

NAMA :

TINGKATAN :

**MODUL PENINGKATAN AKADEMIK TINGKATAN 5
TAHUN 2021**

MODUL 2

KIMIA

KERTAS 1

SATU JAM LIMA BELAS MINIT

JANGAN BUKA MODUL INI SEHINGGA DIBERITAHU

1. *Kertas soalan ini adalah dalam dwibahasa.*
2. *Soalan dalam Bahasa Melayu mendahului soalan yang sepadan dalam Bahasa Inggeris.*
3. *Jawab **semua** soalan.*

Modul ini mengandungi **31** halaman bercetak

1 Apakah zarah subatom yang ditemui oleh Ernest Rutherford?
Which subatomic particle was discovered by Ernest Rutherford?

- A Neutron
Neutron
- B Elektron
Electron
- C Proton
Proton

2 Antara pernyataan berikut yang manakah benar bagi 1 mol bahan?
Which of the following statement is true for 1 mole of substance?

- A 1 mol zink mengandungi 6.02×10^{23} molekul
1 mol of zinc contains 6.02×10^{23} molecules
- B 1 mol ammonia mengandungi bilangan atom yang sama seperti dalam 12g karbon-12
1 mol of ammonia contains the same number of atoms as in 12g of carbon-12.
- C 1 mol karbon dioksida mengandungi bilangan molekul yang sama dengan bilangan atom dalam 12g karbon-12
1 mol of carbon dioxide contains the same number of molecules as the number of atoms in 12g carbon-12.
- D 1 mol gas oksigen mengandungi 6.02×10^{23} atom.
1 mol of oxygen gas contains 6.02×10^{23} atoms.

3 Antara berikut, unsur yang manakah terletak dalam Kumpulan 18 dalam Jadual Berkala Unsur?

Which of the following elements are located in the Group 18 in the Periodic Table of Elements?

A Helium dan Krypton
Helium and Krypton

B Mangan dan Indium
Manganese and Indium

C Argon dan Platinum
Argon and Platinum

D Xenon dan Selenium
Xenon and Selenium

4 Apakah maksud ikatan logam?

What is the meaning of metallic bond?

A Ikatan yang terbentuk melibatkan perpindahan elektron
A bond formed involving transfer of electron

B Ikatan yang terbentuk apabila pasangan elektron yang dikongsi datang daripada satu atom sahaja
A bond formed when the shared paired electron comes from one atom only

C Ikatan yang terbentuk melibatkan daya tarikan elektrostatik antara lautan elektron dan ion logam bercas positif
A bond formed involving electrostatic attraction force between sea of electron and positively charged metal ion

- 5 Nyatakan bahan asas dalam pembinaan struktur di bawah.
State the material used to make this building structure below.



- A Magnesium sulfat
Magnesium sulfat
- B Kalsium karbonat
Calcium carbonate
- C Zink Nitrat
Zinc nitrat
- D Aluminium oksida
Aluminium oxide
- 6 Antara berikut, yang manakah polimer sintetik?
What is the following is synthetic polymer?
- A Selulosa
Cellulose
- B Susu getah
Latex
- C Polistirena
Polystyrene
- D Kanji
Starch

7 Yang manakah bukan satu ciri grafen?
Which is not a feature of graphene?

- A Lutsinar
Transparent
- B Telap
Permeable
- C Konduktor elektrik yang baik
Very good conductor of electricity
- D Sangat kuat dan keras
Very strong and hard

8

Jadual di bawah menunjukkan beberapa isotop dan kegunaannya.

Table below shows several isotopes and their uses.

	Isotop <i>Isotope</i>	Kegunaan <i>Uses</i>
I	Iodin-131 <i>Iodine-131</i>	Mengesan ketumbuhan dalam otak dan ketidakaturan kelenjar tiroid <i>Locate brain tumor and thyroid gland disorder</i>
II	Karbon-12 <i>Carbon-12</i>	Untuk mengukur kadar penyerapan baja oleh tumbuhan <i>To measure the rate of absorption of fertilisers by plant</i>
III	Natrium-24 <i>Sodium-24</i>	Mengkaji peredaran darah dan mengesan sekiranya berlaku salur darah tersumbat <i>Study blood circulation and detect the positions of blood clots</i>
IV	Kobalt-60 <i>Cobalt-60</i>	Untuk menganggar usia fosil <i>To estimate the age of fossils</i>

Antara yang berikut, yang manakah betul?

Which of the following is correct?

A I dan II

I and II

B I dan III

I and III

C II dan IV

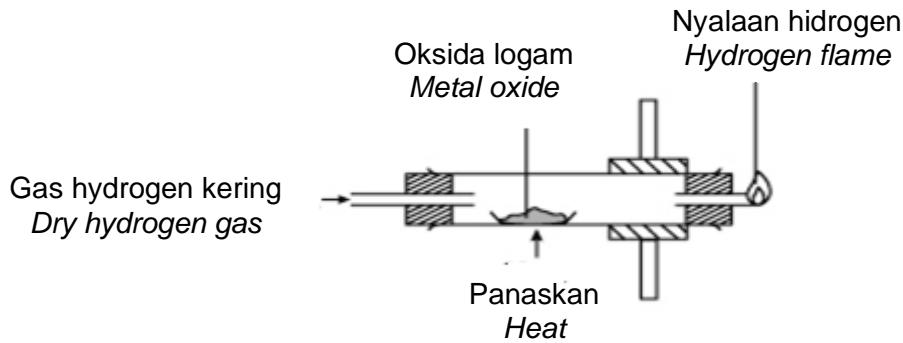
II and IV

D III dan IV

III and IV

- 9 Rajah menunjukkan susunan radas untuk menentukan formula empirik suatu oksida logam

Diagram shows the set-up of the apparatus used to determine the empirical formula of a metal oxide.



Antara oksida logam berikut yang manakah sesuai digunakan dalam eksperimen?
Which one of the following metal oxides is suitable to be used in the experiment?

- A MgO
 - B Al_2O_3
 - C ZnO
 - D Ag_2O
- 10 Molekul manakah mempunyai ikatan kovalen ganda dua di antara atomnya?
[Nombor proton : H =1, N =7, O =8, Cl = 9]
Which molecule has a double covalent bond between its atom?
[Proton Number: H =1, N =7, O =8, Cl = 9]
- A Nitrogen
Nitrogen
 - B Oksigen
Oxygen
 - C Hidrogen
Hydrogen
 - D Fluorin
Fluorine

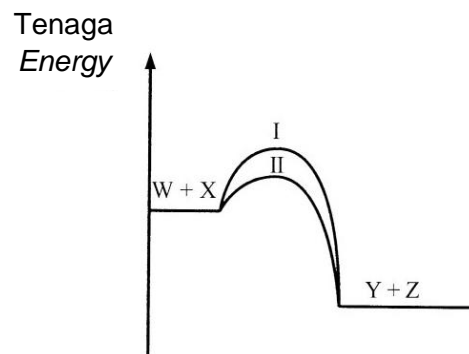
- 11 Jadual menunjukkan larutan A, B, C, D dan E dengan nilai pH.
Table shows solutions A, B, C, D and E with their pH values.

Larutan <i>Solution</i>	A	B	C	D	E
pH	5	6	7	9	11

Dua larutan yang manakah akan menghasilkan larutan neutral apabila dicampurkan?
Which of the two solutions will produce neutral solution when mixed?

- A A and B
A dan B
- B D and E
D dan E
- C C and D
C dan D
- D B and E
B dan E

- 12 Rajah menunjukkan gambar rajah profil tenaga bagi suatu tindak balas.
Diagram shows the energy profile diagram of a reaction.



Berdasarkan Teori Perlanggaran, faktor manakah menerangkan perubahan lengkungan I kepada lengkungan II?

Based on the Collision Theory, which factor explains the changes of curve I to curve II?

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

- 13 Ketulenan aloi emas diukur dalam unit karat (K). Emas 24 K merupakan emas tulen tanpa campuran logam lain. Jadual menunjukkan ketulenan beberapa jenis emas.

The purity of gold alloys is measured in units of carat (K). 24 K gold is pure gold without any mixture of other metals. Table shows the purity of some types of gold.

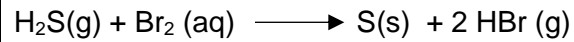
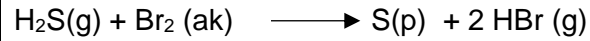
Ketulenan /K <i>Purity /K</i>	Bahagian emas <i>The gold part</i>	Bahagian logam lain <i>Other metal parts</i>
24 K	24	0
22 K	22	2
20 K	20	4
18 K	18	6

Aminah ingin membeli sebentuk cincin berlian. Antara ketulenan emas yang manakah sesuai bagi Aminah yang mempunyai hobi sukan lasak ?

Aminah want to buy a diamond ring. Which of the gold purity is suitable for Aminah who has a hobby of extreme sports?

- A 18 K
- B 20 K
- C 22 K
- D 24 K

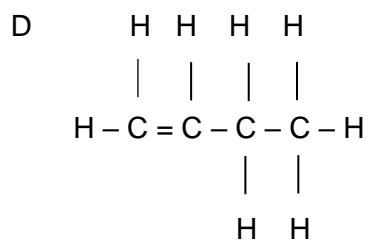
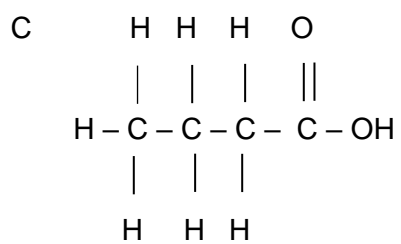
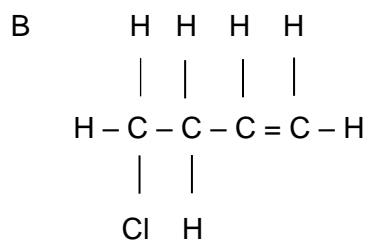
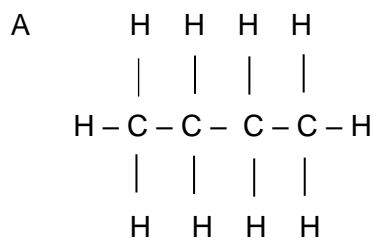
- 14 Antara berikut, yang manakah benar mengenai persamaan kimia seimbang di bawah ?
Which of the following is true about the balanced chemical equation below?



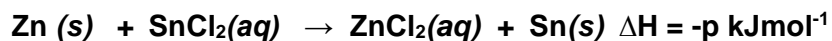
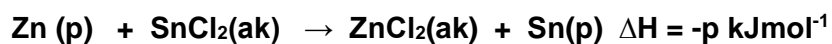
- A Hidrogen sulfida alami pengoksidaan dengan kehilangan hidrogen membentuk sulfur
Hydrogen sulphide undergoes oxidation by losing hydrogen forming sulphur
- B Bromin alami pengoksidaan dengan kehilangan hidrogen membentuk asid hidrobromik
Bromine undergoes oxidation by losing hydrogen forming hydrobromic acid
- C Hidrogen sulfida ialah agen pengoksidaan
Hydrogen sulphide is an oxidising agent
- D Bromin ialah agen penurunan
Bromine is a reducing agent

15 Antara berikut yang manakah formula struktur bagi hidrokarbon tak tepu?

Which of the following is the structural formula of an unsaturated hydrocarbon?



- 16 Apabila zink ditambahkan ke dalam larutan stanum(II) klorida, tindak balas berikut berlaku.
When zinc is added to a solution of tin (II) chloride, the following reaction occurs.



Antara takrifan berikut, yang manakah betul tentang haba tindak balas tersebut?
Which of the following definitions is correct about the heat of the reaction?

- A Haba diserap apabila 1 mol ion stanum(II) berubah kepada atom stanum
Heat is absorbed when 1 mole of tin(II) ions is converted to stanum atoms
- B Haba diserap apabila 1 mol zink klorida dihasilkan
Heat is absorbed when 1 mole of zinc chloride is produced
- C Haba dibebaskan apabila 1 mol zink klorida dihasilkan
Heat is released when 1 mole of zinc chloride is produced
- D Haba dibebaskan apabila 1 mol stanum(II) disesarkan daripada larutan stanum(II) klorida
Heat is released when 1 mole of tin(II) is displaced from a solution of tin(II) chloride

- 17 Rajah menunjukkan periuk yang diperbuat dari keluli nirkarat. Keluli nirkarat mengandungi 73% besi, 1% karbon, 18% kromium dan 8% nikel.

Diagram shows a pot made of stainless steel. Stainless steel contains 73% iron, 1% carbon, 18% chromium and 8% nickel.

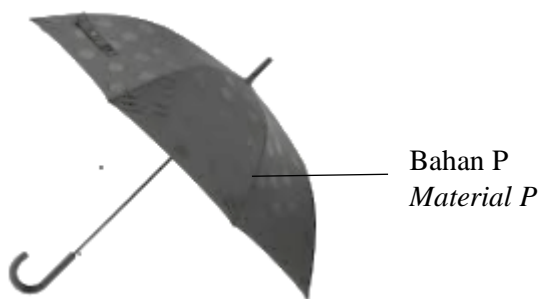


Hitung jisim besi yang diperlukan untuk menghasilkan periuk yang berjisim 665 g.

Calculate the mass of iron required to produce a pot of mass 665 g

- A 146.30 g
- B 147.00 g
- C 485.45 g
- D 419.00 g

- 18 Rajah di bawah menunjukkan sekaki payung. P diperbuat daripada
Diagram shows an umbrella. P is made up of



- A Polistirena
Polystyrene
- B Melamina
Melamine
- C Nilon
Nylon
- D Bakelit
Bakelite
- 19 Apabila asid hidroklorik dan natrium hidroksida bertindak balas, persamaan ion bagi tindak balas tersebut diwakili oleh
When hydrochloric acid and sodium hydroxide react, the ionic equation for the reaction can be represented by
- A $\text{Na}^+ + \text{Cl}^- \rightarrow \text{NaCl}$
- B $\text{H}^+ + \text{OH}^- \rightarrow \text{H}_2\text{O}$
- C $2\text{H}^+ + \text{O}^{2-} \rightarrow \text{H}_2\text{O}$
- D $\text{H}^+ + \text{Cl}^- \rightarrow \text{HCl}$

- 20** Seorang pelajar menjalankan suatu eksperimen. Dia ingin menghasilkan jalur getah yang lebih tahan panas dan lebih elastik. Dia mencelupkan jalur getah ke dalam bikar yang mengandungi disulfur diklorida dan bahan X. Apakah bahan X?

A student carries out an experiment. He wants to produce a rubber strip that is more resistant to heat and more elastic. He dips the rubber strip in a beaker containing disulphur dichloride and substance X. What is substance X?

- A Larutan ammonia
Ammonia solution
- B Metilbenzena
Methylbenzene
- C Asid etanoik
Ethanoic acid
- D Larutan natrium klorida
Sodium chloride solution

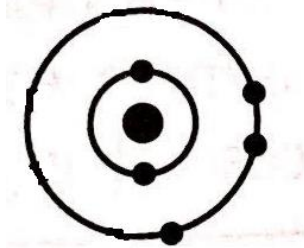
- 21** Unsur S mempunyai 4 neutron dan 3 proton. Perwakilan standard bagi unsur S adalah
Element S has 4 neutrons and 3 protons. Standard representation of element S is

- A ${}^7_3\text{S}$
- B ${}^4_3\text{S}$
- C ${}^7_4\text{S}$
- D ${}^7_2\text{S}$

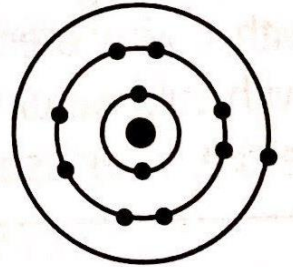
22 Antara gambarajah berikut, yang manakah mewakili susunan unsur bagi suatu unsur Kumpulan 1?

Which of the following elements are in Group 1 in the Periodic Table of Elements?

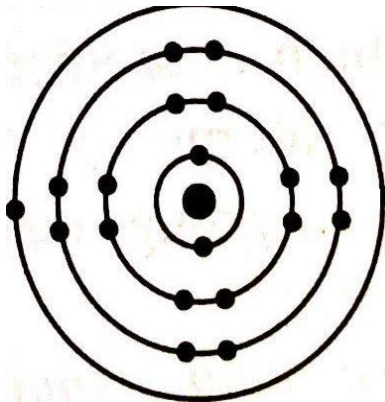
I



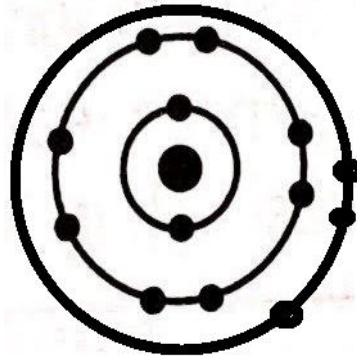
II



III



IV



A I dan III
I and III

C II dan III
II and III

B I dan IV
I and IV

D II dan IV
II and IV

- 23 Antara pasangan sifat fizik berikut, yang manakah benar tentang glukosa, $C_6H_{12}O_6$?
Which of the following pairs of physical properties of glucose, $C_6H_{12}O_6$?

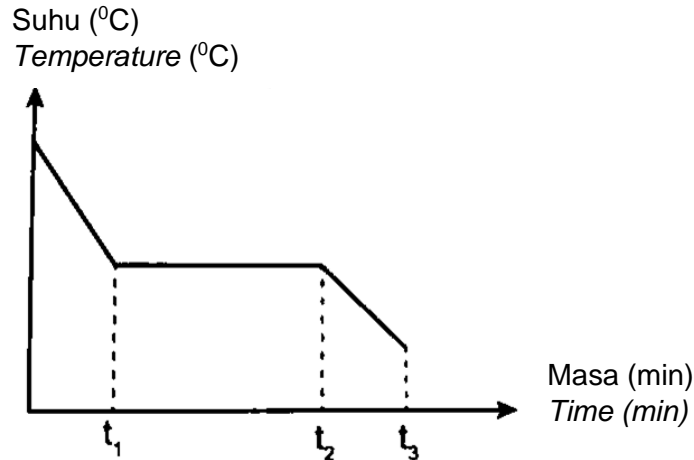
	Keterlarutan dalam air <i>Solubility in water</i>	Kekonduksian elektrik dalam leburan <i>Electrical conductivity when molten</i>
A	Larut <i>Soluble</i>	Mengkonduksi <i>Conducting</i>
B	Larut <i>Soluble</i>	Not conducting <i>Tidak mengkonduksi</i>
C	Tidak larut <i>Insoluble</i>	Mengkonduksi <i>Conducting</i>
D	Tidak larut <i>Insoluble</i>	Not conducting <i>Tidak mengkonduksi</i>

- 24 Bahan manakah yang boleh digunakan untuk menukarkan Fe^{2+} to Fe^{3+} ?
Which substance can be used to convert Fe^{2+} to Fe^{3+}

- A Serbuk zink
Zinc powder
- B Air bromin
Bromine water
- C Gas sulfur dioksida
Sulphur dioxide gas
- D Larutan kalium iodida
Potassium iodide solution

25

Rajah menunjukkan lengkung penyejukan bagi cecair A.
Diagram shows the cooling curve of liquid A.

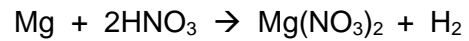


Antara yang berikut, pernyataan yang manakah yang betul?
Which of the following statement is correct?

- A Semua zarah berada dalam keadaan cecair pada t_1 hingga t_2
The particles are all in the liquid state at t_1 to t_2
- B Dari t_2 ke t_3 , zarah-zarah tersusun padat tetapi tidak teratur.
From t_2 to t_3 , particles are arranged in pack but not in orderly manner
- C Tenaga haba dibebaskan ke persekitaran pada t_1 ke t_2 , zarah-zarah cecair menarik antara satu sama lain untuk membentuk pepejal
Heat is released to the surroundings at t_1 to t_2 so that the liquid particles attract one another to form solid.
- D Daya tarikan antara zarah-zarah adalah lebih kuat di t_1 ke t_2 berbanding t_2 ke t_3
The forces of attraction between the particles are stronger in t_1 to t_2 than in t_2 to t_3

- 26 Persamaan berikut mewakili tindak balas antara kepingan magnesium dan asid nitrik.

The following equation represent the reaction between magnesium strip and nitric acid.



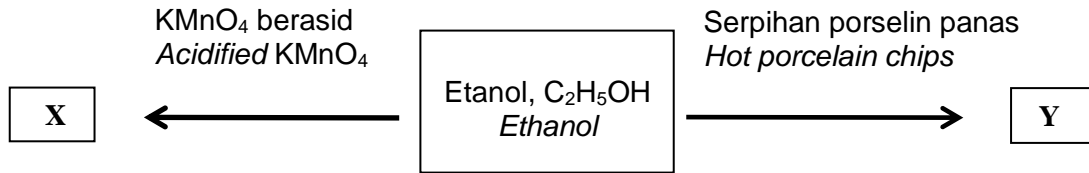
Which method is the most suitable to increase the rate of reaction?

Kaedah manakah yang paling sesuai digunakan untuk meningkatkan kadar tindak balas?

- A Guna serbuk magnesium
Use magnesium powder
- B Mengurangkan isi padu asid nitrik
Reduce the volume of nitric acid
- C Mengurangkan suhu asid nitrik
Reduce the temperature of nitric acid
- D Mengurangkan kepekatan asid nitrik
Decrease the concentration of nitric acid

27 Rajah berikut menunjukkan tindak balas kimia bagi etanol.

Diagram shows the chemical reactions of ethanol.



Antara berikut yang manakah merupakan formula struktur bagi sebatian X dan Y?

Which of the following is the structural formula of compound X and Y?

	X	Y
A	$\begin{array}{c} \text{O} \\ \\ \text{CH}_3 - \text{C} - \text{OH} \end{array}$	$\begin{array}{cc} \text{H} & \text{H} \\ & \\ \text{H} - \text{C} = & \text{C} - \text{H} \end{array}$
B	$\begin{array}{c} \text{O} \\ \\ \text{CH}_3 - \text{CH}_2 - \text{C} - \text{OH} \end{array}$	$\begin{array}{cc} \text{H} & \text{H} \\ & \\ \text{H} - \text{C} = & \text{C} - \text{H} \end{array}$
C	$\begin{array}{c} \text{O} \\ \\ \text{CH}_3 - \text{C} - \text{OH} \end{array}$	$\begin{array}{cc} \text{H} & \text{H} \\ & \\ \text{H} - \text{C} - & \text{C} - \text{H} \\ & \\ \text{H} & \text{H} \end{array}$
D	$\begin{array}{c} \text{O} \\ \\ \text{CH}_3 - \text{CH}_2 - \text{C} - \text{OH} \end{array}$	$\begin{array}{cc} \text{H} & \text{H} \\ & \\ \text{H} - \text{C} - & \text{C} - \text{H} \\ & \\ \text{H} & \text{H} \end{array}$

28 Antara pernyataan berikut, yang manakah betul tentang lemak dan minyak?

Which of the following shows the correct classification of fats and oils?

I Lemak dan minyak merupakan ester

Fats and oils are esters

II Lemak dan minyak diperolehi daripada sumber haiwan

Fats and oils are obtained from animal sources

III Lemak ialah pepejal dan minyak ialah cecair pada suhu bilik

Fats are solids and oils are liquids at room temperature

IV Lemak tak tepu boleh ditukarkan kepada lemak tepu melalui proses pengoksidaan

Unsaturated fats can be converted to saturated fats through the process of oxidation

A I dan II

I and II

C II dan IV

II and IV

B I dan III

I and III

D III dan IV

III and IV

29 Jisim tiga atom unsur Y adalah sama dengan jisim empat atom karbon. Y bukan simbol sebenar unsur itu. Apakah jisim formula relatifnya?

[Jisim atom relatif: C = 12]

The mass of three atoms of element Y is equal to the mass of four carbon atoms. Y is not actual symbol of the element. What is the relative atomic mass of element Y?

[Relative atomic mass: C = 12]

A 12

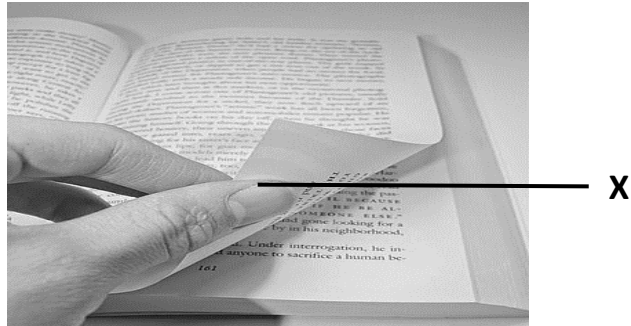
B 16

C 36

D 48

- 30 Ahmad membasahkan jari sebelum menyelak helaian. Dia mendapati kaedah ini lebih cepat untuk menyelak helaian. Apakah jenis ikatan yang terbentuk di X?

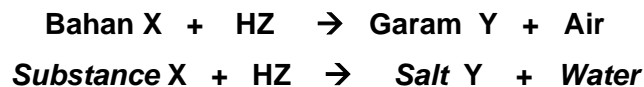
Ahmad lick his finger to turn pages. He noticed that this method is easier to turn pages. What type of bond formed at X?



- A Ikatan Datif
Dative bond
- B Ikatan Logam
Metallic bond
- C Ikatan Kovalen
Covalent bond
- D *Ikatan Hidrogen*
Hydrogen bond

- 31 Persamaan kimia menunjukkan satu persamaan kimia bagi bahan X bertindak balas dengan asid monoprotik (HZ).

The chemical equation shows a chemical equation for the reaction between Substance X and Monoprotic acid (HZ).



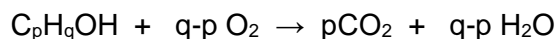
Merujuk kepada persamaan di atas, apakah kemungkinan terbaik bagi bahan X dan Y?

Referring to the equation above, what could be the best for substance X and Y be?

	Bahan X <i>Substance X</i>	Garam Y <i>Salt Y</i>
A	Zink karbonat <i>Zinc carbonate</i>	Zink sulfat <i>Zinc sulphate</i>
B	Kuprum(II) oksida <i>Copper(II) oxide</i>	Kuprum(II) klorida <i>Copper(II) chloride</i>
C	Logam magnesium <i>Magnesium metal</i>	Magnesium nitrat <i>Magnesium nitrate</i>
D	Natrium hidroksida <i>Sodium hydroxide</i>	Natrium klorida <i>Sodium chloride</i>

- 32 Persamaan berikut menunjukkan pembakaran lengkap bagi alkohol.

The following equation represents the complete combustion of alcohol.

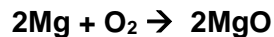


Apakah nilai bagi p dan q

What is the value of p and q?

	p	q
A	1	3
B	2	5
C	3	7
D	4	9

- 33 Persamaan berikut menunjukkan tindak balas antara magnesium dan oksigen.
The following equation represent the reaction between magnesium and oxygen



Antara berikut yang manakah pernyataan yang benar?

Which of the following statements is correct?

[Jisim atom relatif : O=16, Mg=24 ; Pemalar Avogadro, $N_A = 6.02 \times 10^{23} \text{ mol}^{-1}$]

[*Relative atomic mass of O=16, Mg=24 ; Avogadro constant, $N_A = 6.02 \times 10^{23} \text{ mol}^{-1}$*]

- A 2 mol atom magnesium bertindak balas dengan 2 mol atom oksigen untuk menghasilkan 2 mol magnesium oksida.
2 moles of magnesium atoms react with 2 moles of oxygen atoms to produce 2 moles of magnesium oxide.
- B 24 g atom magnesium bertindak balas dengan 1 mol molekul oksigen untuk menghasilkan 2 mol magnesium oksida .
24 g magnesium atoms react with 1 mole of oxygen molecules to produce 2 moles of magnesium oxide
- C 6.02×10^{23} atom magnesium bertindak balas dengan 3.01×10^{23} molekul oksigen untuk menghasilkan 2 mol magnesium oksida
 6.02×10^{23} magnesium atoms react with 3.01×10^{23} oxygen molecules to produce 2 moles of magnesium oxide
- D 1 mol atom magnesium bertindak balas dengan 0.5 mol molekul oksigen untuk menghasilkan 1 mol magnesium oksida
1 mole of magnesium atoms react with 0.5 mole of oxygen molecules to produce 1 moles of magnesium oxide

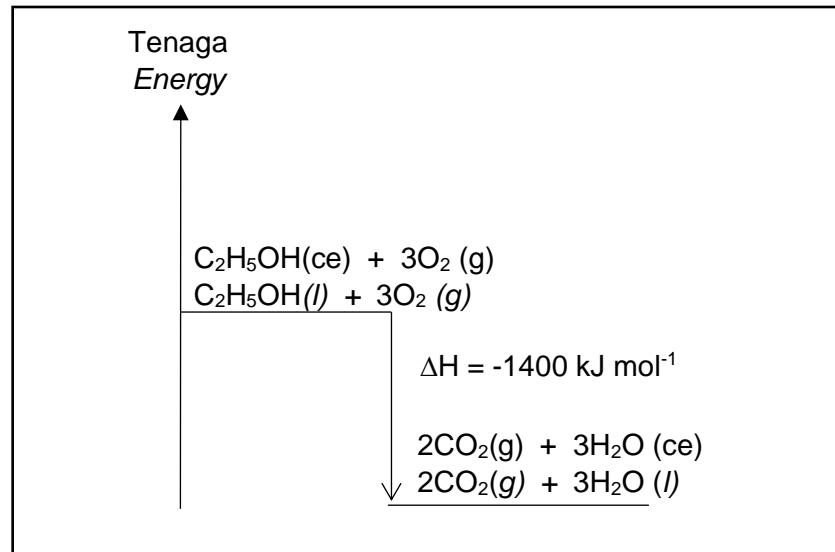
34 Apabila kepekatan bahan tindak balas meningkat, kadar tindak balas akan meningkat. Pernyataan yang manakah menerangkan mengapa tindak balas meningkat?

When the concentration of reactant increases, the rate of reaction increases. Which statement explains why the rate of reaction increases?

- A Bilangan perlanggaran berkesan meningkat
The number of effective collision increases
- B Tenaga kinetik zarah bertindak balas meningkat
The kinetic energy of reacting particles increases
- C Jumlah bilangan zarah yang bertindak balas per unit isipadu meningkat
The total number of reacting particles per unit volume increases
- D Jumlah luas permukaan bahan tindak balas meningkat
The total surface area of reactant increases

35 Perubahan tenaga yang berlaku semasa pembakaran etanol ditunjukkan dalam rajah.

The energy changes that occur during the combustion of ethanol are shown in the diagram.



Dalam tindak balas yang berlaku,

In the reaction that happen,

A 1400 kJ haba diserap

1400 kJ of heat is absorbed

B suhu persekitaran menurun

the environmet temperature decreases

C haba pembakaran etanol ialah $-1400 \text{ kJ mol}^{-1}$

the heat of combustion of ethanol is $-1400 \text{ kJ mol}^{-1}$

D Jumlah kandungan tenaga kimia hasil tindak balas adalah lebih tinggi berbanding kandungan tenaga kimia bahan tindak balas.

The total chemical energy content of the reaction product is higher than the chemical energy content of the reaction reactant.

- 36 Polimer X merupakan molekul rantai panjang yang terbentuk dari ulangan unit glukosa. Antara berikut, yang manakah polimer X?

Polymer X is a long chain molecule made up from repeating unit of glucose.

Which of the following is polymer X?

- A Kanji
Starch
- B Protein
Protein
- C Getah asli
Natural rubber
- D Polivinil klorida
Polyvinyl chloride

- 37 Jadual menunjukkan pemerhatian apabila oksida bagi unsur –unsur dalam jadual berkala unsur dilarutkan dalam air

Table shows the observation when oxides of elements in the Periodic Table of elements is added to water.

Oksida unsur <i>Oxides of element in Period 3</i>	Pemerhatian <i>Observations</i>
W_2O_3	Tiada perubahan <i>No changes</i>
XO	Larut membentuk larutan tak berwarna <i>Dissolves to form a colourless solution</i>
Y_2O	Larut membentuk larutan tak berwarna <i>Dissolves to form a colourless solution</i>

Apakah susunan yang betul mengikut pengurangan nombor proton unsur-unsur itu?

What is the correct arrangement in decreasing proton number of the elements?

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

- 38 Suatu sel elektrokimia terdiri daripada sel-sel setengah yang berikut.
An Electrochemical cell is made up of the following half cells.

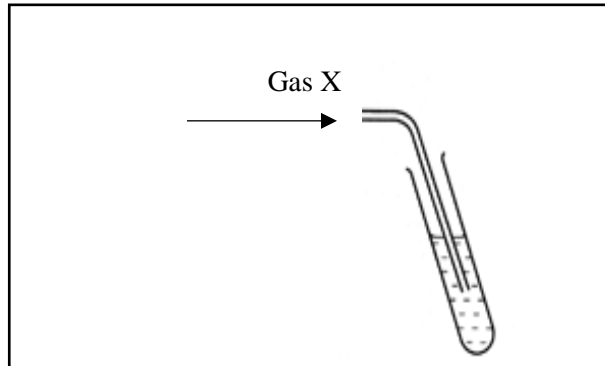
Sel setengah Half cells	E^0
$\text{Ni}^{2+} / \text{Ni}$	-0.25
$\text{Fe}^{2+} / \text{Fe}$	-0.44

Pernyataan yang manakah benar berdasarkan jadual di atas ?
Which statement is true based on the above table ?

- A Pengoksidaan berlaku di elektrod Ni
Oxidation occurs at the Ni electrode
- B Pengoksidaan berlaku di elektrod Fe
Oxidation occurs at the Fe electrode
- C Ni bertindak sebagai agen penurunan
Ni act as an reducing agent
- D Fe bertindak sebagai agen pengoksidaan
Fe act as a oxidising agent

- 39 Rajah di bawah menunjukkan Gas X dialirkan ke dalam air suling. Larutan yang dihasilkan menukarkan warna kertas litmus biru kepada merah.

Diagram below shows Gas X is bubbled into distilled water. The solution obtained changes blue litmus paper to red.



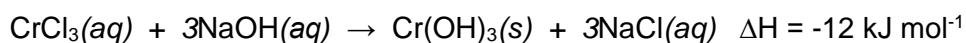
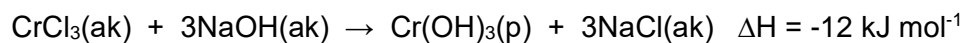
Gas X ialah...

Gas X could be...

- A Ammonia
Ammonia
- B Sulphur dioxide
Sulfur dioksida
- C Carbon monoxide
Karbon monoksida
- D Nitrogen monoxide
Nitrogen monoksida

- 40 Ion kromium(III) yang dimendakkan oleh larutan natrium hidroksida membentuk kromium(III) hidroksida.

Chromium (III) ions precipitated by sodium hydroxide solution form chromium (III) hydroxide.



Berapakah isi padu larutan natrium hidroksida 1.0 mol dm^{-3} yang perlu digunakan untuk tindak balas menghasilkan 1.2 kJ haba?

What is the volume of 1.0 mol dm^{-3} sodium hydroxide solution that should be used for the reaction to produce 1.2 kJ of heat?

- A 25 cm^3
- B 50 cm^3
- C 75 cm^3
- D 100 cm^3

KERTAS SOALAN TAMAT

THE END OF QUESTION PAPERS.