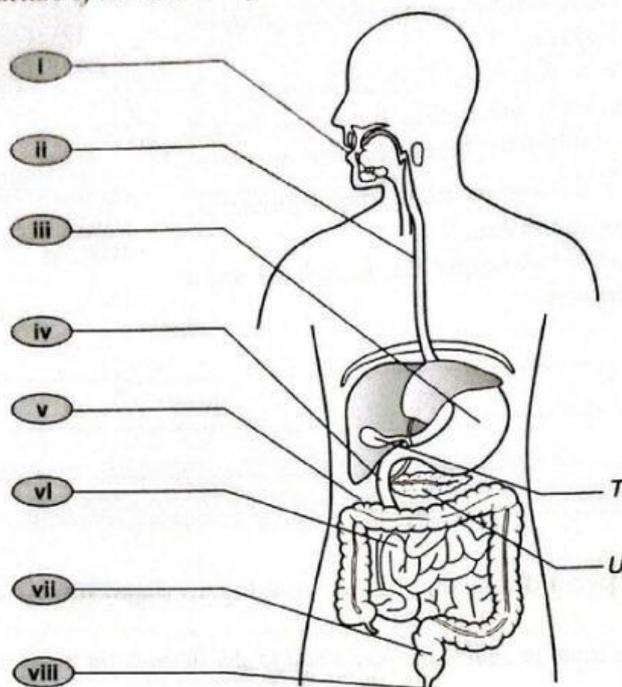
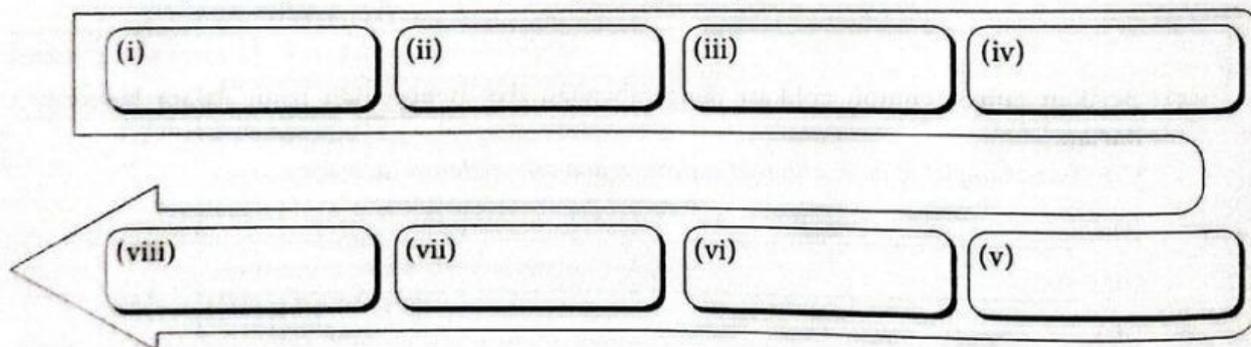


9. Rajah 9 menunjukkan struktur sistem pencernaan manusia.
Diagram 9 shows the structure of the human digestive system.



Rajah 9/ Diagram 9

- (a) Lengkapkan carta alir berikut dengan bahagian-bahagian dalam sistem pencernaan manusia.
Complete the flow chart with the parts of the digestive system.



[4 markah / 4 marks]

- (b) Selepas menjalani pembedahan membuang bahagian T, Helen terpaksa membuat perubahan pada tabiat pemakanannya. Pada pendapat anda, apakah jenis makanan yang perlu dielakkan oleh Helen? Jelaskan sebabnya.

After going through a surgery to remove part T, Helen had to make some changes to her eating habits. In your opinion, what are the food that should be avoided by Helen? Explain.

Helen should avoid food that is too oily and because gall bladder contains that is responsible for the of fat. Without a gall bladder, Helen could not fat well and this could cause her indigestion and .

digest

emulsion

bile

diarrhea

fatty

[2 markah / 2 marks]

(c) Bahagian U menghasilkan beberapa jenis enzim. Bulatkan jawapan-jawapan yang betul.
Part U produces a few types of enzymes. Circle the correct answers.

- (i) Amilase / Amylase
- (ii) Maltase / Maltase

- (iii) Protease / Protease
- (iv) Dipeptida / Dipeptide

[2 markah / 2 marks]

(d) Thomas mengalami penyakit kronik pada bahagian U yang menyebabkan organ tersebut membengkak dan tidak dapat menjalankan fungsinya dengan baik. Berdasarkan hal ini, berikan dua jenis makanan yang perlu dielakkan oleh Thomas.

Thomas has a chronic illness in part U that causes the organ to inflame and cannot function properly. Based on this, give two types of food that need to be avoided by Thomas.

- High fat food
- High carbohydrate such as white rice and white bread.

white fat Refine

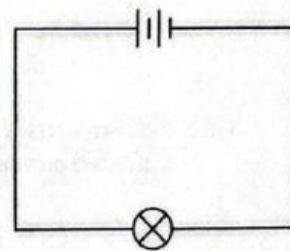
[2 markah / 2 marks]

10. (a) Rajah 10.1 menunjukkan satu litar ringkas. Lukis anak

- Direction of current in the circuit
- Direction of electron

Diagram 10.1 shows a simple circuit. Draw an arrow (→) to show the direction of current in the circuit and a dotted line arrow (→) to show the direction of electron.

[2 markah / 2 marks]



Rajah 10.1/ Diagram 10.1

(b) Jawab soalan-soalan berikut berdasarkan Rajah 10.2.
Answer the following questions based on Diagram 10.2.

- (i) Bagaimanakah perintang-perintang tersebut disambungkan dalam litar?
How are the resistors connected in the circuit?

[1 markah / 1 mark]

- (ii) Hitung rintangan berkesan.
Calculate the effective resistance.

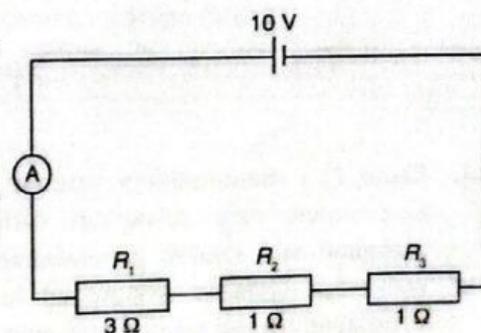
R =

Guide : For series

$$R = R_1 + R_2 + R_3$$

- (iii) Berdasarkan Hukum Ohm, hitung jumlah arus, I .
Based on Ohm's law, calculate the total current, I .

$$I = V/R =$$



Rajah 10.2/ Diagram 10.2

[2 markah / 2 marks]

[2 markah / 2 marks]

(c) Jawab soalan-soalan berikut berdasarkan Rajah 10.3.
 Answer the following questions based on Diagram 10.3.

(i) Bagaimanakah perintang disambungkan dalam litar tersebut?
 How are the resistors connected in the circuit?

[1 markah / 1 mark]

(ii) Hitung rintangan berkesan, R .
 Calculate the effective resistance, R .

$R =$

Guide : For parallel

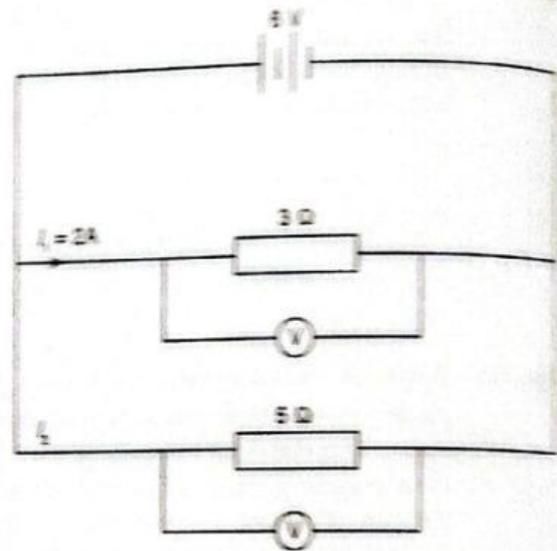
$$1/R = 1/R_1 + 1/R_2$$

[2 markah / 2 mark]

(iii) Hitung arus, I_2 .
 Calculate current, I_2 .

$I_2 =$

$$I_2 = V / R$$



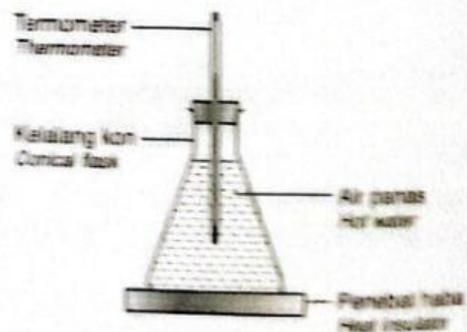
Rajah 10.3 / Diagram 10.3

[2 markah / 2 mark]

11. Rajah 11.1 menunjukkan susunan radas bagi satu eksperimen yang dilakukan oleh Aileen untuk mengkaji satu kaedah pemindahan haba. Susunan radas ini dibiarkan selama 20 minit dan Aileen mendapati bacaan termometer menurun.

Diagram 11.1 shows the arrangement of apparatus for an experiment carried out by Aileen to study one of the methods of heat transfer. The arrangement of apparatus is left for 20 minutes and Aileen found that the reading of thermometer decreases.

(a) (i) Nyatakan kaedah pemindahan haba yang dikaji dalam Rajah 9.1.
 State the method of heat transfer in Diagram 9.1.



Rajah 11.1 / Diagram 11.1

[1 markah / 1 mark]

- (ii) Terangkan mengapa bacaan termometer menurun selepas 20 minit
 Explain why the reading of thermometer decreases after 20 minutes

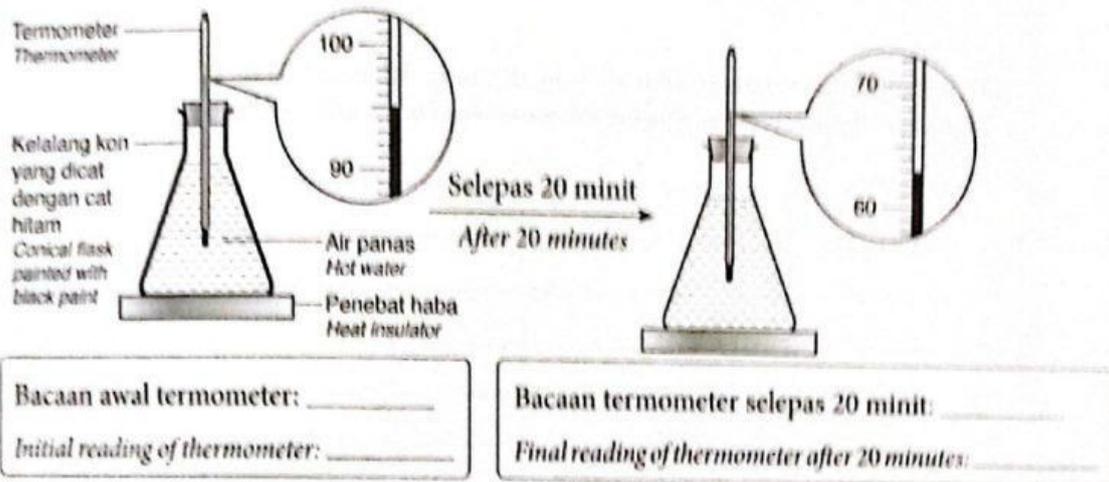
The _____ water in the conical flask _____ heat to the _____. The temperature of water _____ because the heat contain in it has decreased.

loses _____ decreases _____ hot _____ surrounddings

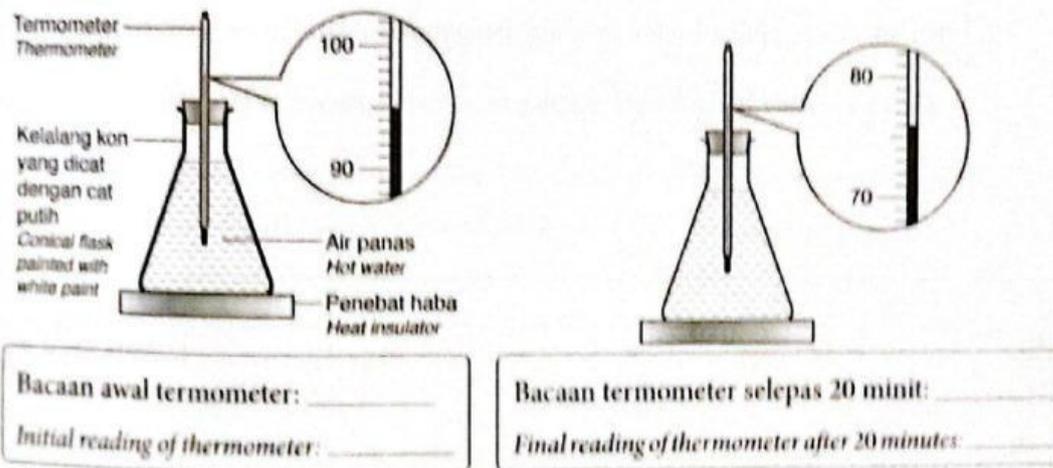
[2 markah / 2 marks]

- (b) Aileen kemudian mengulangi eksperimen di atas dengan menggunakan kelalang kon yang dicat dengan warna yang berlainan. Rajah 11.2 menunjukkan bacaan-bacaan termometer yang diperhatikan oleh Aileen pada awal eksperimen dan pada 20 minit kemudian. Aileen then repeated the above experiment by using conical flasks painted with different colours. Diagram 11.2 show the readings of thermometer observed by Aileen at the beginning of experiment and 20 minutes later.

Set I / Set I:



Set II / Set II:



Rajah 11.2 / Diagram 11.2

- (i) Rekodkan bacaan-bacaan termometer pada ruang yang disediakan pada Rajah 11.2
 Record the readings of thermometer in the spaces provided in Diagram 11.2.

[2 markah / 2 marks]

- (ii) Bina sebuah jadual yang sesuai untuk merekodkan semua bacaan termometer yang didapati di 11(b)(i) dan untuk hitung perubahan suhu air dalam kedua-dua set eksperimen.

Construct a suitable table to record all the thermometer readings obtained in 11(b)(i) and to calculate the temperature change of water in both sets of experiment.

Experiment	Set I	Set II
Initial reading of thermometer		
Thermometer reading after 20 minutes		
Temperature change of water		

[3 markah / 3 marks]

- (iii) Terangkan perubahan suhu air yang dihitung dalam jadual di 11(b)(ii).

Explain the temperature change of water calculated in the table in 11(b)(ii).

In set I, the black surface of the conical flask is able to absorb heat better compared to the white surface of conical flask in Set II. Therefore, the water in the conical flask set I contain more heat after 20 minutes, causing its temperature to be higher than the water in Set II

less better lower release black

[2 markah / 2 marks]

- (iv) Huraikan satu aplikasi seharian yang menggunakan konsep yang diterangkan di 11(b)(iii).

Describe one daily life application that uses the concept explained in 11(b)(iii).

Vehicle tyres are coloured black so that they can release heat to the surroundings faster due to the friction with the surface of the road when moving.

friction black faster heat tyres

[2 markah / 2 marks]

- (ii) Bina sebuah jadual yang sesuai untuk merekodkan semua bacaan termometer yang didapati di 11(b)(i) dan untuk hitung perubahan suhu air dalam kedua-dua set eksperimen.

Construct a suitable table to record all the thermometer readings obtained in 11(b)(i) and to calculate the temperature change of water in both sets of experiment.

[3 markah / 3 marks]

- (iii) Terangkan perubahan suhu air yang dihitung dalam jadual di 11(b)(ii).

Explain the temperature change of water calculated in the table in 11(b)(ii).

[2 markah / 2 marks]

- (iv) Huraikan satu aplikasi seharian yang menggunakan konsep yang diterangkan di 11(b)(iii).

Describe one daily life application that uses the concept explained in 11(b)(iii).

[2 markah / 2 marks]