

Kertas 2

[100 markah/marks]

(2½ jam/hours)

Bahagian A Section A [60 markah/marks]

- 1 Rajah 1 menunjukkan senarai polimer. Polimer boleh dikelaskan berdasarkan sumbernya iaitu semula jadi dan sintetik.

Diagram 1 shows a list of polymers. Polymers can be classified based on their resources which are natural and synthetic.

• Selulosa <i>Cellulose</i>	• Protein <i>Protein</i>
• Kanji <i>Starch</i>	• Polivinil klorida <i>Polyvinyl chloride</i>
• Polistirena <i>Polystyrene</i>	

Rajah 1 Diagram 1

- (a) Namakan polimer semula jadi dari senarai dalam Rajah 1.

Name natural polymers from the list in Diagram 1.

[1 markah/mark]

- (b) Selain sumber, nyatakan dua cara lain untuk mengelaskan polimer.

Other than sources, state two other ways of classifying polymers.

[2 markah/marks]

- (c) Apakah monomer bagi polistirena?

What is the monomer for polystyrene?

[1 markah/mark]

- (d) Polivinil klorida terbentuk melalui pempolimeran monomernya. Namakan jenis pempolimeran ini.

Polyvinyl chloride is formed from the polymerisation of its monomers. Name the type of polymerisation.

[1 markah/mark]

- 2 Rajah 2 menunjukkan sebotol minyak masak dan lampu neon.

Diagram 2 shows a bottle of cooking oil and a neon lamp.



Rajah 2 Diagram 2

LATIH TUBI KIMIA FORECAST 3 K2 (Q1-Q4)

- (a) Nyatakan jenis zarah dalam minyak dan neon.

State the type of particles in the oil and neon.

[2 markah/marks]

- (b) Mengapakah neon wujud sebagai monoatom?

Why does neon exist as monoatoms?

[1 markah/mark]

- (c) Nyatakan keadaan fizikal minyak pada suhu bilik.

State the physical condition of oil at room temperature.

[1 markah/mark]

- (d) Ibu Nadia gemar menggunakan jus lemon untuk menambah rasa masam dalam masakannya. Apakah zarah dalam jus lemon yang memberikannya rasa masam?

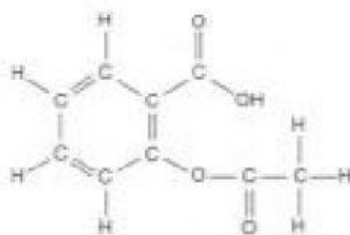
ADAM

Nadia's mother likes to use lemon juice to add a sour taste to her cooking. What are the particles in lemon juice that give it a sour taste?

[1 markah/mark]

- 3 Rajah 3.1 menunjukkan formula struktur aspirin.

Diagram 3.1 shows the structural formula of aspirin.



Rajah 3.1 Diagram 3.1

- (a) Apakah maksud formula molekul?
What is meant by a molecular formula?

[1 markah/mark]

- (b) Berapakah jisim molar aspirin?
What is the molecular mass of aspirin?
[Jisim atom relatif/Relative atomic mass: H = 1, C = 12, O = 16]

[2 markah/marks]

LATIH TUBI KIMIA FORECAST 3 K2 (Q1-Q4)

(c) Rajah 3.2 menunjukkan sebahagian daripada struktur aspirin.

Diagram 3.2 shows part of the structure of aspirin.



Rajah 3.2 Diagram 3.2

(i) Namakan bahagian yang ditunjukkan dalam Rajah 3.2.

Name the part shown in Diagram 3.2.

[1 markah/mark]

(ii) Kewujudan bahagian ini menyebabkan aspirin tidak sesuai diambil oleh kanak-kanak. Jelaskan.

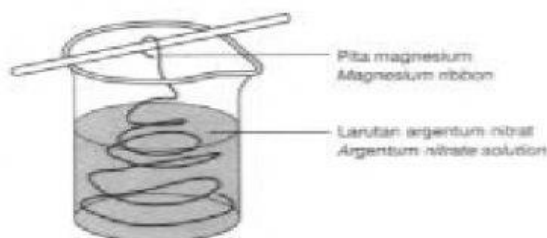
The existence of this part has made aspirin not suitable to be taken by children. Explain.

[2 markah/marks]

4 Rajah 4 menunjukkan sejalur pita magnesium yang digantung dalam larutan argentum nitrat.

Diagram 4 shows a strip of magnesium ribbon suspended in a solution of argentum nitrate.

[Nilai E°/E° value: $\text{Mg} = -2.37$, $\text{Ag} = +0.80$]



Rajah 4 Diagram 4

(a) Bandingkan keelektronegatifan antara magnesium dengan argentum. Jelaskan jawapan anda.

Compare the electronegativity between magnesium and argentum. Explain your answer.

[2 markah/marks]

(b) Apakah pemerhatian yang dapat dilihat pada pita magnesium?

What is the observation that can be seen on the magnesium ribbon?

[1 markah/mark]

(c) Namakan agen penurunan dalam Rajah 4.

Name the reducing agent in Diagram 4.

[1 markah/mark]

(d) Tuliskan persamaan setengah bagi tindak balas di (c).

Write the half-equation for the reaction in (c).

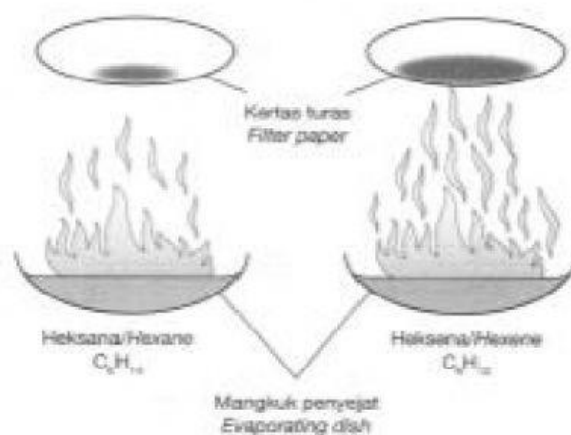
[2 markah/marks]

(e) Apakah bacaan voltan bagi sel votan daripada magnesium dan argentum?

What is the voltage reading of a voltaic cell of magnesium and argentum?

[1 markah/mark]

- 5 Rajah 5 menunjukkan perbandingan jelaga yang dihasilkan melalui pembakaran heksana dan heksena.
Diagram 5 shows the difference in the amount of soot produced from the combustion of hexane and hexene.



Rajah 5 Diagram 5

- (a) Berdasarkan Rajah 5, bandingkan pemerhatian antara heksana dan heksena.
Based on Diagram 5, compare the observations between hexane and hexene.

[1 markah/mark]

- (b) Terangkan jawapan anda di (a) berdasarkan peratus karbon per molekul.
Explain your answer in (a) based on the percentage of carbon per molecule.
[Jisim atom relatif/Relative atomic mass: H = 1, C = 12, O = 16]

- (c) Heksana boleh disediakan daripada heksena.
Hexane can be prepared from hexene.

- (i) Namakan mangkin yang boleh digunakan dalam tindak balas ini.
Name a catalyst that can be used in this reaction.

[1 markah/mark]

- (ii) Tuliskan persamaan tindak balas untuk mewakili tindak balas ini.
Write a reaction equation that represents this reaction.

[2 markah/marks]

- (d) Namakan tindak balas untuk menukarkan heksena menjadi heksanol.
Name the reaction to convert hexene to hexanol.

[1 markah/mark]