

Nama Tingkatan

Sekolah

MODUL PINTAS 2020

TINGKATAN 5

4541/1

CHEMISTRY

Kertas 1

September/Oktober

$1\frac{1}{4}$ jam

Satu jam lima belas minit

JANGAN BUKA KERTAS PEPERIKSAAN INI SEHINGGA DIBERITAHU

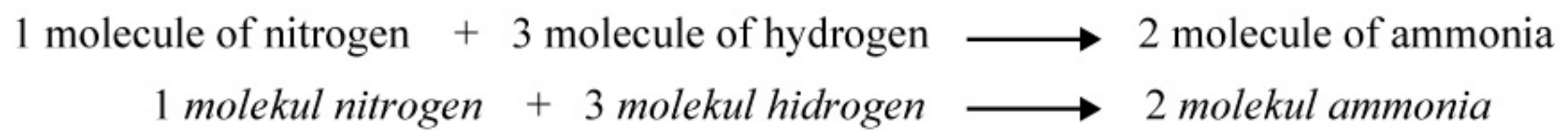
1. *Kertas peperiksaan ini adalah dalam dwibahasa.*
2. *Soalan dalam bahasa Inggeris mendahului soalan yang sepadan dalam bahasa Melayu.*
3. *Calon dikehendaki membaca maklumat di halaman belakang kertas peperiksaan ini.*

Kertas peperiksaan ini mengandungi 31 halaman bercetak dan 1 halaman tidak bercetak.

- 1 Which of the followings is not a factor that affects rate of reaction?
Antara berikut manakah faktor yang tidak mempengaruhi kadar tindak balas?

- A** Temperature of solution
Suhu larutan
- B** Presence of catalyst
Kehadiran mangkin
- C** Size of reactant
Saiz bahan tindak balas
- D** Concentration of product
Kepekatan hasil tindak balas

- 2 Nitrogen and hydrogen react as shown.
Nitrogen dan hidrogen bertindak balas seperti berikut.



- What is the equation for this reaction?
Apakah persamaan kimia bagi tindak balas ini?

- A** $N + 3H \rightarrow 2NH$
- B** $N + 3H \rightarrow 2NH_3$
- C** $N_2 + 3H_2 \rightarrow 2NH_3$
- D** $N_2 + H_2 \rightarrow NH_3$
- 3 Which particles are produced when an electrolyte dissolves in water?
Zarah manakah yang terhasil apabila elektrolit melarut dalam air?
- A** Ions
Ion
- B** Atoms
Atom
- C** Electrons
Elektron
- D** Molecules
Molekul

4 Which of the following pH values is for strong acid solution?
Antara berikut, yang manakah nilai pH bagi larutan asid kuat?

- A pH 14
- B pH 11
- C pH 5
- D pH 1

5 Which substance is a salt?
Bahan manakah yang merupakan satu garam?

- A Zinc oxide
Zink oksida
- B Calcium oxide
Kalsium oksida
- C Magnesium chloride
Magnesium klorida
- D Aluminium hydroxide
Aluminium hidroksida

6 What is the functional group of an alcohol?
Apakah kumpulan berfungsi bagi satu alkohol?

- A $-\text{COOH}$
- B $-\text{COO}-$
- C $-\text{C}=\text{C}-$
- D $-\text{OH}$

- 7 What is the meaning of empirical formula?
Apakah maksud formula empirik?
- A Chemical formula that shows the bonding of each element in a compound
Formula kimia yang menunjukkan ikatan setiap unsur dalam satu sebatian
 - B Chemical formula that shows the charge of each element in a compound
Formula kimia yang menunjukkan cas setiap unsur dalam satu sebatian
 - C Chemical formula that shows the simplest ratio of atom of each element in a compound
Formula kimia yang menunjukkan nisbah teringkas atom setiap unsur dalam satu sebatian
 - D Chemical formula that shows the actual number of atom of each element in a compound
Formula kimia yang menunjukkan bilangan sebenar atom setiap unsur dalam satu sebatian
- 8 What is the vertical column in the Periodic Table?
Apakah lajur menegak dalam Jadual Berkala?
- A Shell
Petala
 - B Period
Kala
 - C Group
Kumpulan
 - D Transition
Peralihan
- 9 Which substances is made of covalent bond?
Bahan manakah terhasil daripada ikatan kovalen?
- A Sodium oxide
Natrium oksida
 - B Sulphur dioxide
Sulfur dioksida
 - C Aluminium oxide
Aluminium oksida
 - D Magnesium oxide
Magnesium oksida

10 Which substance consists of atom?
Bahan manakah terdiri daripada atom?

- A Glucose
Glukosa
- B Helium
Helium
- C Ammonia
Ammonia
- D Copper (II) sulphate
Kuprum (II) sulfat

11 Which substance is an alkali?
Bahan manakah adalah satu alkali?

- A Copper (II) oxide
Kuprum (II) oksida
- B Magnesium oxide
Magnesium oksida
- C Potassium hydroxide
Kalium hidroksida
- D Aluminium hydroxide
Aluminium hidroksida

12 The manufacturing of sulphuric acid involves several reactions.
Which of the following equations represents the sulphuric acid reaction that uses a catalyst?

Pembuatan asid sulfurik melibatkan beberapa tindak balas.

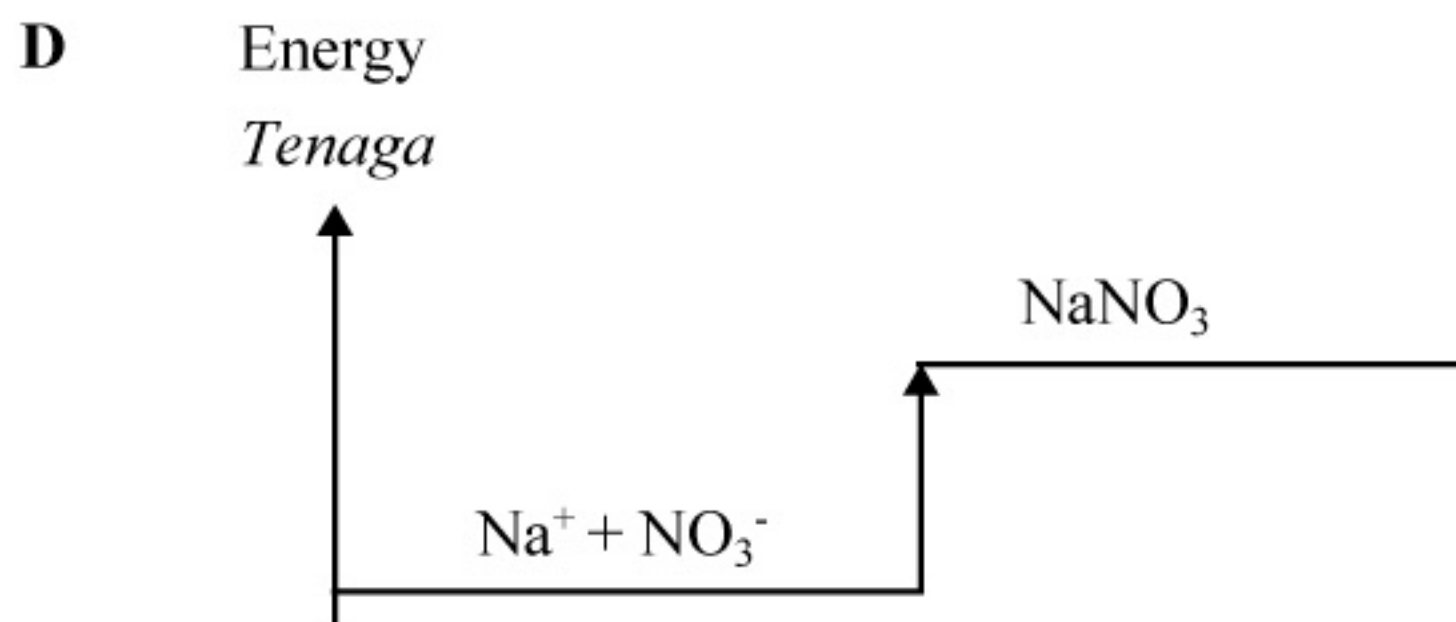
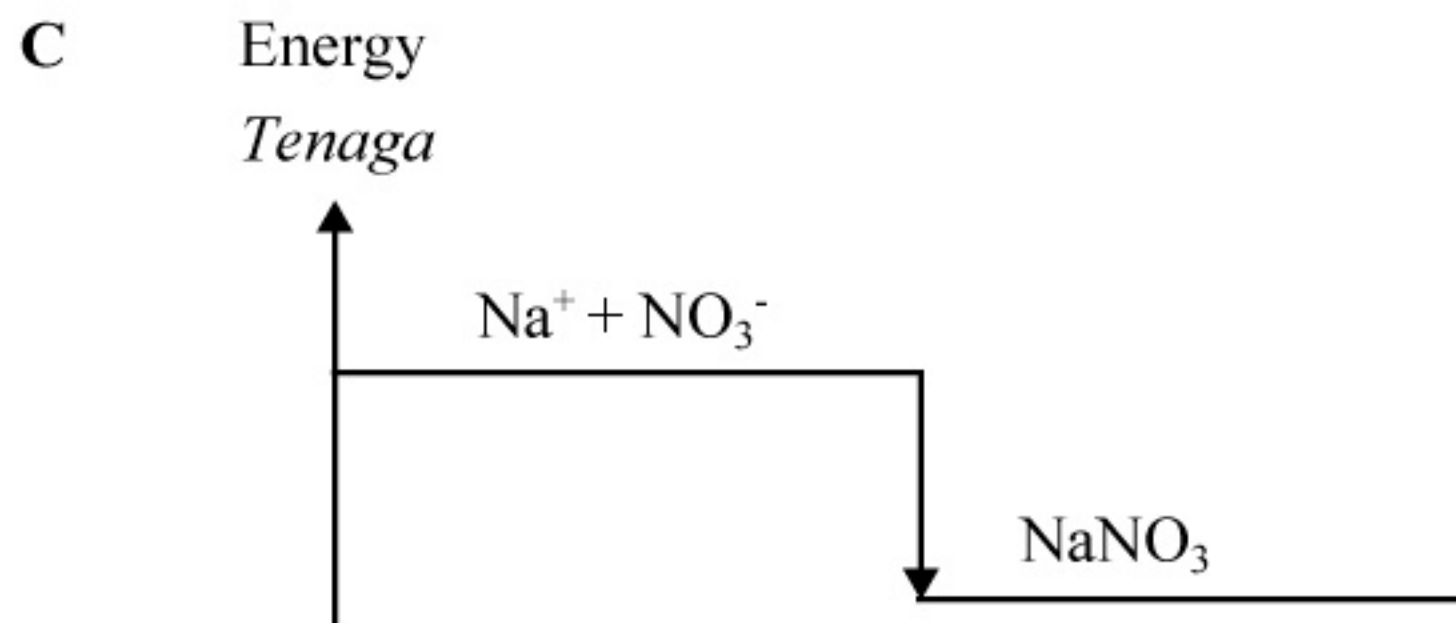
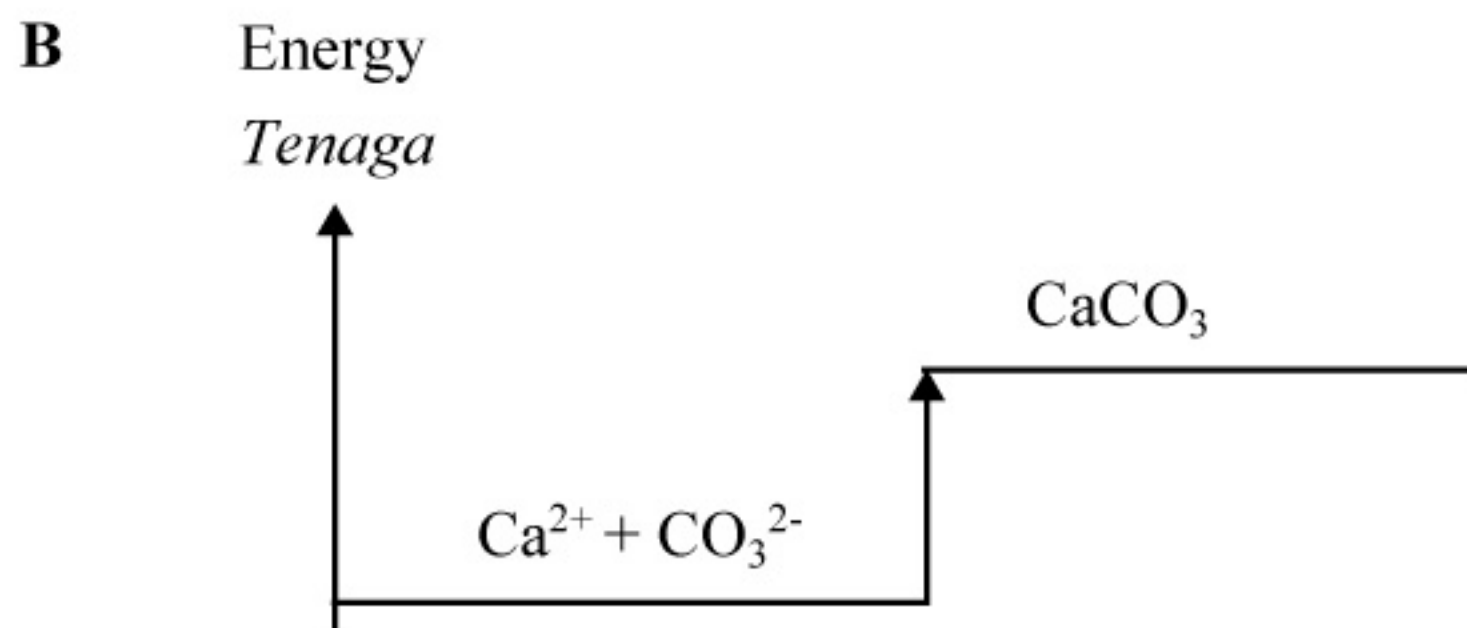
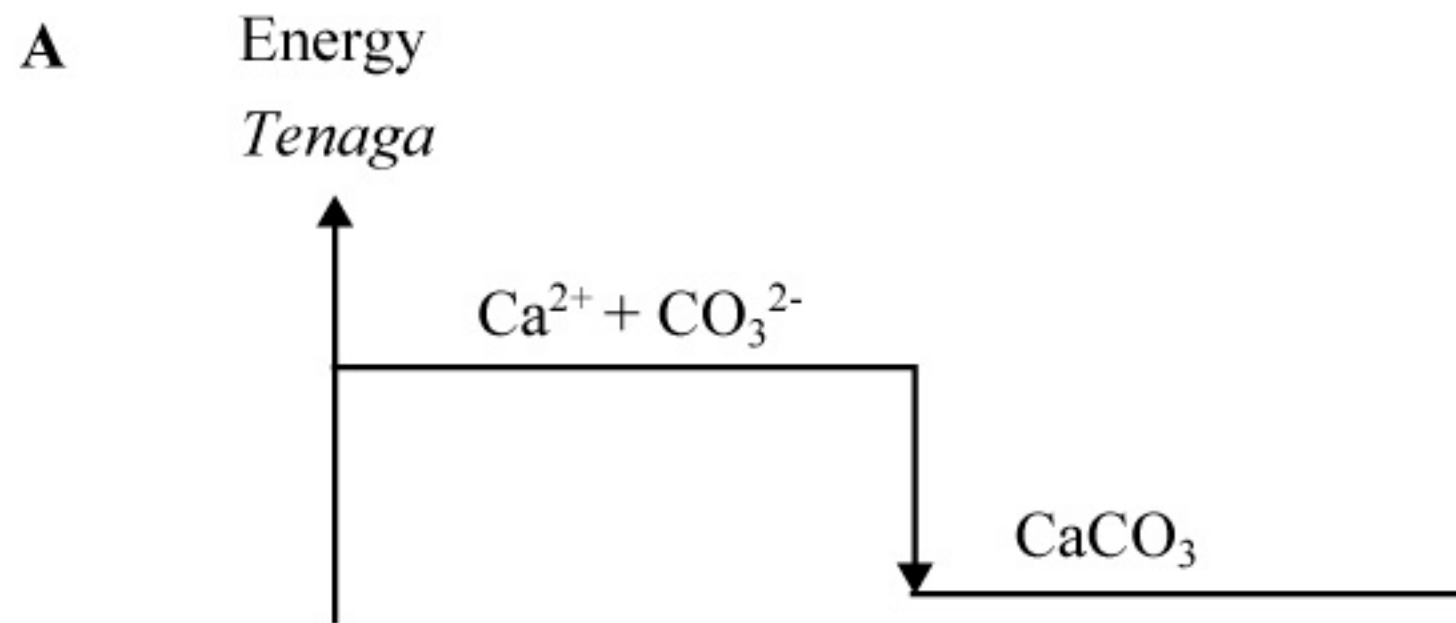
Antara berikut, persamaan yang manakah mewakili tindak balas asid sulfurik yang menggunakan mangkin?

- A $S + O_2 \rightarrow SO_2$
- B $2SO_2 + O_2 \rightarrow 2SO_3$
- C $SO_3 + H_2SO_4 \rightarrow H_2S_2O_7$
- D $H_2S_2O_7 + H_2O \rightarrow 2H_2SO_4$

- 13** When a substance Q is added to latex, the process of coagulation of latex slows down.
What is Q?
Apabila satu sebatian Q ditambahkan pada lateks, proses penggumpalan lateks menjadi perlahan.
Apakah Q?
- A** Water
Air
- B** Ethanol
Etanol
- C** Ethanoic acid
Asid etanoik
- D** Ammonia solution
Larutan ammonia
- 14** Which of the following is a soluble salt?
Antara berikut, yang manakah adalah satu garam terlarutkan?
- A** Iron (II) chloride
Ferum (II) klorida
- B** Silver chloride
Argentum klorida
- C** Calcium sulphate
Kalsium sulfat
- D** Lead (II) sulphate
Plumbum (II) sulfat
- 15** Which substance is an oxidizing agent?
Bahan manakah adalah agen pengoksidaan?
- A** Bromine water
Air bromin
- B** Magnesium powder
Serbuk magnesium
- C** Iron (II) chloride solution
Larutan ferum (II) klorida
- D** Potassium iodide solution
Larutan kalium iodida

- 16 The reaction between calcium nitrate solution and sodium carbonate solution is endothermic. Which of the following energy level diagrams represents this reaction?

Tindak balas antara larutan kalsium nitrat dengan larutan natrium karbonat adalah endotermik. Antara gambar rajah aras tenaga berikut, yang manakah mewakili tindak balas ini?



- 17 Which of the following is used to cure headaches?
Antara berikut, yang manakah digunakan untuk menyembuhkan sakit kepala?

- A Cortisone
Kortison
- B Barbiturates
Barbiturate
- C Amphetamine
Amfetamin
- D Paracetamol
Parasetamol

- 18 Diagram 1 shows the atomic symbol of element X.
Rajah 1 menunjukkan simbol atom bagi unsur X.

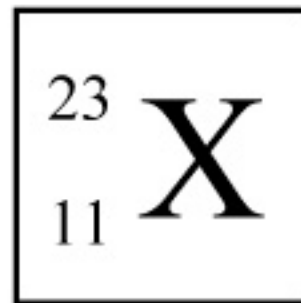


Diagram 1
Rajah 1

- Which of the following is true about the subatomic particles of element X?
Antara yang berikut, yang manakah benar tentang zarah subatom bagi unsur X?

	Proton number <i>Nombor proton</i>	Nucleon number <i>Nombor nukleon</i>	Electron arrangement <i>Susunan elektron</i>
A	23	11	2.8.1
B	23	11	2.8.8.5
C	11	23	2.8.1
D	11	23	2.8.8.5

- 19** The mass of one atom of element Y is two times more than an atom of oxygen.
What is the relative atomic mass of element Y?

[Relative atomic mass: O = 16]

Jisim satu atom Y adalah dua kali ganda lebih daripada satu atom oksigen.

Apakah jisim atom relatif bagi unsur Y?

[*Jisim atom relatif: O = 16*]

- A** 12
- B** 24
- C** 32
- D** 36

- 20** Which of the following elements can form acidic oxide?

Antara berikut, yang manakah dapat membentuk oksida asid?

- I** Calcium
Kalsium
 - II** Sulphur
Sulfur
 - III** Potassium
Kalium
 - IV** Nitrogen
Nitrogen
- A** I and II
I dan II
 - B** I and III
I dan III
 - C** II and IV
II dan IV
 - D** III and IV
III dan IV

- 21 Diagram 2 shows the electron arrangement of a compound.
Rajah 2 menunjukkan susunan elektron bagi satu sebatian.

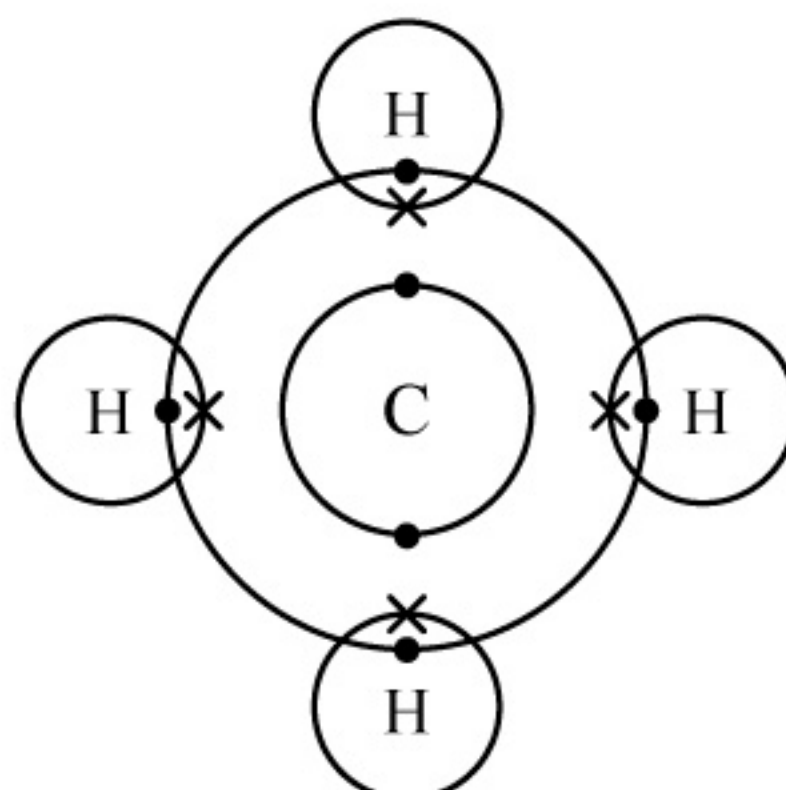


Diagram 2
Rajah 2

Which of the following is correct about the compound?
Antara berikut, yang manakah betul mengenai sebatian tersebut?

- A** Soluble in benzene
Larut dalam benzena
- B** Soluble in water
Larut dalam air
- C** Have high boiling point
Mempunyai takat didih yang tinggi
- D** Can conduct electricity in molten state
Boleh mengkonduksi elektrik dalam keadaan leburan
- 22 The following equation represents a redox reaction.
Persamaan berikut mewakili satu tindak balas redoks.



Which of the following change in oxidation number is correct for Zn?
Antara berikut, perubahan nombor pengoksidaan yang manakah betul bagi Zn?

- A** $0 \rightarrow +1$
- B** $+1 \rightarrow 0$
- C** $0 \rightarrow +2$
- D** $+2 \rightarrow 0$

- 23 Which of the following substances is suitable to be used as electrolyte?
Antara berikut, bahan manakah yang sesuai digunakan sebagai elektrolit?

- A Sucrose solution
Larutan sukrosa
- B Molten naphthalene
Leburan naftalena
- C Hydrochloric acid
Asid hidroklorik
- D Cyclohexane
Sikloheksana

- 24 Diagram 3 shows the apparatus set-up to prepare a soluble salt.
Rajah 3 menunjukkan susunan radas bagi menyediakan satu garam terlarutkan.

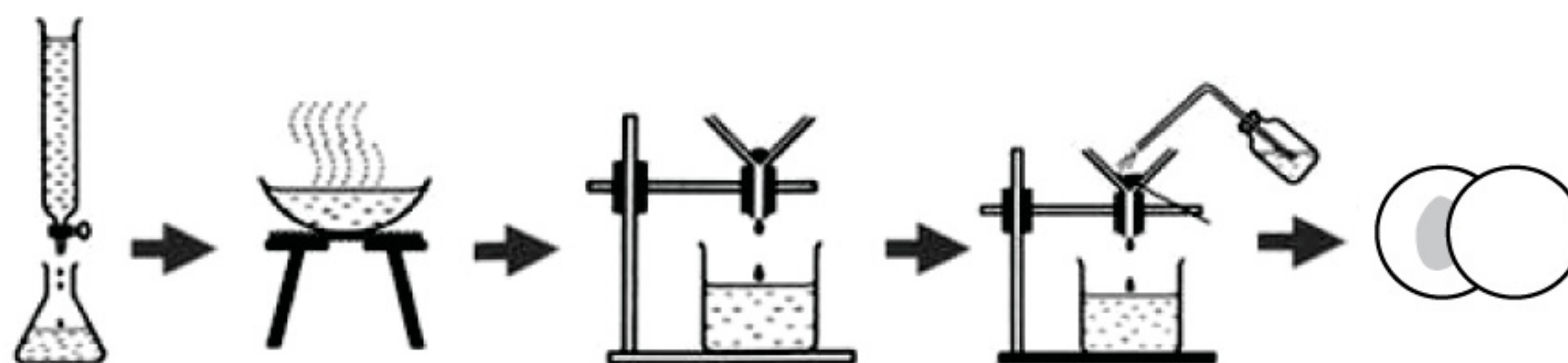


Diagram 3
Rajah 3

- Which of the following salt can be prepared by this method?
Antara berikut, garam manakah yang boleh disediakan dengan kaedah ini?

- A Zinc chloride
Zink klorida
- B Sodium sulphate
Natrium sulfat
- C Copper (II) sulphate
Kuprum (II) sulfat
- D Lead (II) nitrate
Plumbum (II) nitrat

- 25 Diagram 4 shows an energy profile diagram for a reaction.
Rajah 4 menunjukkan gambar rajah profil tenaga bagi satu tindak balas.

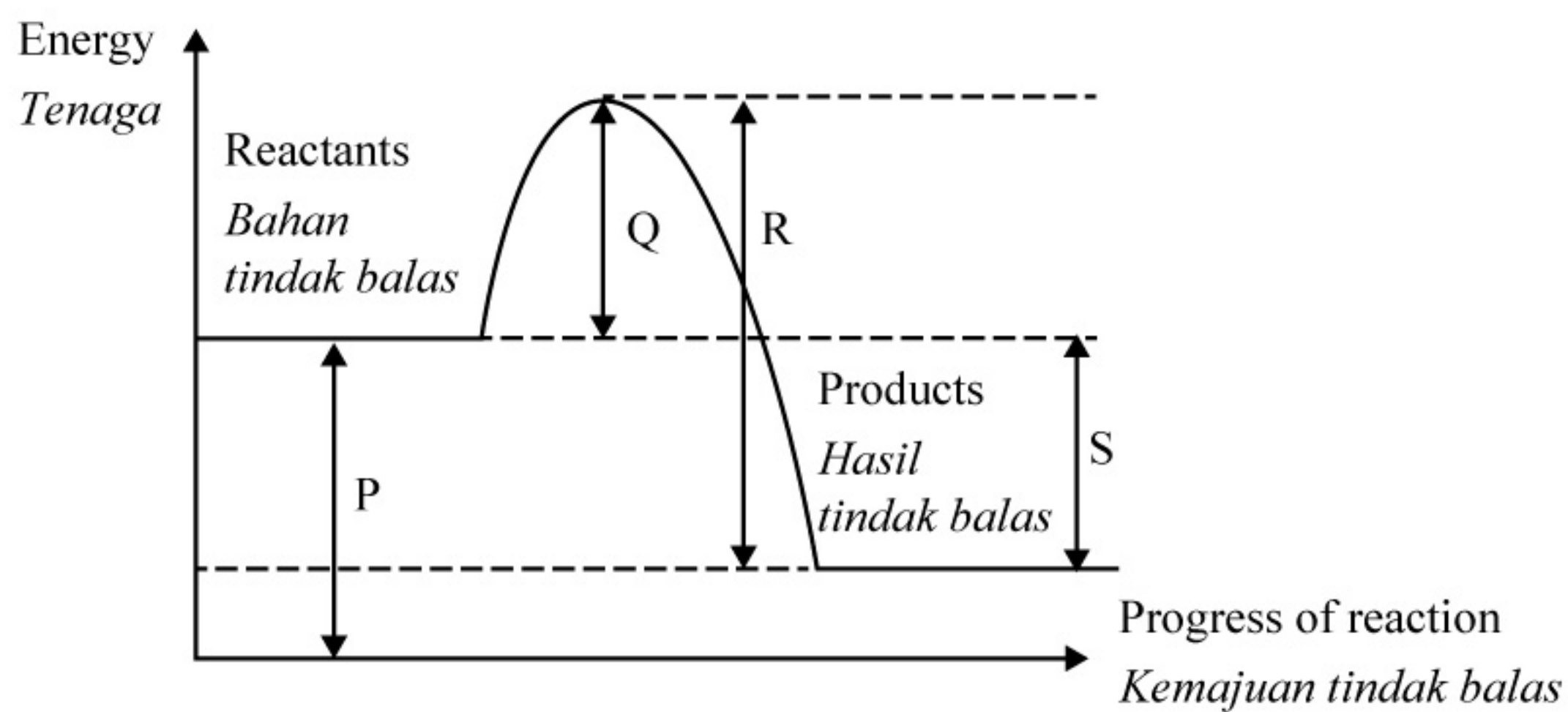


Diagram 4
Rajah 4

Which of the following shows the activation energy of the reaction?

Antara berikut, yang manakah menunjukkan tenaga pengaktifan bagi tindak balas tersebut?

- A P
- B Q
- C R
- D S

- 26 An organic compound Q has the following properties.
Satu sebatian organik Q mempunyai sifat-sifat berikut.

Colourless liquid <i>Cecair tidak berwarna</i>	Insoluble in water <i>Tak larut dalam air</i>	Has a sweet smell <i>Mempunyai bau yang wangi</i>
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Which substance could be Q?
Bahan manakah mungkin bagi Q?

- A Ethene
Etena
- B Ethanol
Etanol
- C Ethanoic acid
Asid etanoik
- D Ethyl ethanoate
Etil etanoat
- 27 Which of the following absorbs heat from the surroundings?
Antara yang berikut, yang manakah menyerap haba dari persekitaran?
- A Adding acid to alkali
Tambahkan asid kepada alkali
- B Adding concentrated acid to water
Tambahkan asid pekat ke dalam air
- C Dissolving solid ammonium chloride in water
Larutkan pepejal ammonium klorida di dalam air
- D Dissolving anhydrous copper (II) sulphate in water
Larutkan kuprum (II) sulfat kontang di dalam air

28 Diagram 5 shows the structural formula for a soap anion.

Rajah 5 menunjukkan formula struktur bagi anion sabun.

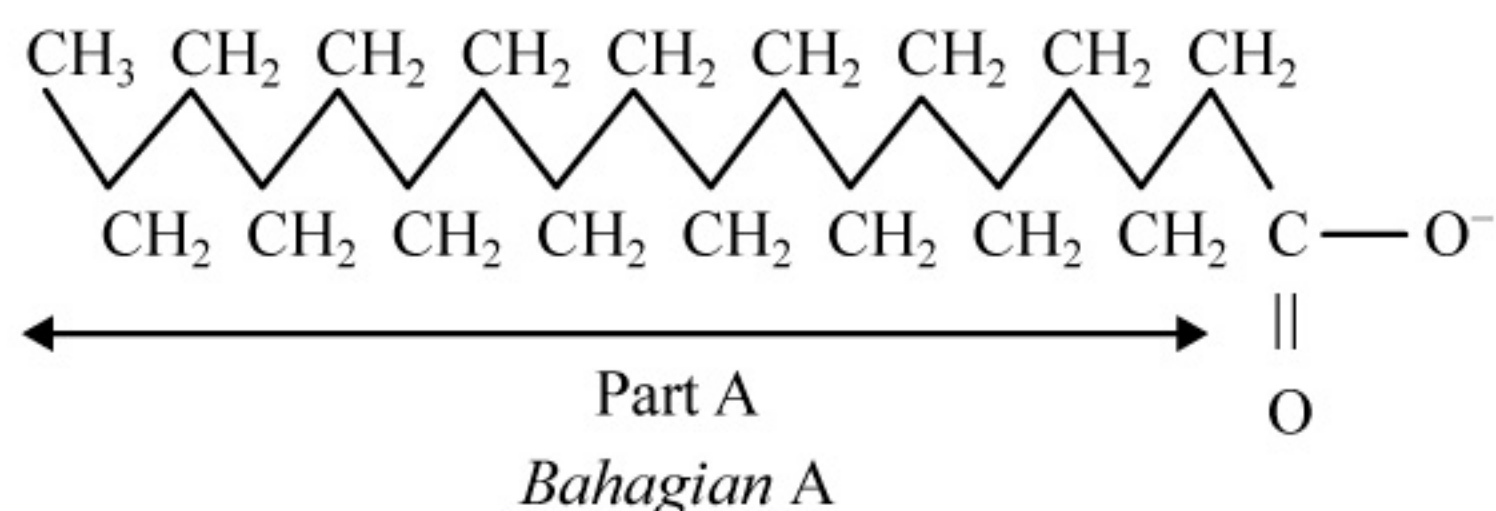


Diagram 5

Rajah 5

Which of the following is true about part A of soap anion?

Antara berikut, yang manakah benar tentang bahagian A bagi anion sabun?

A It is ion

Ia adalah ion

B It is soluble in grease

Ia larut dalam gris

C It is hydrophilic part

Ia merupakan bahagian hidrofilik

D It reacts with calcium ion to form scum

Ia bertindak balas dengan ion kalsium untuk membentuk kekat

- 29 Table 1 shows the pH value of two solutions with the same concentration.
Jadual 1 menunjukkan nilai pH bagi dua larutan dengan kepekatan yang sama.

Solution <i>Larutan</i>	pH value <i>Nilai ph</i>
K	8
L	12

Table 1
Jadual 1

Which statement explains the differences in the pH values?

Pernyataan manakah yang menerangkan perbezaan antara nilai pH itu?

- A** K ionises partially whereas L ionises completely in water
K mengion separa manakala L mengion dengan lengkap dalam air
- B** The concentration of hydroxide ion in K is higher than L
Kepekatan ion hidroksida dalam K lebih tinggi berbanding L
- C** The number of mole of hydroxide ion in K is less than L
Bilangan mol ion hidroksida dalam K kurang berbanding L
- D** The concentration of hydrogen ion in K is lower than L
Kepekatan ion hidrogen dalam K lebih rendah berbanding L
- 30 Thiosulphate ion, $S_2O_3^{2-}$ reacts with an element M in Group 1 to form a compound. M is not the actual symbol of the element.
 What is the formula of the compound?
Ion tiosulfat, $S_2O_3^{2-}$ bertindak balas dengan satu unsur M dalam Kumpulan 1 untuk membentuk satu sebatian. M bukan simbol sebenar unsur itu.
Apakah formula bagi sebatian tersebut?
- A** MS_2O_3
- B** $M_2S_2O_3$
- C** $M(S_2O_3)_2$
- D** $M_2(S_2O_3)_3$

- 31 Diagram 6 shows the apparatus set-up of an electrolysis using carbon electrodes.
Rajah 6 menunjukkan susunan radas bagi elektrolisis menggunakan elektrod karbon.

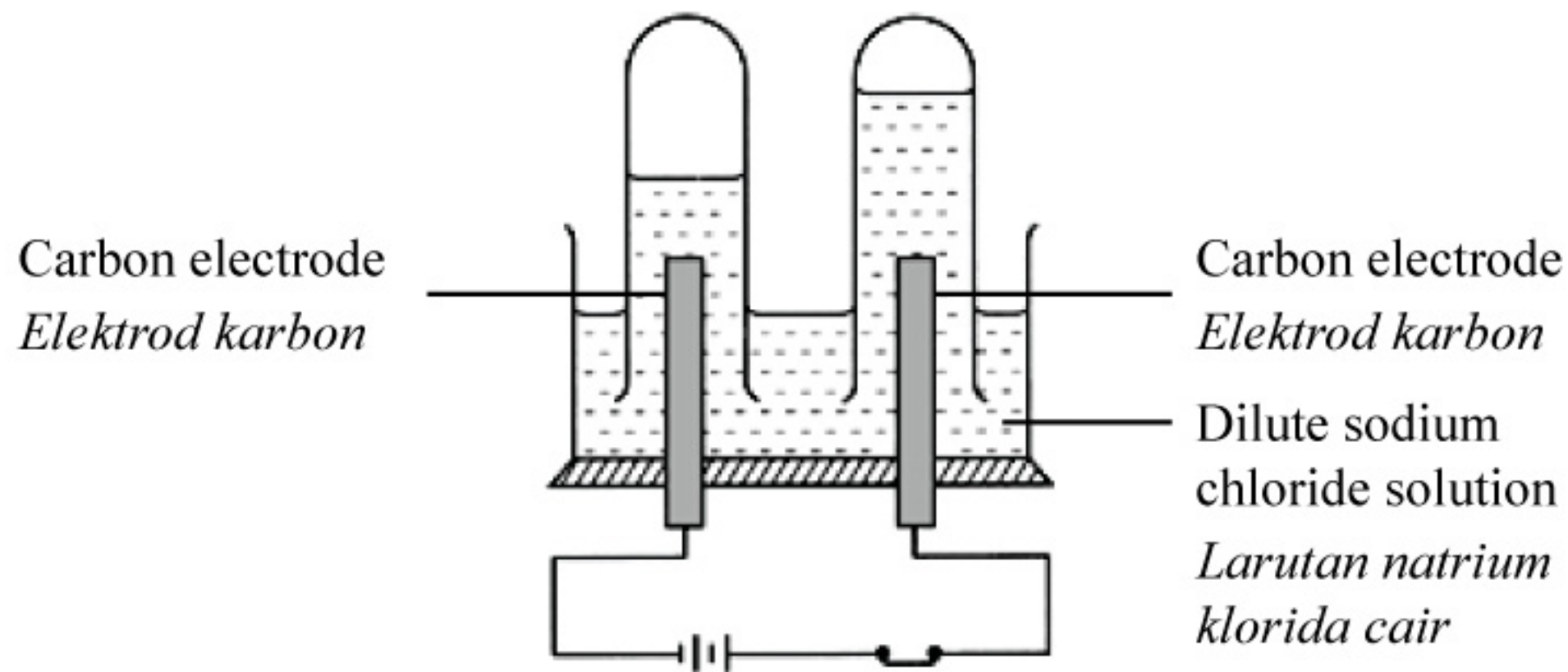


Diagram 6
Rajah 6

What are the products formed at the anode and cathode?

Apakah hasil yang terbentuk di anod dan di katod?

	Anode <i>Anod</i>	Cathode <i>Katod</i>
A	Chlorine <i>Klorin</i>	Hydrogen <i>Hidrogen</i>
B	Chlorine <i>Klorin</i>	Sodium <i>Natrium</i>
C	Oxygen <i>Oksigen</i>	Hydrogen <i>Hidrogen</i>
D	Oxygen <i>Oksigen</i>	Sodium <i>Natrium</i>

- 32 Diagram 7 shows an egg shell in a beaker containing vinegar.
Rajah 7 menunjukkan cangkerang telur di dalam bikar berisi cuka.

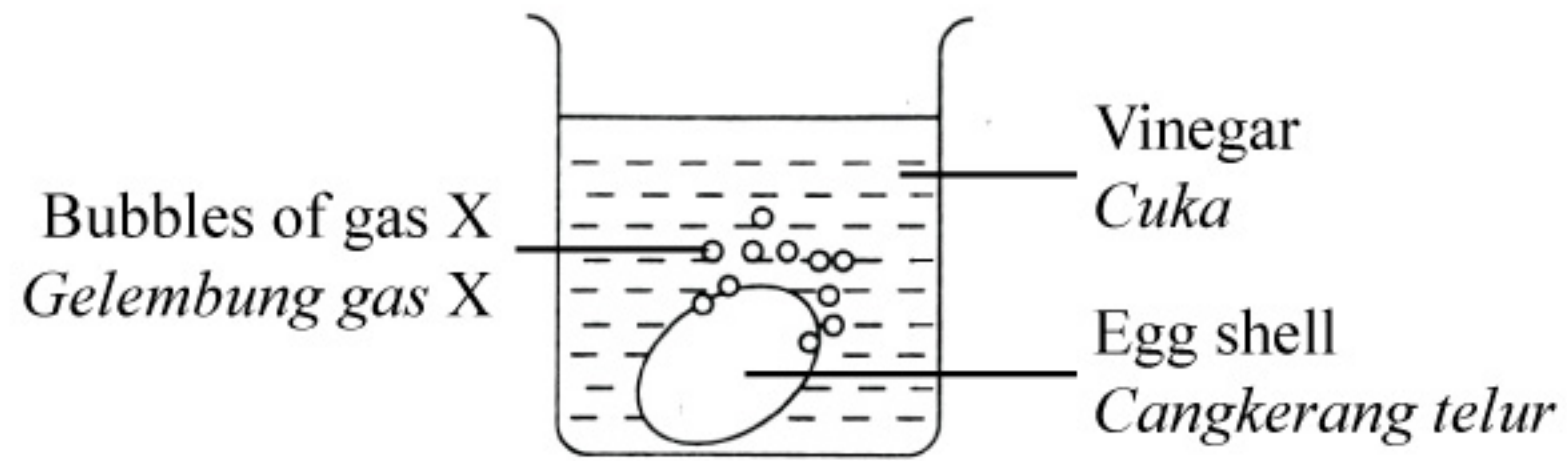


Diagram 7
Rajah 7

What is X?

Apakah X?

- A Carbon dioxide
Karbon dioksida
- B Hydrogen
Hidrogen
- C Oxygen
Oksigen
- D Nitrogen dioxide
Nitrogen dioksida

- 33 Diagram 8 shows the graph of the volume of hydrogen gas against time for the reaction between zinc and sulphuric acid. Curve X is obtained when excess granulated zinc is reacted with 25 cm³ of 1 mol dm⁻³ sulphuric acid.

Rajah 8 menunjukkan graf isi padu gas hidrogen melawan masa bagi tindak balas antara zink dengan asid sulfurik. Lengkung X diperolehi apabila ketulan zink berlebihan bertindak balas dengan 25 cm³ asid sulfurik 1 mol dm⁻³.

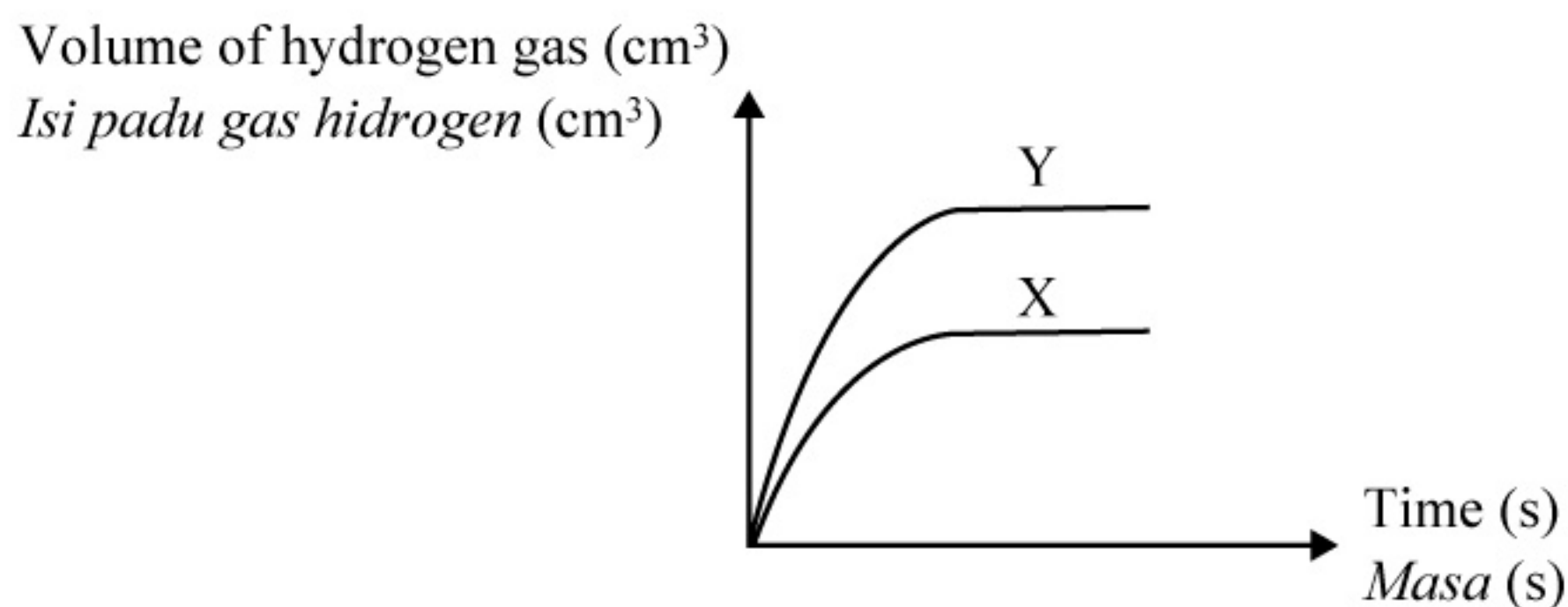


Diagram 8
Rajah 8

Which of the following must be done to produce curve Y?

Antara berikut, yang manakah perlu dilakukan untuk menghasilkan lengkung Y?

- A** Replace granulated zinc with zinc powder
Menggantikan ketulan zink dengan serbuk zink
- B** Add a few drops of copper (II) sulphate solution
Menambahkan beberapa titik larutan kuprum (II) sulfat
- C** Replace 25 cm³ of 1 mol dm⁻³ sulphuric acid with 25 cm³ of 2 mol dm⁻³ sulphuric acid
Menggantikan 25 cm³ asid sulfurik 1 mol dm⁻³ dengan 25 cm³ asid sulfurik 2 mol dm⁻³
- D** Replace 25 cm³ of 1 mol dm⁻³ sulphuric acid with 50 cm³ of 1 mol dm⁻³ sulphuric acid
Menggantikan 25 cm³ asid sulfurik 1 mol dm⁻³ dengan 50 cm³ asid sulfurik 1 mol dm⁻³

34 The ester with molecular formula $C_3H_7COOC_4H_9$ can be prepared by reacting
Ester dengan formula molekul $C_3H_7COOC_4H_9$ boleh disediakan melalui tindak balas

- A** C_3H_7OH with C_3H_7COOH
 C_3H_7OH dengan C_3H_7COOH
- B** C_3H_7OH with C_4H_9COOH
 C_3H_7OH dengan C_4H_9COOH
- C** C_4H_9OH with C_3H_7COOH
 C_4H_9OH dengan C_3H_7COOH
- D** C_4H_9OH with C_4H_9COOH
 C_4H_9OH dengan C_4H_9COOH

35 Table 2 shows observations for the reaction between metals W, X and Y with different metal oxides.

Jadual 2 menunjukkan pemerhatian untuk tindak balas antara logam W, X dan Y dengan oksida logam yang berbeza.

Reaction mixture <i>Campuran tindak balas</i>	Observation <i>Pemerhatian</i>
Metal oxide Y + metal X <i>Oksida logam Y + logam X</i>	Reaction occurs <i>Tindak balas berlaku</i>
Metal oxide Y + metal W <i>Oksida logam Y + logam W</i>	No reaction <i>Tiada tindak balas</i>

Table 2

Jadual 2

Which of the following is the arrangement of metals W, X and Y in decreasing order of Reactivity Series of Metals?

Antara berikut, yang manakah adalah susunan logam W, X dan Y dalam tertib menurun Siri Kereaktifan Logam?

- A** X, Y, W
- B** X, W, Y
- C** W, Y, X
- D** Y, W, X

- 36** An experiment is conducted to determine the heat of neutralisation for the reaction between sulphuric acid and potassium hydroxide solution.

What is the information that has to be gathered from the experiment?

Satu eksperimen dilakukan untuk menentukan haba peneutralan antara asid sulfurik dengan larutan kalium hidroksida.

Apakah maklumat yang perlu diperolehi daripada eksperimen ini?

- I The increase in temperature of the mixture
Kenaikan suhu campuran
 - II The volume of both solutions used
Isi padu kedua-dua larutan yang digunakan
 - III pH value of both acid and alkali used
Nilai pH bagi kedua-dua asid dan alkali yang digunakan
 - IV The size of the polystyrene cup used
Saiz cawan polistirena yang digunakan
- A** I and II
I dan II
 - B** I and III
I dan III
 - C** II and IV
II dan IV
 - D** III and IV
III dan IV

37 Diagram 9 shows four simple voltaic cells with their voltmeter readings.

Rajah 9 menunjukkan empat sel kimia ringkas dengan bacaan voltmeter.

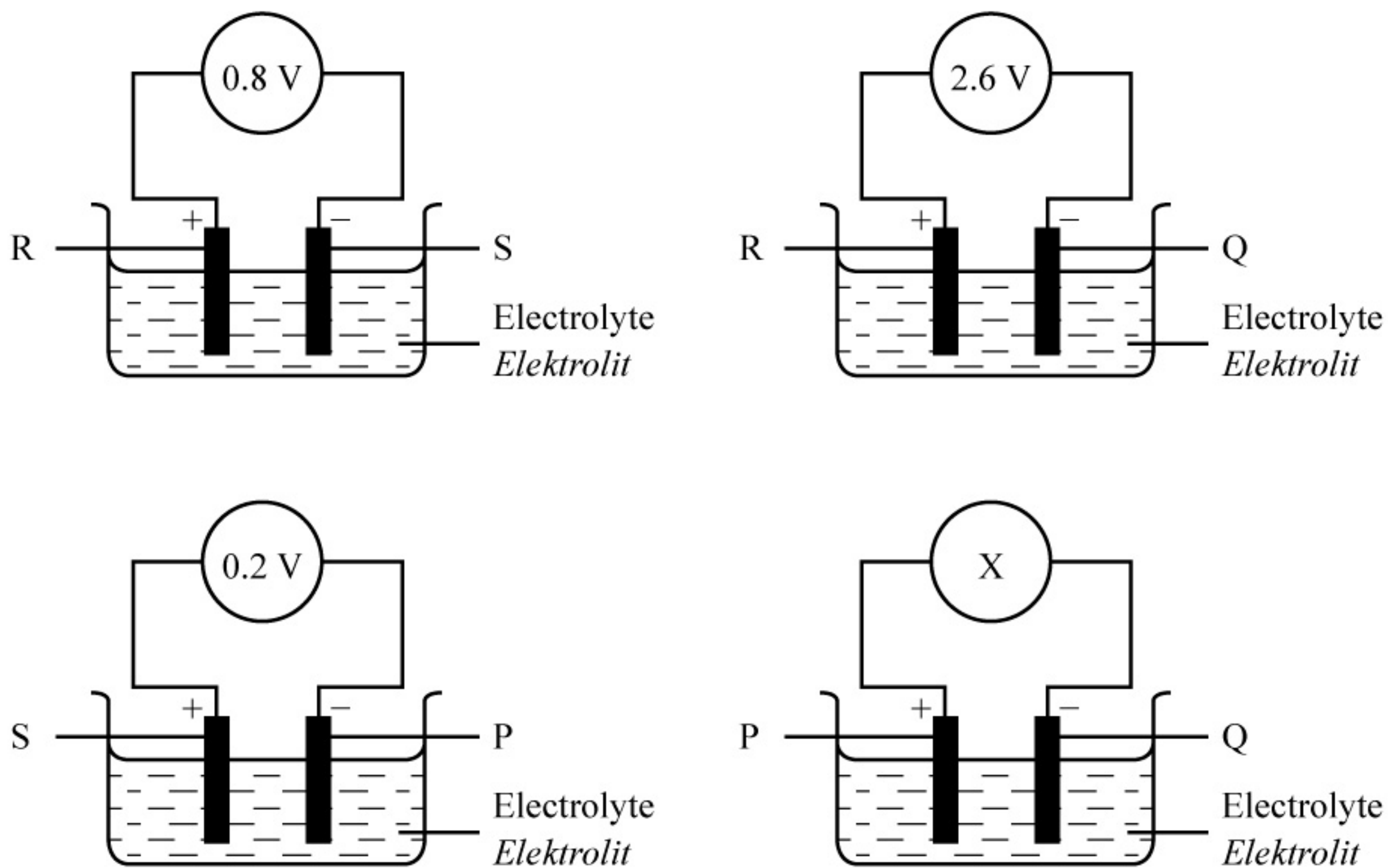


Diagram 9

Rajah 9

Referring to the voltmeter readings, what is the value of X?

Merujuk kepada bacaan voltmeter, apakah nilai X?

- A 1.6 V
- B 1.8 V
- C 2.4 V
- D 3.6 V

- 38 Diagram 10 shows the composition of a coral reef.
Rajah 10 menunjukkan komposisi suatu terumbu karang.

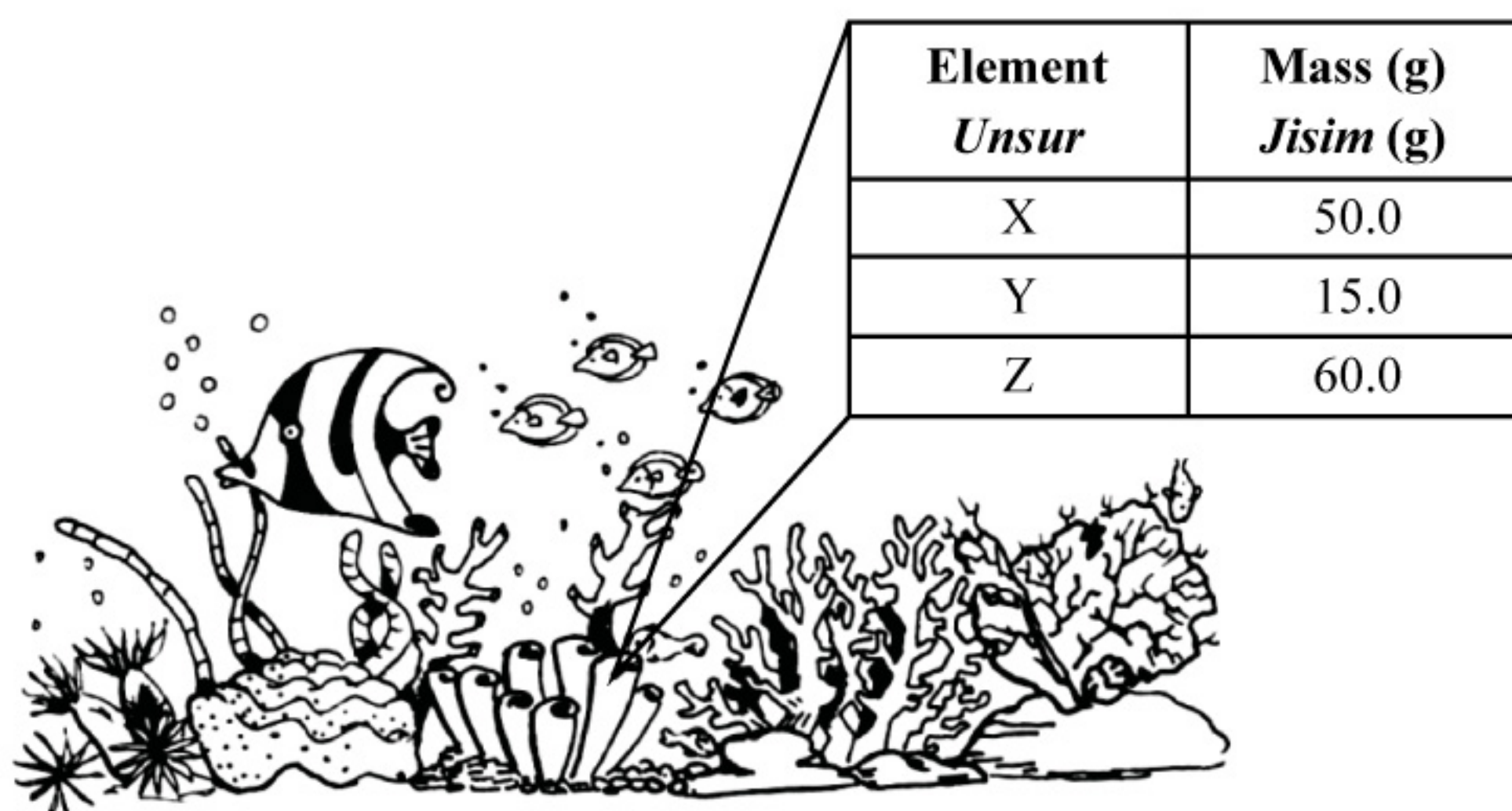


Diagram 10
Rajah 10

What is the empirical formula of the compound in the coral reef?

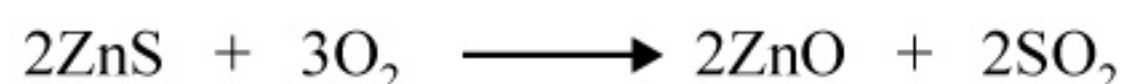
[Relative atomic mass: X = 40, Y = 12, Z = 16]

Apakah formula empirik bagi sebatian dalam terumbu karang tersebut?

[*Jisim atom relatif: X = 40, Y = 12, Z = 16*]

- A XYZ
 B XYZ₃
 C XYZ₄
 D X₃YZ₄

- 39 Chemical equation shows the reaction between zinc sulphide with oxygen.
Persamaan kimia menunjukkan tindak balas antara zink sulfida dengan oksigen.



What is the volume of oxygen needed for complete reaction with 38.8 g zinc sulphide at room temperature?

[Relative formula mass: $\text{ZnS} = 97$, 1 mol gas occupied $24 \text{ dm}^3 \text{ mol}^{-1}$ at room temperature]

Berapakah isi padu oksigen yang diperlukan untuk bertindak balas lengkap dengan 38.8 g zink sulfida pada suhu bilik?

[*Jisim formula relatif: $\text{ZnS} = 97$, 1 mol gas menempati $24 \text{ dm}^3 \text{ mol}^{-1}$ pada suhu bilik*]

- A 4.8 dm^3
 B 9.6 dm^3
 C 14.4 dm^3
 D 28.8 dm^3
- 40 Diagram 11 shows a part of the Periodic Table of Elements.
Rajah 11 menunjukkan sebahagian daripada Jadual Berkala Unsur.

A														B			
																	C
					D												

Diagram 11

Rajah 11

Which elements **A**, **B**, **C** or **D** in the Periodic Table of Elements is suitable to be filled in electrical bulb?

*Antara unsur **A**, **B**, **C** dan **D** dalam Jadual Berkala Unsur, yang manakah sesuai digunakan untuk mengisi mentol elektrik?*

- 41 Diagram 12 shows the standard representation symbol of the atoms of two elements, X and Y.
Rajah 12 menunjukkan simbol perwakilan piawai atom bagi dua unsur, X dan Y.

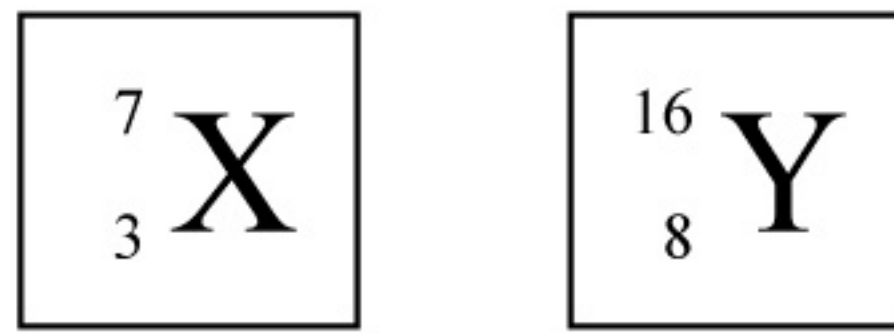
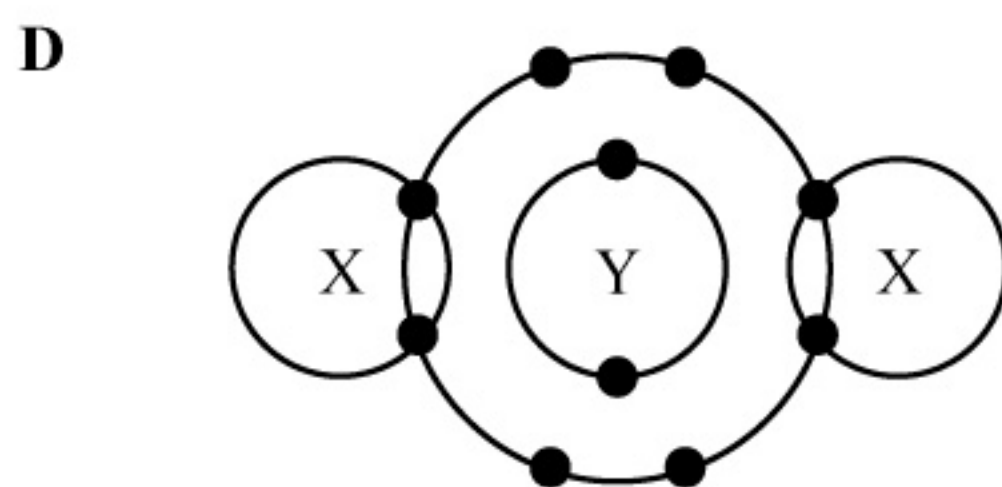
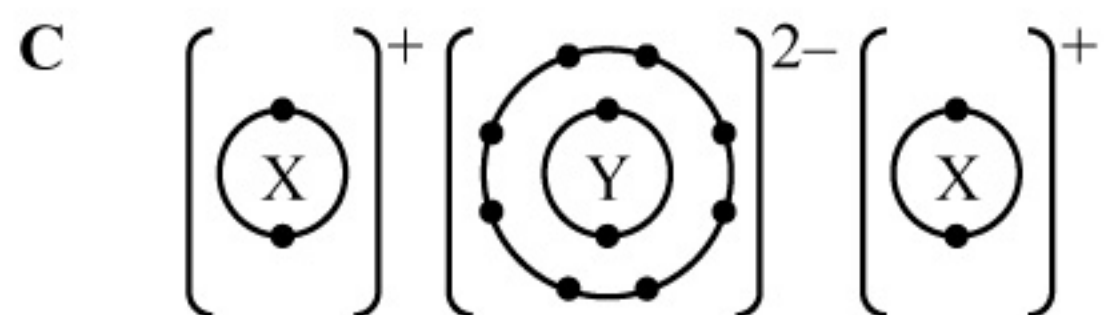
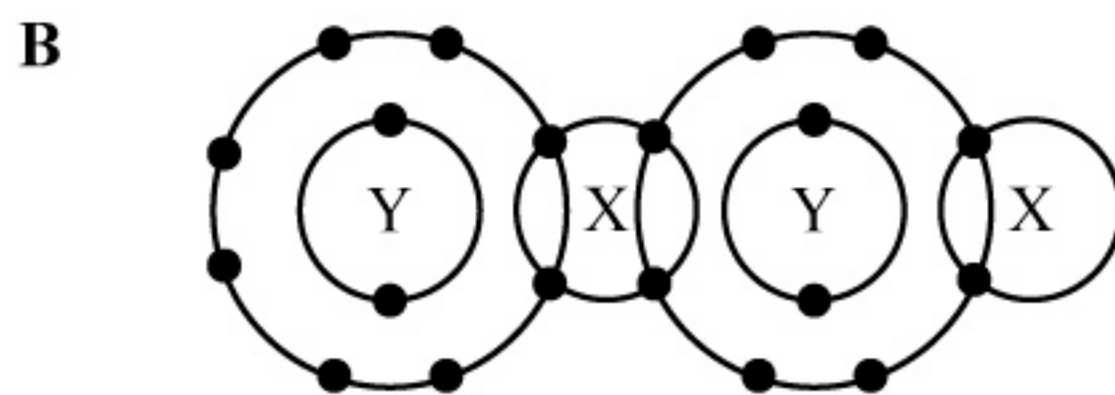
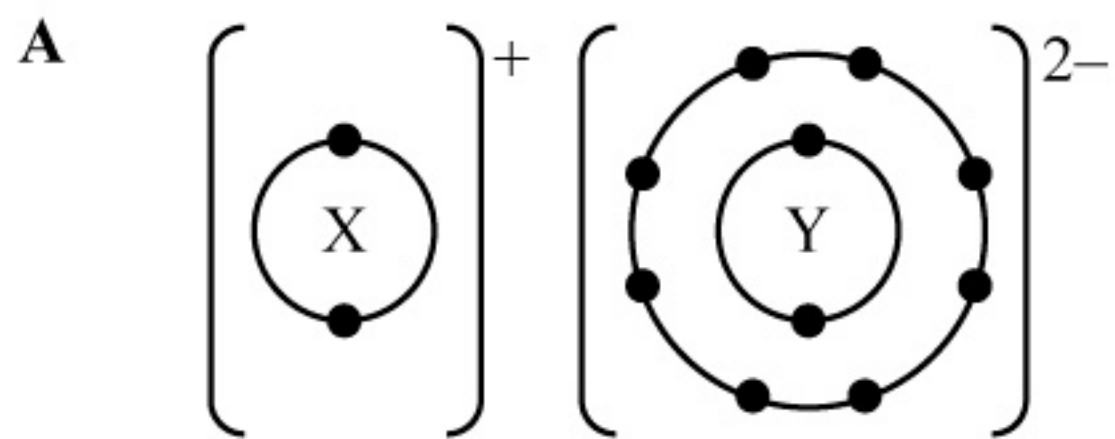


Diagram 12
Rajah 12

Which of the following represents the electron arrangement for a compound formed when element X reacts with element Y?

Antara yang berikut, yang manakah mewakili susunan elektron bagi satu sebatian yang terbentuk apabila unsur X bertindak balas dengan unsur Y?



42 Table 3 shows the potential differences of three simple voltaic cells.

Jadual 3 menunjukkan beza keupayaan untuk tiga sel voltan ringkas.

Cell <i>Sel</i>	Pair of metal <i>Pasangan logam</i>	Potential differences (V) <i>Beza keupayaan (V)</i>	Negative terminal <i>Terminal negatif</i>
I	Mg and Cu <i>Mg dan Cu</i>	3.0	Mg
II	Mg and Zn <i>Mg dan Zn</i>	1.5	Mg
III	Zn and Fe <i>Zn dan Fe</i>	0.5	Zn

Table 3

Jadual 3

What is the potential difference of a simple voltaic cell for pair of iron and copper?

Berapakah beza keupayaan untuk sel voltan ringkas bagi pasangan ferum dan kuprum?

- A 0.5 V
- B 1.0 V
- C 1.5 V
- D 2.5 V

43 A patient complained of a pain due to an excess of acid in the stomach.

Which substance will help to relieve the pain?

Seorang pesakit mengadu sakit disebabkan lebihan asid di dalam perut.

Bahan manakah yang akan membantu melegakan sakit itu?

- A Ammonia
Ammonia
- B Ethanoic acid
Asid etanoik
- C Sodium chloride
Natrium klorida
- D Magnesium hydroxide
Magnesium hidroksida

- 44 Diagram 13 shows the apparatus set-up for the preparation of silver chloride.
Rajah 13 menunjukkan susunan radas bagi penyediaan argentum klorida.

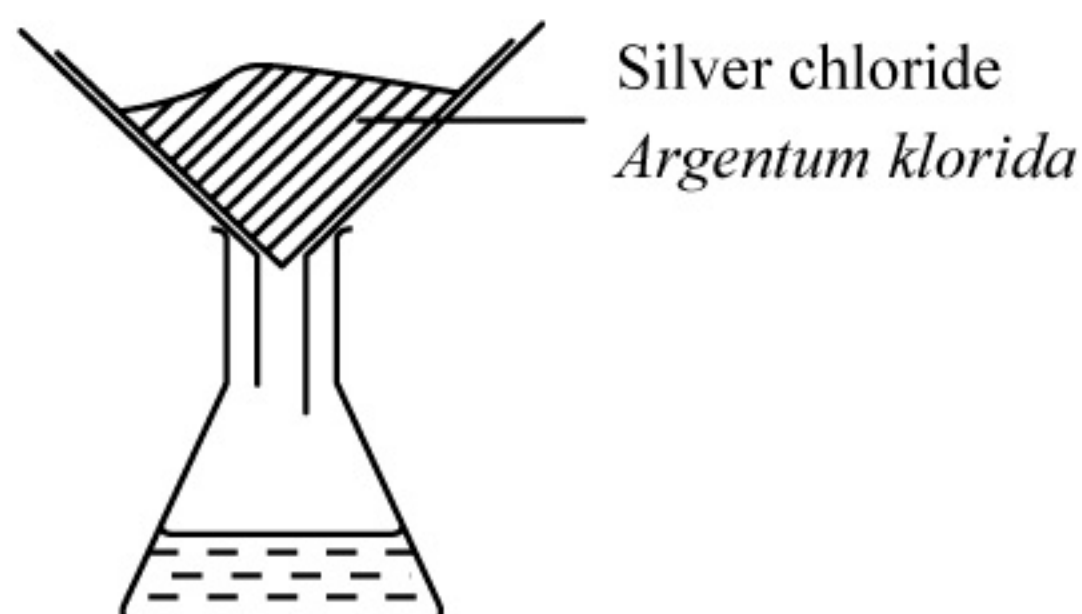


Diagram 13
Rajah 13

Which reactants are suitable to prepare silver chloride?

Bahan tindak balas manakah yang sesuai untuk menyediakan argentum klorida?

- A** Silver and hydrochloric acid
Argentum dan asid hidroklorik
- B** Silver carbonate powder and hydrochloric acid
Serbuk argentum karbonat dan asid hidroklorik
- C** Silver nitrate solution and chlorine gas
Larutan argentum nitrat dan gas klorin
- D** Silver nitrate solution and sodium chloride solution
Larutan argentum nitrat dan larutan natrium klorida

- 45 Table 4 shows the total volume of hydrogen gas, H₂ collected in the reaction between zinc and dilute hydrochloric acid, HCl.

Jadual 4 menunjukkan jumlah isi padu gas hidrogen, H₂ yang dikumpulkan dalam tindak balas antara zink dan asid hidroklorik cair, HCl.

Time (s) <i>Masa (s)</i>	0	30	60	90	120	150	180	210	240
Volume of H₂ (cm³) <i>Isi padu H₂ (cm³)</i>	0.0	18.0	27.5	35.0	41.5	46.5	50.0	50.0	50.0

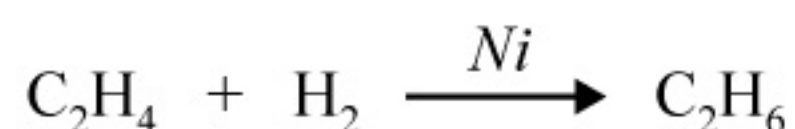
Table 4

Jadual 4

What is the overall average rate of reaction?

Berapakah kadar tindak balas purata keseluruhan?

- A 0.21 cm³ min⁻¹
 B 0.28 cm³ min⁻¹
 C 12.50 cm³ min⁻¹
 D 16.67 cm³ min⁻¹
- 46 Chemical equation shows the reaction between ethene and hydrogen gas.
Persamaan kimia menunjukkan tindak balas antara etena dengan gas hidrogen.



If 6 dm³ ethene reacts at room temperature, what is the mass of ethane produced?

[1 mole of gas occupies a volume of 24 dm³ at room temperature]

[Relative formula mass: H = 1, C = 12]

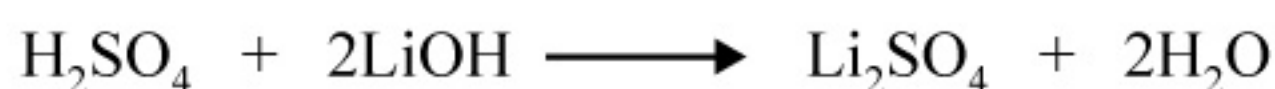
Jika 6 dm³ etena bertindak balas pada suhu bilik, apakah jisim bagi etana yang dihasilkan?

[1 mol gas menempati isi padu 24 dm³ pada suhu bilik]

[Jisim formula relatif: H = 1, C = 12]

- A 24 g
 B 12 g
 C 8.5 g
 D 7.5 g

- 47 Chemical equation shows the reaction between sulphuric acid and lithium hydroxide.
Persamaan kimia menunjukkan tindak balas antara asid sulfurik dengan litium hidroksida.



What is the molarity of lithium hydroxide used when 50 cm³ of 0.1 mol dm⁻³ sulphuric acid is neutralized by 100 cm³ of lithium hydroxide solution?

Berapakah kemolaran litium hidroksida yang digunakan apabila 50 cm³ asid sulfurik 0.1 mol dm⁻³ meneutralkan 100 cm³ larutan litium hidroksida?

- A 0.005 mol dm⁻³
 B 0.100 mol dm⁻³
 C 0.200 mol dm⁻³
 D 0.025 mol dm⁻³
- 48 Diagram 14 shows the result of a series of test that is carried out by a student on solution Y.
Rajah 14 menunjukkan keputusan satu siri ujian yang dijalankan oleh seorang murid terhadap larutan Y.

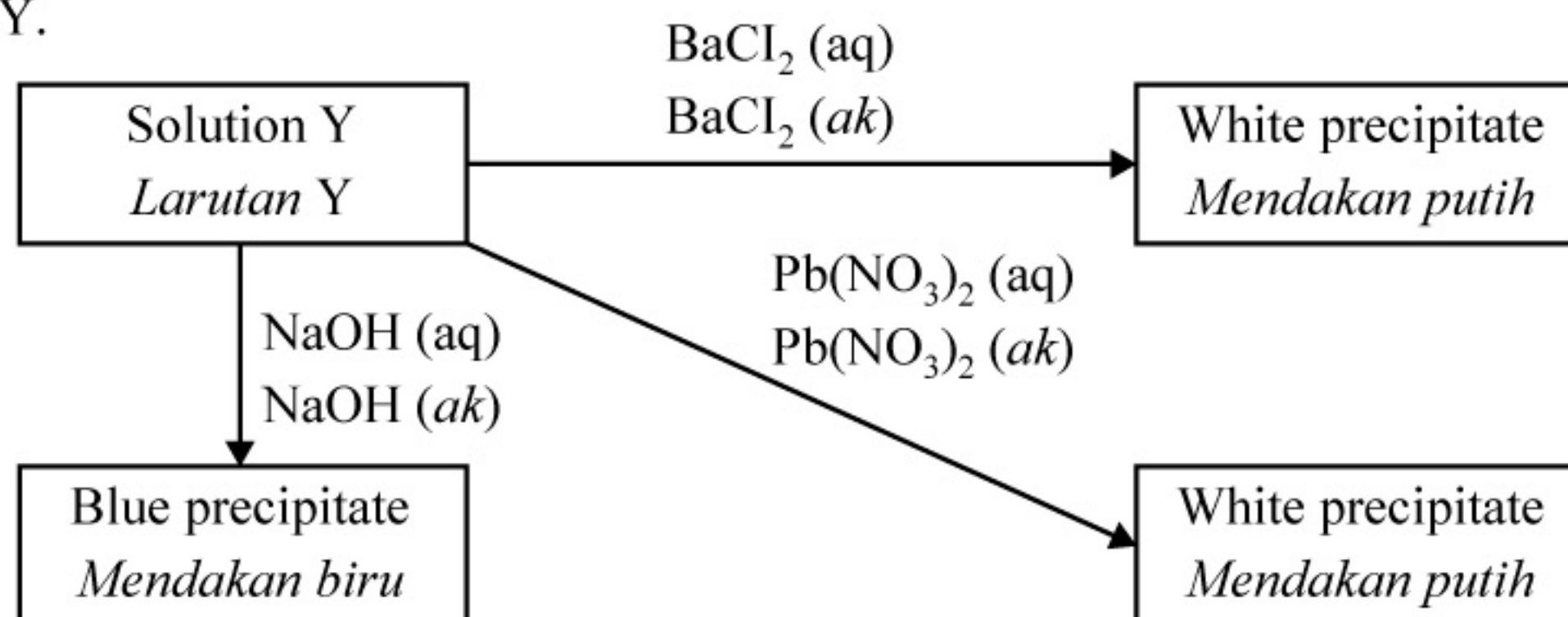


Diagram 14
Rajah 14

Which of the following could be solution Y?
Antara berikut, yang manakah mungkin larutan Y?

- A Copper (II) chloride
Kuprum (II) klorida
 B Zinc chloride
Zink klorida
 C Copper (II) sulphate
Kuprum (II) sulfat
 D Lead (II) sulphate
Plumbum (II) sulfat

- 49 Bazli sprain his leg during loosening the soil in his farm. Bazli asked his son to take substance X from the store and mix it into a plastic bag containing water. His son shook the plastic bag and pressed it onto the sprain part.

What are the probable of substance X?

Kaki Bazli terseliuh ketika sedang menggembur tanah kebunnya. Bazli meminta anaknya untuk mengambil bahan X dari stor dan mencampurkannya ke dalam beg plastik yang mengandungi air. Anaknya menggoncangkan beg plastik itu dan menepak ke atas bahagian yang terseliuh.

Apakah kemungkinan bahan X?

- I Ammonium nitrate
Ammonium nitrat
 - II Potassium nitrate
Kalium nitrat
 - III Anhydrous magnesium sulphate
Magnesium sulfat kontang
 - IV Calcium oxide
Kalsium oksida
- A I and II
I dan II
 - B I and III
I dan III
 - C II and IV
II dan IV
 - D III and IV
III dan IV

- 50** Monosodium glutamate (MSG) is an example of food additive.
Which of the following is true about the type of food additive of MSG and why the addition of MSG in children's food is not encouraged?

Mononatrium glutamat (MSG) ialah satu contoh bahan tambah makanan.

Antara berikut, yang manakah betul mengenai jenis bahan tambah makanan bagi MSG dan mengapa penambahan MSG dalam makanan kanak-kanak tidak digalakkan?

	Type of food additive <i>Jenis bahan tambah makanan</i>	Effects to children <i>Kesan kepada kanak-kanak</i>
A	Flavouring agent <i>Agen perasa</i>	Causes the children become hyperactive <i>Menyebabkan kanak-kanak menjadi terlalu aktif</i>
B	Flavouring agent <i>Agen perasa</i>	Damaged the brain development in children <i>Merosakkan perkembangan otak kanak-kanak</i>
C	Preservatives <i>Pengawet</i>	Appearance of black spot on the skin <i>Menimbulkan bitnik-bintik hitam pada kulit</i>
D	Preservatives <i>Pengawet</i>	Reduce the body immunization toward disease <i>Mengurangkan ketahanan badan terhadap penyakit</i>

END OF QUESTION PAPER
KERTAS PEPERIKSAAN TAMAT

INFORMATION FOR CANDIDATES
MAKLUMAT UNTUK CALON

1. This question paper consists of **50** questions.
Kertas peperiksaan ini mengandungi 50 soalan.
2. Answer **all** questions.
Jawab semua soalan.
3. Each question is followed by four alternative answers, **A, B, C** or **D**. For each question, choose **one** answer only. **Blacken** your answer on the objective answer sheet provided.
*Tiap-tiap soalan diikuti oleh empat pilihan jawapan, iaitu **A, B, C** dan **D**. Bagi setiap soalan, pilih **satu** jawapan sahaja. **Hitamkan** jawapan anda pada kertas jawapan objektif yang disediakan.*
4. If you wish to change your answer, erase blackened mark that you have made. Then blacken the new answer.
Sekiranya anda hendak menukar jawapan, padamkan tanda yang telah dibuat. Kemudian hitamkan jawapan yang baharu.
5. The diagrams in the questions provided are not drawn to scale unless stated.
Rajah yang mengiringi soalan tidak dilukis mengikut skala kecuali dinyatakan.
6. You may use a scientific calculator.
Anda dibenarkan menggunakan kalkulator saintifik.