5. The diagram below shows two types of food.

X

Y

(a) Based on the words given below, state the class of food of *X* and *Y*.

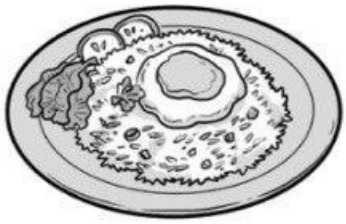
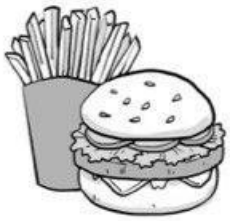
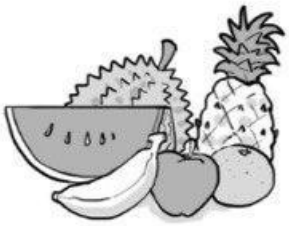
Protein	Vitamin	Carbohydrate	Fat

X	

Y	

[2 *marks*]

(b) Tick (✓) the food that are important for the growth of children.

(i)  ☐	(ii)  ☐
(iii) ☐	(iv)  ☐

[2 *marks*]

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LIVEWORKSHEETS

Section C

[60 marks]

Answer **all** questions in this section.

6. (a) Pak Samad oil's palm plantation has been attacked by rhinoceros beetles that cause the base of palm fronds to be perforated and young shoots broken.

(i) The diagram shows Pak Samad has sprayed insecticide on his oil palm tree.
State the negative effects of the use of insecticide on crops and humans.

_____

_____

[2 *marks*]

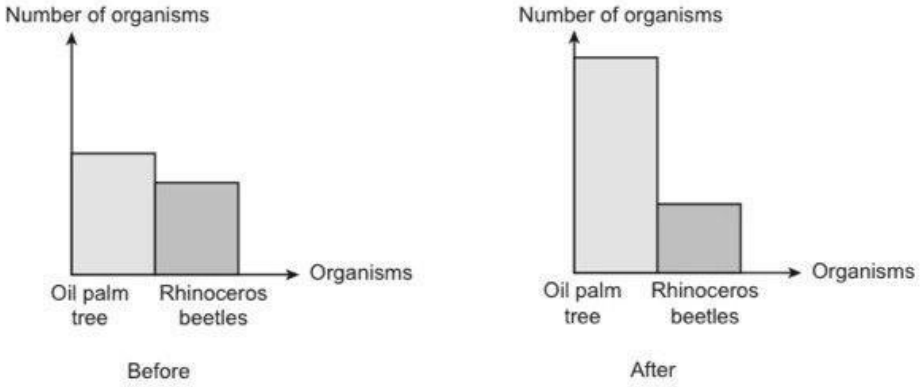
(ii) However, after receiving advice from the Malaysian Palm Oil Board, Pak Samad changes his mind by supplying *Bacillus thuringiensis* bacteria to overcome the problem. Name the method and explain.

_____

_____

[2 *marks*]

(iii) The diagram below shows the population of oil palm trees and rhinoceros beetles, before and after *Bacillus thuringiensis* bacteria were supplied in the oil palm plantations.



Based on the diagram above, state the changes of populations of oil palm trees and rhinoceros beetles.

_____

_____

[2 *marks*]

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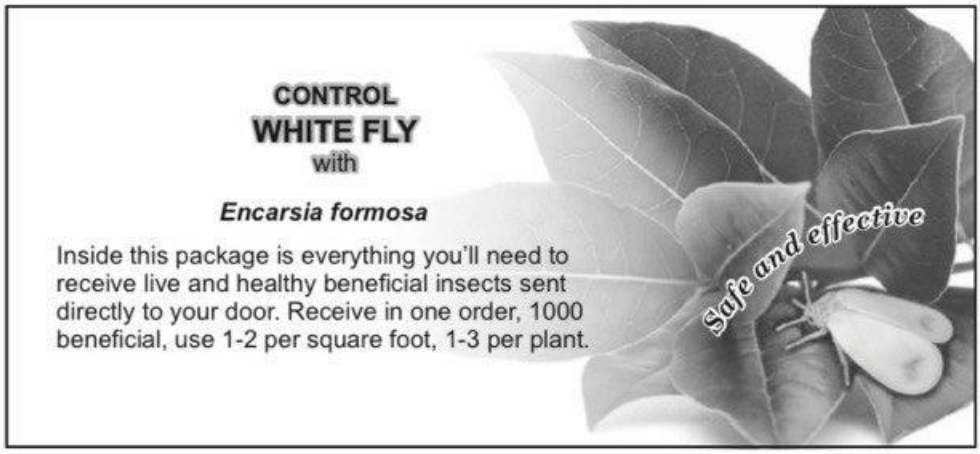
LIVEWORKSHEETS

(b) While in town, Arman saw an advertisement selling a type of wasp of the species *Encarsia formosa*. The wasps are used to kill whiteflies that attack plants. The diagram below shows the advertisement.



(i) Based on the diagram above, what is the relationship between the wasps and the whiteflies?

_____

[1 *mark*]

(ii) Arman intends to buy those wasps. What is your advice to Arman, should he buy or not? Justify your answer.

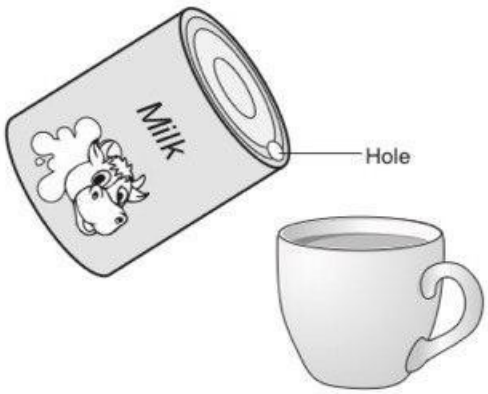
_____

_____

_____

[3 *marks*]

7. (a) During breakfast, Fatimah wants to make milk tea using condensed milk as shown in the diagram below. Unfortunately, the condensed milk cannot flow out through the hole that has been punched.



(i) State why the condensed milk is difficult to flow out of the milk can.

_____

[1 *mark*]

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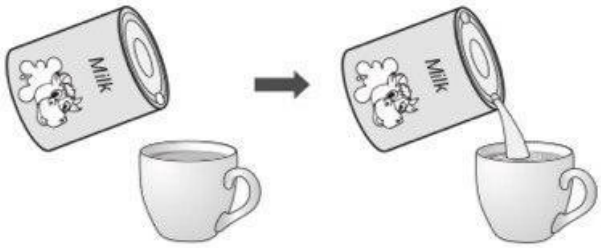
LIVEWORKSHEETS

(ii) Fatimah punched another hole on the milk can. The diagram below shows the flow of condensed milk from the milk can after having two holes.

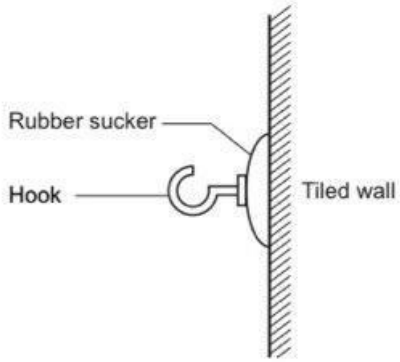


Why does this happen?

_____

[1 *mark*]

(iii) After eating, Fatimah washes and then wipes her hand using a hand towel hung on the tiled wall. The diagram below shows the suction hook that is used to hang the hand towel.



What will happen to the suction hook if the hand towel is replaced with a wet T-shirt?

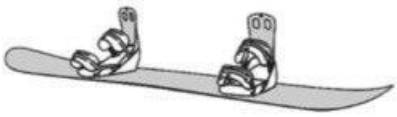
_____

_____

[2 *marks*]

(b) The diagram below shows two types of shoes used for skating on ice and snow.

Shoe *A*



Shoe *B*

(i) Compare the pressure exerted by shoe *A* and shoe *B* on a surface.

_____

[1 *mark*]

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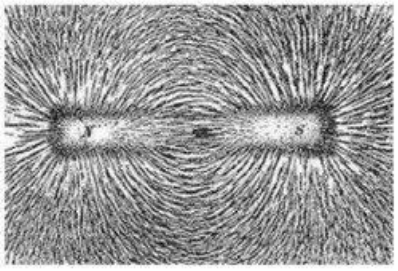
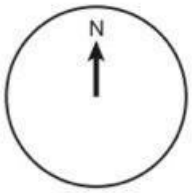
LIVEWORKSHEETS

(ii) Which shoes, *A* or *B*, can be used to help you surf in desert? Justify your choice.

[3 *marks*]

8. The diagram below shows an activity conducted by Aiman to observe the pattern of magnetic field.

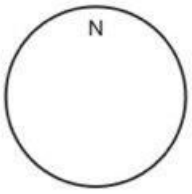




(a) What is meant by magnetic field?

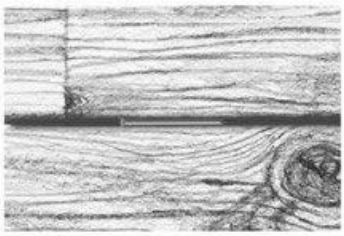
[1 *mark*]

(b) A compass is placed beside the bar magnet as shown in the diagram.
Draw the changes in the compass arrow in the circle to show the direction of magnetic field.
Then, explain why the arrow in the compass changes the direction.



[2 *marks*]

(c) While doing woodwork, Aiman dropped an iron nail in between two wood planks as shown in the diagram.



Explain how Aiman is able to retrieve the iron nail even though the bar magnet cannot fit into the gap between the planks.

[2 *marks*]

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(d) Aiman is required by his teacher to choose between the solar compass that uses the shadow or the magnetic compass as shown in the diagram below if he is lost in the jungle.

Solar compass

Magnetic compass

Aiman choose the magnetic compass. Give reasons for his choice.

_____

_____

_____

[3 *marks*]

9. Imran had attended a camping camp organised by the school's uniformed unit to Pantai Tanjung Rhu.

(a) When Imran reached the beach, he felt very hot because of the heat that the sun was emitting. State the unit for heat.

_____

[1 *mark*]

(b) The diagram below shows water being boiled by Imran in a pot.

State the method of heat flow that occurs in the area labelled *P* and *Q*.

_____

_____

[2 *marks*]

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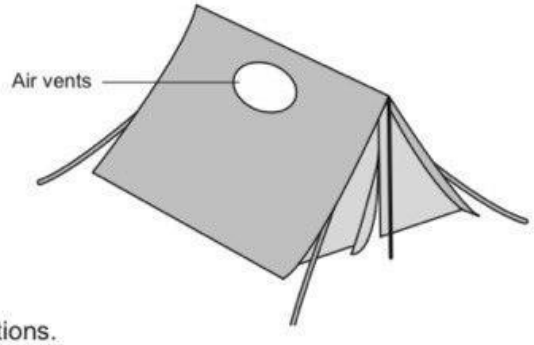
LIVEWORKSHEETS

(c) The diagram below shows the actions of Imran, who renovated his tent by raising the structure of the tent and creating an air vent to reduce the heat in the tent.



Describe Imran's actions.

[3 *marks*]

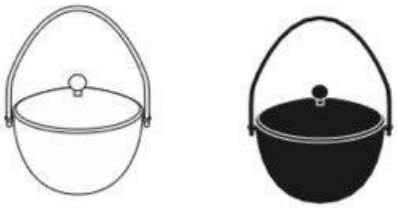
(d) Imran added 100 ml of water at room temperature into containers *P*, *Q* and *R*. Then, he added the same amount of ice into the containers. The table below shows the water temperature after 10 minutes.

Container	Temperature after 10 minutes (°C)
P	25
Q	16
R	19

Which container is a good thermal insulation? Explain your answer.

[2 *marks*]

(e) The diagram below shows two pots of different colours. Imran chose a black pot for cooking in the camping camp.



Justify Imran's choice.

[2 *marks*]

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LIVEWORKSHEETS

10. (a) Sufian's sister, Sumayyah has a fever and has no appetite to eat. Her mother prepares rice porridge for her lunch as shown in the diagram below.

(i) State the main class of food for the menu in the diagram above.

_____

[1 *mark*]

(ii) State the risk that a child will face if he consumes too much of the food class above. Explain your answer.

_____

_____

[2 *marks*]

(b) The table below shows the calorific value of some types of food in Sufian's lunch.

Menu	Quantity	Calories values (kcal)
Fried rice	1 plate	2200
Orange juice	1 glass	160
Kuih lapis	1 piece	240

Calculate the calorie value of food taken by Sufian if he eats a plate of fried rice, 2 glasses of orange juice and 2 pieces of kuih lapis for his lunch.

[3 *marks*]

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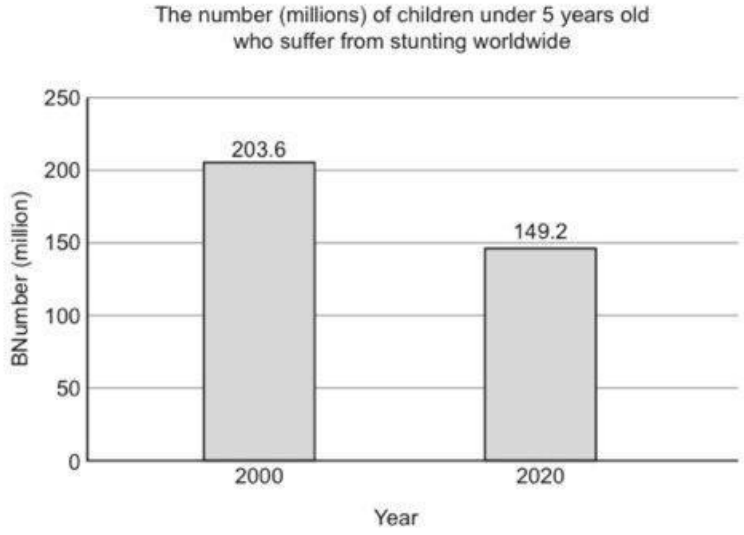
LIVEWORKSHEETS

(c) After lunch, Sufian carries out school assignments related to the problem of stunting all over the world. The graph below shows the rate of stunting among children under the age of 5 years old in 2000 and 2020.



Compare the number of children under the age of 5 years old who were stunted in 2000 and 2020. Explain the reasons that could cause the comparison to happen.

[3 *marks*]

(d) Children are susceptible to stunting if they are not given a healthy menu by their parents. Suggest a healthy breakfast menu that can be given to children to prevent the problem of stunting.

Explanation:

[3 *marks*]

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LIVEWORKSHEETS

11. (a) During the last school holidays, Mr. Raslan and his family went on vacation at a hotel. During breakfast, his son, Shahfizi wanted to make a cup of coffee for his father. The diagram shows the cup used by Shahfizi.

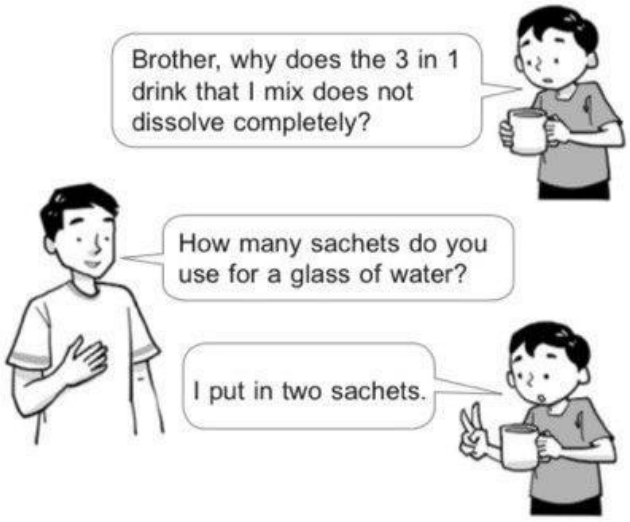
(i) Shahfizi put two teaspoons of substance *P* into his cup. Name the type of solution made and explain your answer.

_____

_____

[2 *marks*]

(ii) The diagram below shows a conversation between Shahfizi and his brother, Shahril.



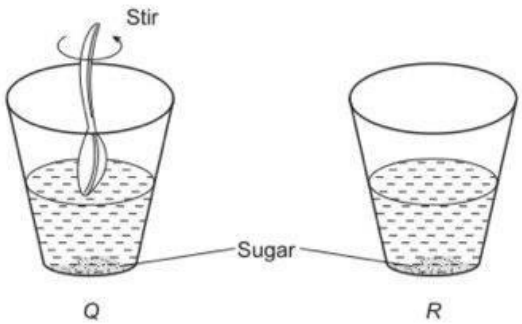
What can Shahril do so that the drink prepared by him dissolves completely?

_____

_____

[2 *marks*]

(b) The diagram below shows two glasses of water, *Q* and *R* containing sugar.



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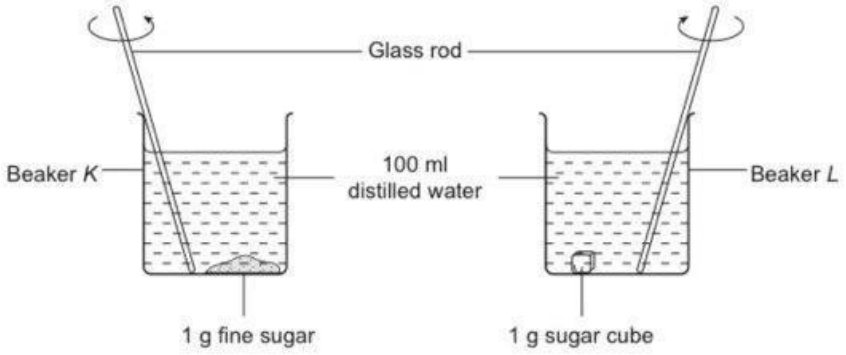
After a few minutes, it is found that sugar in glass *Q* dissolves more easily than in glass *R*. Explain your answer.

[2 *marks*]

(c) The diagram below shows the set-up of apparatus for an experiment to study the factor that affects the rate of solubility of a substance. Both beakers were stirred for 1 minute.



(i) State **one** observation based on the diagram above and give your reason.

[2 *marks*]

(ii) If the time used to dissolve sugar in beaker *K* is 20 seconds, predict the time it will take to dissolve the sugar in the hot water. Explain your answer.

[2 *marks*]

(iii) State **two** constant variables in this investigation.

[2 *marks*]

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