

Kertas 2

[100 markah/marks]

(2½ jam/hours)

Bahagian A Section A [60 markah/marks]

- 1 Jadual 1 menunjukkan nombor nukleon, nombor proton dan susunan elektron untuk lima unsur.

Table 1 shows the nucleon numbers, proton numbers and electron arrangements of five elements.

Unsur Element	Nombor nukleon Nucleon number	Nombor proton Proton number	Susunan elektron Electron arrangement
P	12	6	2.4
Q	13	6	
R	20	10	
S	23	11	2.8.1
T	27		2.8.3

Jadual 1 Table 1

- (a) Apakah nombor proton atom T?
What is the proton number of atom T?

[1 markah/mark]

- (b) Lukiskan susunan elektron untuk unsur Q.
Draw the electron arrangement for element Q.

[1 markah/mark]

- (c) Tuliskan susunan elektron atom R.
Write the electron arrangement of atom R.

[1 markah/mark]

- (d) (i) Apakah maksud isotop?
What is meant by isotopes?

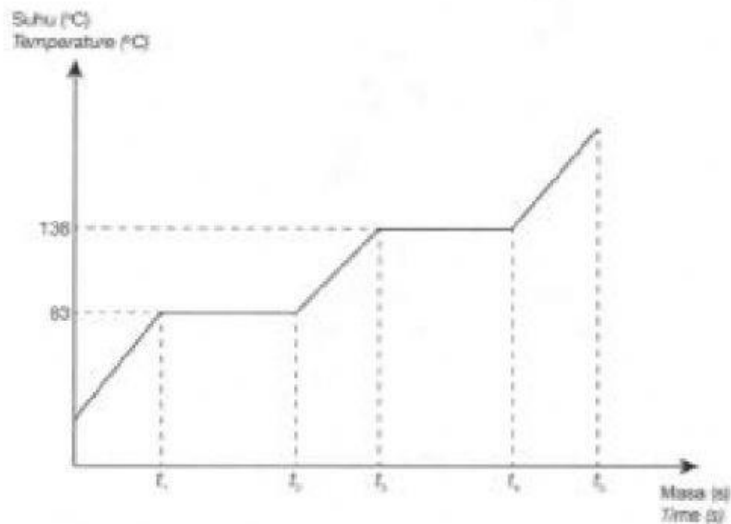
[1 markah/mark]

LATIH TUBI KIMIA (K2_Q1-Q2)

- (ii) Berdasarkan Jadual 1, nyatakan pasangan unsur yang merupakan isotop.
Based on Table 1, state the pairs of elements that are isotopes.

[1 markah/mark]

- 2 Rajah 1 menunjukkan graf suhu melwan masa bagi pemanasan pepejal Q.
Diagram 1 shows the graph of temperature against time when solid Q is heated.



Rajah 1 Diagram 1

Berdasarkan Rajah 1, jawab soalan berikut.
Based on Diagram 1, answer the following questions.

- (a) Apakah maksud takat lebur?
What is meant by melting point?

[1 markah/mark]

- (b) Nyatakan takat lebur pepejal Q.
State the melting point of solid Q.

[1 markah/mark]

- (c) Nyatakan keadaan fizikal bagi Q dari masa t_1 hingga t_2 .
State the physical state of Q from time t_1 to t_2 .

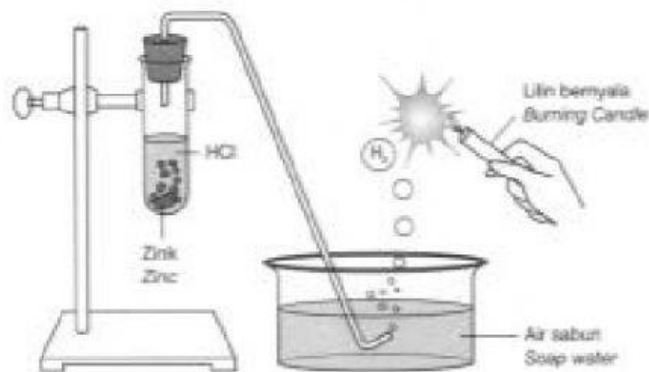
[1 markah/mark]

- (d) Bandingkan tenaga kinetik zarah Q pada masa antara t_2 hingga t_3 dan antara t_4 hingga t_5 . Terangkan jawapan anda.
Compare the kinetic energy of Q particles for the time between t_2 to t_3 and between t_4 to t_5 . Explain your answer.

[2 markah/marks]

LATIH TUBI KIMIA (K2_Q1-Q2)

- 3 Rajah 2 menunjukkan susunan radas untuk mengkaji tindak balas antara suatu asid dengan suatu logam.
Diagram 2 shows the apparatus set-up of an experiment to study the reaction between an acid and a metal.



Rajah 2 Diagram 2

- (a) Namakan asid yang diwakili formula kimia HCl.
Name the acid that is represented by the chemical formula HCl.
- _____
- [1 markah/mark]
- (b) Tulis satu persamaan kimia yang seimbang bagi mewakili tindak balas antara zink dengan asid HCl.
Write a balanced chemical equation to represent the reaction between zinc and HCl acid.
- _____
- [2 markah/marks]
- (c) Nyatakan nisbah zink kepada gas hidrogen dalam tindak balas ini.
State the ratio of zinc to hydrogen gas in this reaction.
- _____
- [1 markah/mark]
- (d) Jika 0.65 g zink bertindak balas lengkap dengan asid HCl, hitung isi padu gas hidrogen yang dihasilkan.
[Jisim atom relatif: Zn = 65; 1 mol gas menempati 24 dm³ pada keadaan bilik]
If 0.65 g of zinc is reacted completely with HCl acid, calculate the amount of hydrogen gas that is produced.
[Relative atomic mass: Zn = 65; 1 mole of gas occupies the volume of 24 dm³ at room conditions]

[2 markah/marks]