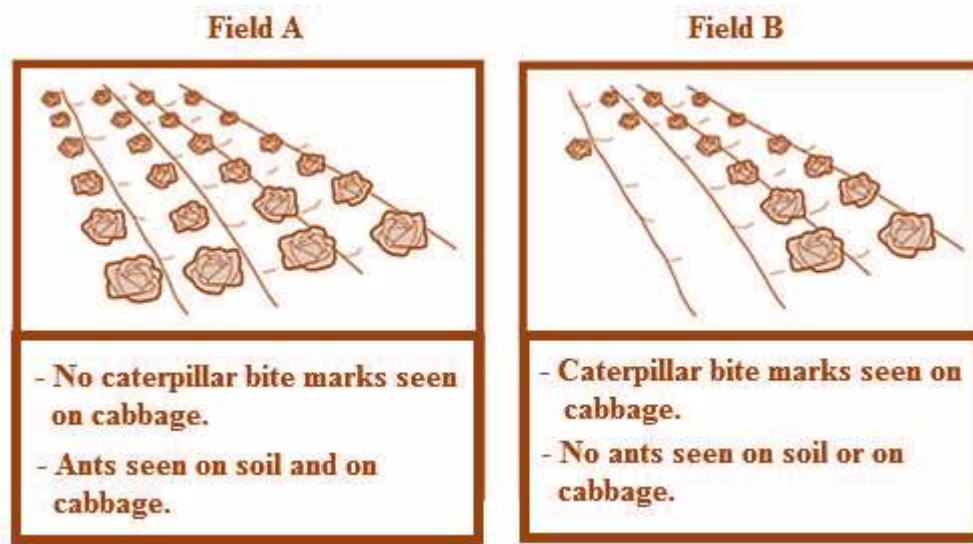
The A B C D is one of the A B C D sense organs in the body. It is responsible for A B C D .

The first missing word in the paragraph is "eye" so "D" is shaded.

The second missing word in the paragraph is "five" so "A" is shaded.

The third missing word in the paragraph is "sight" so "C" is shaded.

The diagrams below show two cabbage fields: Field A and Field B. The observations of a farmer are also included. Carefully examine the diagrams, then use them to answer item 40.



40. Use the diagram and the word choices (A – I) below to **CORRECTLY** complete the statement which follows. The statement should explain why Field A produced more cabbage than field B.

Word choices:

- | | | |
|---------------|--------------|----------------|
| A. fertilizer | D. protected | G. soil |
| B. soil | E. nourished | H. caterpillar |
| C. ants | F. bit | I. cabbage |

Statement:

Field A produced more cabbage than Field B because the **(A)** **(B)** **(C)** on Field A **(D)** **(E)** **(F)** the **(G)** **(H)** **(I)**.

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