

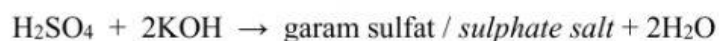
- 30** Unsur X dan Y terletak dalam Kumpulan 17 di dalam Jadual Berkala Unsur.
Elements X and Y are located in Group 17 in the Periodic Table of Elements.

- Y lebih reaktif daripada X
Y is more reactive than X
- Takat lebur Y lebih rendah daripada X
The melting point of Y is lower than X

Pasangan manakah yang mungkin merupakan unsur bagi X dan Y?
Which one is the possible pair of elements X and Y?

	Unsur X <i>Element X</i>	Unsur Y <i>Element Y</i>
A	Bromin <i>Bromine</i>	Iodin <i>Iodine</i>
B	Bromin <i>Bromine</i>	Klorin <i>Chlorine</i>
C	Klorin <i>Chlorine</i>	Iodin <i>Iodine</i>
D	Florin <i>Fluorin</i>	Bromin <i>Bromine</i>

- 31** Persamaan berikut menunjukkan tindak balas untuk mendapatkan garam sulfat terlarutkan.
The following equation shows the reaction to obtain soluble sulphate salt.



Berapakah jisim garam sulfat yang terhasil jika 50 cm^3 0.1 mol dm^{-3} kalium hidroksida digunakan?

[Jisim atom relatif : K = 39, S = 32, O = 16, H = 1]

What is the mass of sulphate salt obtained if 50 cm^3 of 0.1 mol dm^{-3} potassium hydroxide is used?

[Relative atomic mass : K = 39, S = 32, O = 16, H = 1]

- A 0.22 g
- B 0.44 g
- C 0.87 g
- D 1.74 g

- 32 Suatu persamaan termokimia bagi penyesaran kuprum oleh zink ditunjukkan seperti di bawah.
A thermochemical equation for the displacement of copper by zinc is shown as below.



Berapakah kenaikan suhu larutan jika zink berlebihan dilarutkan dalam 50 cm³ larutan kuprum(II) sulfat 0.2 mol dm⁻³?

[Muatan haba tentu larutan = 4.2 J g⁻¹ °C⁻¹]

What is the increase in temperature of the solution if excess zinc is dissolved in 50 cm³ of 0.2 mol dm⁻³ copper(II) sulphate solution?

[Specific heat capacity of solution = 4.2 J g⁻¹ °C⁻¹]

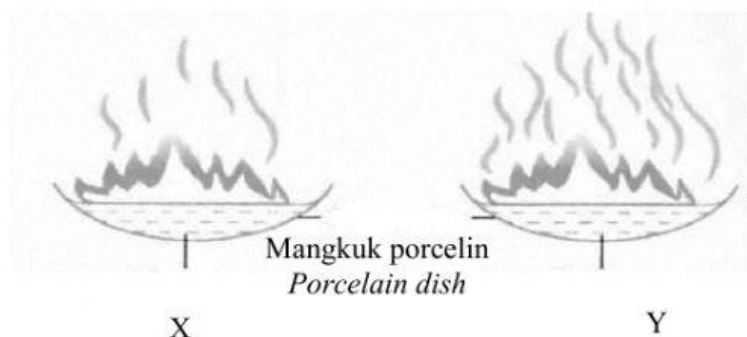
- A 11.91 °C
- B 15.81 °C
- C 20.59 °C
- D 23.81 °C

- 33 Apakah kegunaan asid sulfurik?
What is the use of sulphuric acid?

- A Pembuatan detergen
Manufacture of detergent
- B Pembuatan kaca
Manufacture of glass
- C Pembuatan paip air
Manufacture of water pipe
- D Pembuatan seramik
Manufacture of ceramic

- 34 Rajah 8 menunjukkan pembakaran dua jenis hidrokarbon, X dan Y yang mempunyai bilangan atom karbon per molekul yang sama.

Diagram 8 shows combustion of two type of hydrocarbons, X and Y with same number of carbon atom per molecule.



Rajah 8 / Diagram 8

Pilih pernyataan yang **betul**.

*Choose the **correct** statement.*

- A** Hidrokarbon Y menyahwarnakan larutan ungu kalium manganat(VII) berasid tetapi hidrokarbon X tidak
Hydrocarbon Y decolourise purple acidified potassium manganate(VII) solution but hydrocarbon X cannot
- B** Hidrokarbon X menyahwarnakan warna perang air bromin tetapi hidrokarbon Y tidak
Hydrocarbon X decolourise brown colour bromine water but hydrocarbon Y cannot
- C** Hidrokarbon Y boleh diperolehi daripada hidrokarbon X
Hydrocarbon Y can be obtained from hydrocarbon X
- D** Hidrokarbon X lebih larut dalam air daripada hidrokarbon Y
Hydrocarbon X more soluble in water than hydrocarbon Y
- 35 Semasa Ahmad berjoging, kakinya terseliuh disebabkan terjatuh. Rajah 9 menunjukkan bahan yang digunakan untuk mengurangkan kesakitan.
During Ahmad jogging, his leg sprained due to a fall. Diagram 9 shows a substance used for reducing pain.



Rajah 9 / Diagram 9

Antara bahan yang berikut, yang manakah digunakan dalam bahan itu?

Which of the following substances is used in the substance?

- A Kalsium oksida
Calcium oxide
- B Kuprum(II) sulfat terhidrat
Hydrated copper(II) sulphate
- C Magnesium sulfat terhidrat
Hydrated magnesium sulphate
- D Ammonium nitrat
Ammonium nitrate

36 Maklumat berikut menunjukkan tiga bahan.

The following information shows three substances.

- Natrium klorida
Sodium chloride
- Plumbum(II) bromida
Lead(II) bromide
- Kuprum(II) sulfat
Copper(II) sulphate

Apakah sifat bahan-bahan itu?

What is the property of the substances?

- A Takat lebur yang rendah
Low melting point
- B Konduktor haba yang baik
Good heat conductor
- C Boleh mengkonduksi elektrik dalam keadaan leburan
Can conduct electricity in molten state
- D Daya tarikan yang lemah antara zarah-zarah
Weak attraction force between the particles

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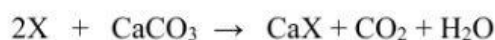
- 37 Antara yang berikut, yang manakah tindak balas redoks?

Which of the following is a redox reaction?

- A Pengaratan
Rusting
- B Pendidihan
Boiling
- C Pemendakan
Precipitation
- D Peneutralan
Neutralisation

- 38 Persamaan berikut mewakili satu tindak balas antara 80 cm^3 asid X 0.1 mol dm^{-3} dan kalsium karbonat berlebihan. Masa yang diambil untuk tindak balas itu lengkap adalah 180 saat.

The following equation represents a reaction between 80 cm^3 of 0.1 mol dm^{-3} acid X and excess calcium carbonate. The time taken for the reaction to complete is 180 seconds.



Apakah kadar tindak balas purata tersebut?

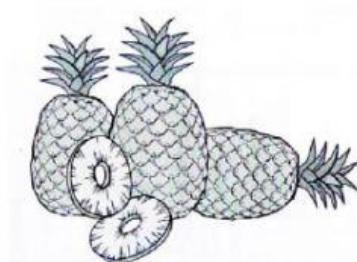
What is the average rate of reaction?

[Isi padu molar bagi gas = $24 \text{ dm}^3 \text{ mol}^{-1}$ pada keadaan bilik]

[Molar volume of gas = $24 \text{ dm}^3 \text{ mol}^{-1}$ at room temperature]

- A $0.53 \text{ dm}^3 \text{ s}^{-1}$
 - B $0.53 \text{ cm}^3 \text{ s}^{-1}$
 - C $0.53 \text{ cm}^3 \text{ min}^{-1}$
 - D $0.53 \text{ dm}^3 \text{ min}^{-1}$
- 39 Rajah 10 menunjukkan beberapa biji nanas.

Diagram 10 shows some pineapples.

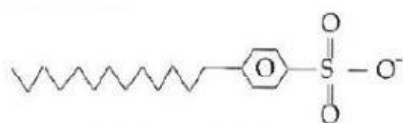


Rajah 10 / Diagram 10

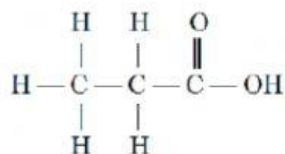
Antara yang berikut, yang manakah menunjukkan struktur ester yang terkandung dalam nanas?

Which of the following shows the structure of the ester that is contained in pineapples?

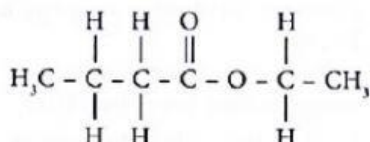
A



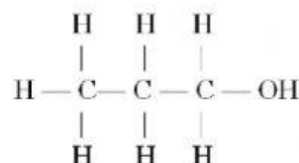
B



C



D



- 40 Sarina telah menerima sepucuk surat jemputan perkahwinan daripada rakan baiknya, Saruna. Surat yang diterimanya berwarna putih tanpa tulisan padanya. Terdapat satu nota yang disisipkan sebagai panduan.

Sarina received a letter of wedding invitation from her best friend, Saruna. The letter is white in colour without any writing on it. There is a note enclosed as a guide.

Kepada sahabat, Dakwat yang digunakan : Kuprum(II) oksida Formula : CuO Untuk membaca surat ini, semburkan satu larutan yang akan menghasilkan tulisan berwarna biru.	<i>Dear friend, Ink that was used :</i> <i>Copper(II) oxide Formula : CuO</i> <i>To read this letter, spray a solution that will produce blue writing.</i>
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Larutan manakah yang perlu disembur bagi membolehkan Sarina membaca surat tersebut?

Which solution should be sprayed to enable Sarina to read the letter?

A Air

Water

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- B** Zink sulfat
Zinc sulphaite
- C** Magnesium nitrat
Magnesium nitrate
- D** Asid sulfurik cair
Dilute sulphuric acid

Soalan tamat