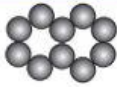


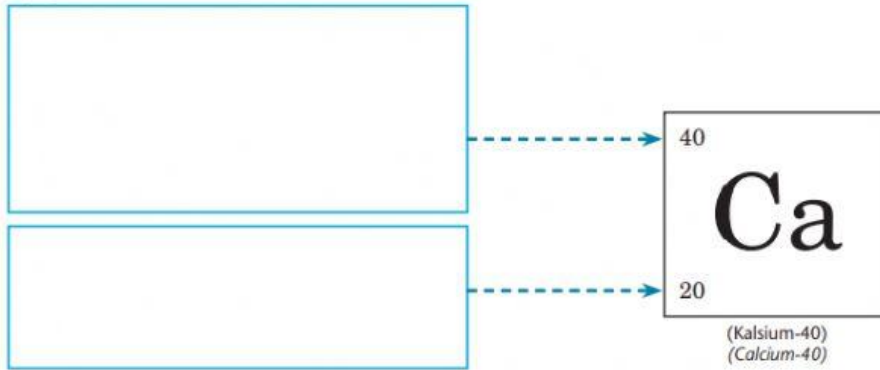
TINGKATAN 4 BAB 8: UNSUR DAN BAHAN
FORM 4 CHAPTER 8: ELEMENTS AND SUBSTANCES

Jirim
Matters

Bahan/Substances	Maksud/Meanings	Contoh/Examples
(a)  _____		
(b)  _____		
(c)  _____		

Ciri-ciri Properties	Bahan atom Atomic substances	Bahan molekul Molecular substances	Bahan ion Ionic substances
(a) Keadaan fizikal pada suhu bilik <i>Physical state at room temperature</i>			
(b) Daya tarikan antara zarah <i>Forces of attraction between the particles</i>			
(c) Takat lebur dan takat didih/ <i>Melting and boiling points</i>			
(d) Kekonduksian elektrik <i>Electrical conductivity</i>			

Isotop
Isotope



Kegunaan Isotop
Uses of Isotopes

Latihan Kertas 2 Bahagian B

Exercise Paper 2 Section B

1. Rajah 1 menunjukkan unsur W, X, Y dan Z dalam Jadual Berkala Unsur Modern.
 Diagram 1 shows some of elements W, X, Y and Z in Modern Periodic Table of Elements.

W																Y	Z
X																	

Rajah 1
Diagram 1

- a) Bagaimanakah unsur disusun dalam jadual berkala Unsur Modern?
 How the elements in the Modern Periodic Table of Elements are arranged?

[1 markah]

- b) Berdasarkan rajah 1, nyatakan dua unsur yang berada dalam :
 Based on diagram 1, state the two elements that are in:

- (i) Kumpulan yang sama
 The same group

- (ii) Kala yang sama
 The same period

[2 markah]

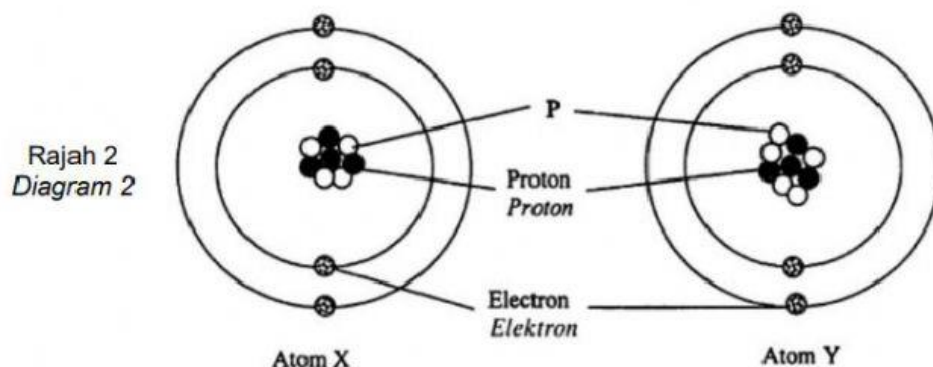
- c) W mempunyai nombor proton 11. Apakah susunan elektron atom W?
 W has a proton number of 11. What is the electron arrangement of atom W?

[1 markah]

- d) Lukiskan bagaimana atom W membentuk susunan elektron yang stabil?
Draw how the W atom forms a stable arrangement of electrons?

[2 markah]

2. Rajah 2 menunjukkan model struktur atom X dan atom Y
Diagram 2 shows the structural model of the X atom and the Y atom.



- a) Namakan zarah P
Name the particle P

[1 markah]

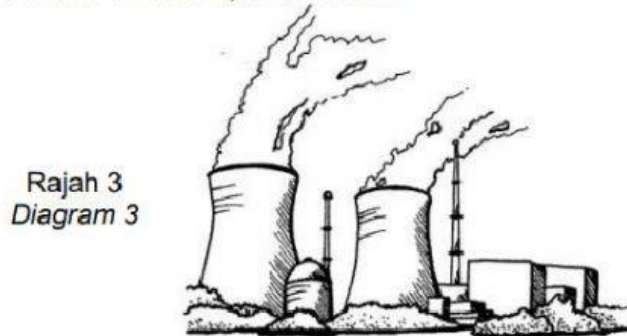
- (b) Atom X dan Y merupakan isotop. Kenalpasti mengapakah atom X dan Y adalah isotop.
Atoms X and Y are isotopes. Identify why atoms X and Y are isotopes.

[1 markah]

- c) Bandingkan jumlah nukleon bagi atom X dan atom Y.
Compare the nucleon number of atom X and atom Y

[1 markah]

- d) Rajah 3 menunjukkan sebuah stesen janakuasa nuklear
Diagram 3 shows a nuclear power station.



- (i) Namakan bahan radioaktif yang digunakan dalam stesen janakuasa tersebut
Name the radioactive substance used in the power station.

.....
[1 markah]

- (ii) Pada pendapat anda, adakah sesuai sebuah stesen janakuasa nuklear dibina di Malaysia? Beri satu sebab kepada jawapan anda
In your opinion, is it suitable to build a nuclear power station in Malaysia? Give one reason for your answer.

.....
[2 markah]

Latihan Kertas 2 Bahagian C
Exercise Paper 2 Section C

- a) Berikan definisi isotop
Give definition of isotope

[2 markah]

- b) Berikan **dua** contoh isotop dan kegunaannya dalam bidang perubatan.
State two examples of isotopes and their uses in the medical field.

[4 markah]

TINGKATAN 4 BAB 9: KIMIA INDUSTRI
FORM 4 CHAPTER 9: CHEMICALS IN INDUSTRY

Aloi
Alloy

Aloi/Alloy	Atom logam tulen/Atoms of the pure metal	Atom asing/Foreign atoms
Keluli/Steel		
Piuter/Pewter		
Loyang/Brass		
Gangsa/Bronze		
Duralumin/Duralumin		

Kegunaan Aloi
Uses of Alloy

(a)  Bingkai gambar Photo frame  Piala Trophy	(b)  Jambatan Bridge  Badan kereta Body of a car
(c)  Alat muzik Musical instrument  Kunci Key	(d)  Patung Statue  Pingat Medal
(e)  Badan kapal terbang Body of an aeroplane  Badan basikal lumba Body of a racing bike	

Proses Pengaloiian
Alloying Process

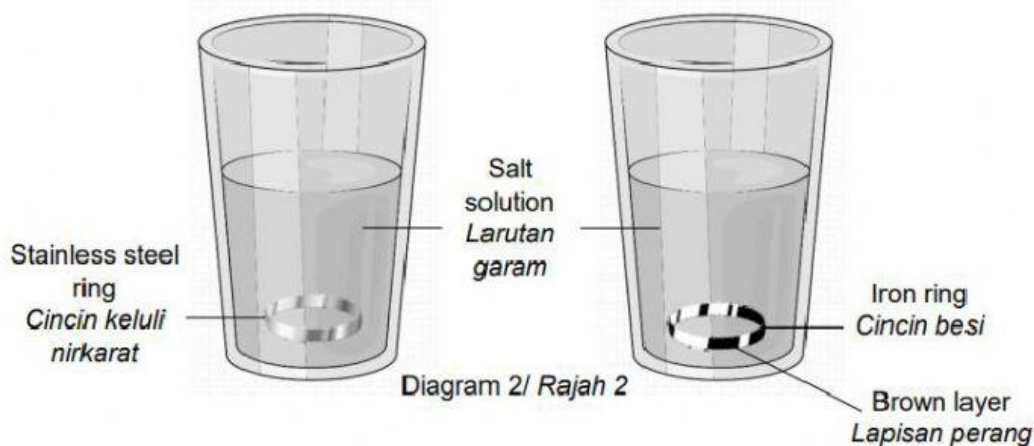
Kelebihan Alooi
Advantages of Alloy

Ciri-ciri <i>Characteristics</i>	Perbezaan/Differences	
	Logam tulen/ <i>Pure metals</i>	Alooi/ <i>Alloys</i>
(a) Sifat permukaan <i>Surface appearance</i>		
(b) Kekuatan <i>Strength</i>		
(c) Kekerasan <i>Hardness</i>		
(d) Kebolehan untuk dibengkokkan <i>Ability to be bent</i>		
(e) Takat lebur <i>Melting point</i>		
(f) Tahan kakisan <i>Resistance to corrosion</i>		
(g) Kemuluran <i>Ductility</i>		
(h) Ketertempaan <i>Malleability</i>		
(i) Kekuatan regangan <i>Tensile strength</i>		

Latihan Kertas 2 Bahagian A
Exercise Paper 2 Section A

1. A student conducted an experiment in her home laboratory to study the corrosion resistance properties of iron ring and stainless steel ring.

Seorang pelajar menjalankan suatu eksperimen di rumahnya bagi mengkaji sifat ketahanan kakisan bagi cincin besi dan cincin keluli nirkarat. Rajah 2 menunjukkan keputusan eksperimen tersebut selepas 3 hari.



- (a) Based on Diagram 2:

Berdasarkan Rajah 2,

- (i) State **one** observation for the experiment.
Nyatakan **satu** pemerhatian bagi eksperimen ini.

[1 mark/ 1 markah]

- (ii) State **one** inference for your answer in 2(a).
Nyatakan **satu** inferens bagi jawapan anda di 2(a).

[1 mark/ 1 markah]

- (b) State the responding variable in this experiment.
Nyatakan pemboleh ubah bergerakbalas dalam eksperimen ini.

[1 mark/ 1 markah]

- (c) Tick (✓) in the box provided for the material that have the same properties like stainless steel ring.
Tandakan (✓) pada petak yang disediakan bagi bahan yang mempunyai sifat yang sama seperti cincin keluli nirkarat

☐

Brass
Loyang

☐

Copper
Kuprum

[1 mark/ 1 markah]