

- 3 Diagram 3 shows the pH value of acid in beaker I, II and III.

Rajah 3 menunjukkan nilai pH bagi asid di dalam bikar I, II dan III

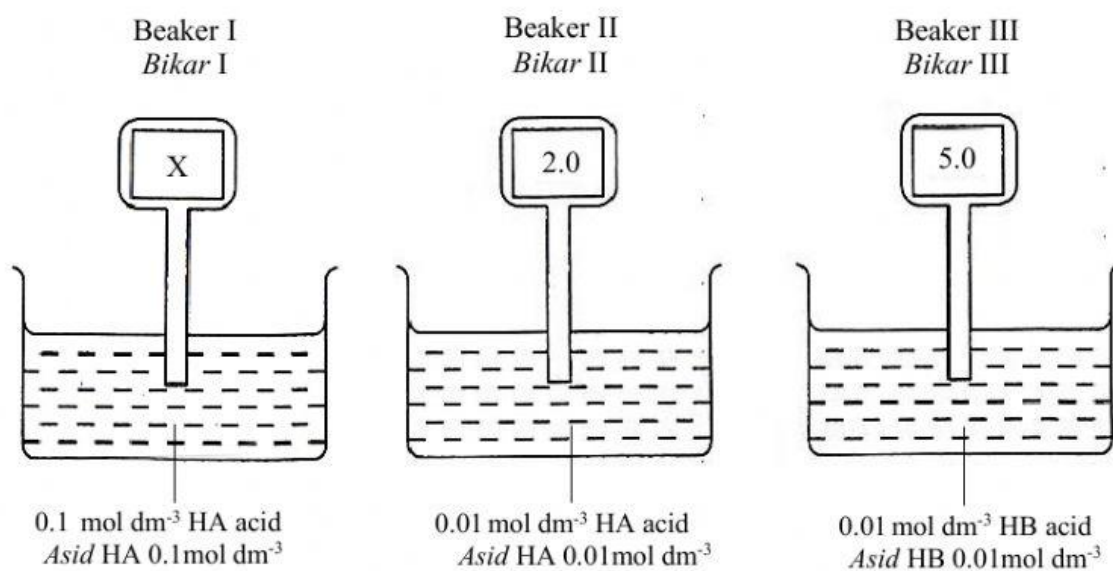


Diagram 3/ *Rajah 3*

- (a) State the meaning of acid.
Nyatakan maksud bagi asid.

.....
[1 mark/ 1 markah]

- (b) What is the value of X for HA acid in beaker I.
Apakah nilai bagi X pada asid HA dalam bikar I.

.....
[1 mark/ 1 markah]

- (c) HA acid and HB acid are monoprotic acid.
Asid HA dan asid HB adalah asid monoprotik.

- (i) What is meant by monoprotic acid.
Apakah yang dimaksudkan dengan asid monoprotik.

.....
[1 mark/ 1 markah]

- (ii) Suggest the name of HA acid and HB acid.

Cadangkan nama bagi asid HA dan asid HB.

HA acid :

Asid HA

HB acid :

Asid HB

[2 marks/ 2 markah]

- (iii) Explain why the pH value of HB acid in beaker III is higher than HA acid in beaker II.

Terangkan mengapa nilai pH bagi asid HB dalam bikar III adalah lebih tinggi berbanding asid HA dalam bikar II.

.....

.....

[2 marks/ 2 markah]

- (d) Chemical reaction below shows the reaction between HA acid and sodium hydroxide solution.

Persamaan kimia di bawah menunjukkan tindak balas di antara asid HA dan natrium hidroksida.



20 cm³ of HA acid in beaker I is needed to neutralise 25 cm³ of sodium hydroxide solution.

Calculate the concentration of sodium hydroxide used.

20 cm³ asid HA di dalam bikar I diperlukan untuk meneutralkan 25 cm³ larutan natrium hidroksida. Hitungkan kepekatan natrium hidroksida yang digunakan.

[3 marks/ 3 markah]

- 8 (a) Diagram 8.1 shows two methods of preparing salts in the laboratory.
Rajah 8.1 menunjukkan dua kaedah penyediaan garam-garam di dalam makmal.

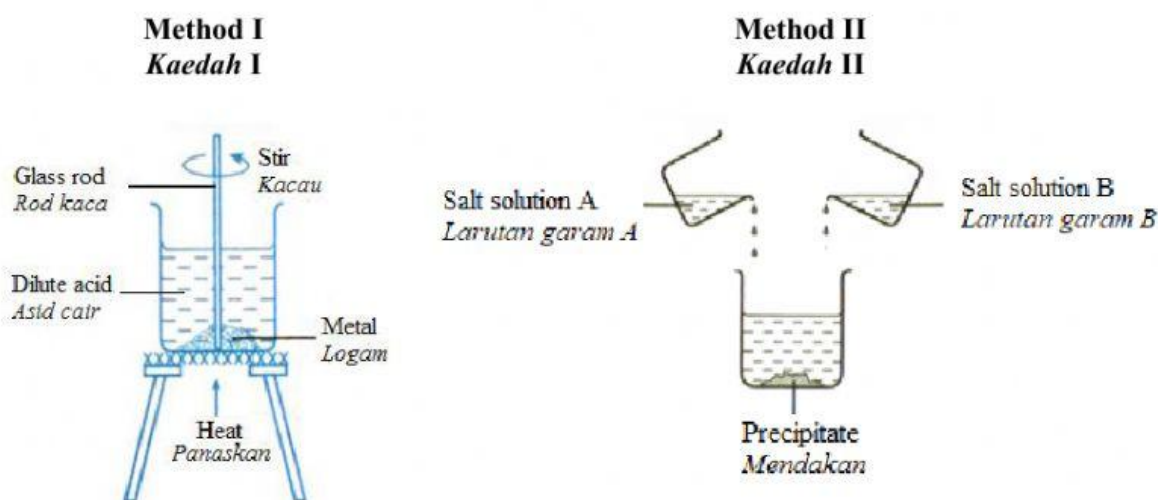


Diagram 8.1
Rajah 8.1

The following are three examples of salts that can be prepared using either Method I or Method II.

Berikut adalah tiga contoh garam yang boleh disediakan sama ada menggunakan Kaedah I atau Kaedah II.

Barium sulphate, BaSO_4 <i>Barium sulfat, BaSO_4</i>	Copper(II) nitrate, $\text{Cu}(\text{NO}_3)_2$ <i>Kuprum(II) nitrat, $\text{Cu}(\text{NO}_3)_2$</i>	Magnesium chloride, MgCl_2 <i>Magnesium klorida, MgCl_2</i>
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- (i) From the given examples, identify the salts that can be prepared by using the methods as shown in Diagram 8.1.
Daripada contoh-contoh yang diberikan, kenalpasti garam-garam yang boleh disediakan melalui kaedah-kaedah seperti di dalam Rajah 8.1.

[2 marks]
 [2 markah]

- (ii) State the reactants for the preparation of salt in Method II.
Nyatakan bahan tindak balas bagi penyediaan garam dalam Kaedah II.

[2 marks]
 [2 markah]

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- 6 Diagram 6 shows a flow chart of zinc salts.
Rajah 6 menunjukkan carta alir bagi garam zink.

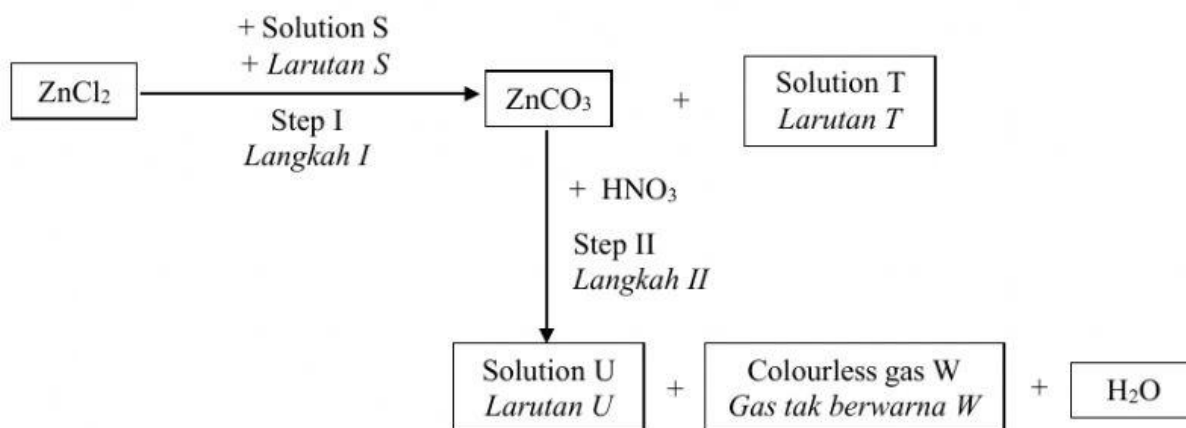


Diagram 6 / Rajah 6

- (a) State the solubility zinc chloride salt.
Nyatakan keterlarutan garam zink klorida.

.....
 [1 mark / 1 markah]

- (b) Based on Diagram 6,
Berdasarkan Rajah 6,

- (i) identify.
kenal pasti

Solution S :
Larutan S

Solution U :
Larutan U

[2 marks / 2 markah]

- (ii) State the type of reaction for Step I.
Nyatakan jenis tindak balas bagi Langkah I.

.....
 [1 mark / 1 markah]

- (iii) Write a balanced chemical equation for the reaction occur in Step I.

Tulis persamaan kimia seimbang bagi tindak balas yang berlaku di Langkah I.

.....
[2 marks / 2 markah]

- (iv) What is the mass of ZnCO_3 produced when 0.1 mole ZnCl_2 reacts with Solution S?

[Molar mass $\text{ZnCO}_3 = 125 \text{ gmol}^{-1}$]

Apakah jisim ZnCO_3 yang dihasilkan apabila 0.1 mol ZnCl_2 bertindak balas dengan Larutan S

[Jisim Molar $\text{ZnCO}_3 = 125 \text{ gmol}^{-1}$]

[2 marks / 2 markah]

- (c) Draw a labelled diagram of apparatus set up to carry out experiment to confirm the presence of colourless gas W.

Lukis gambar rajah berlabel susunan radas untuk menjalankan eksperimen bagi mengesahkan kehadiran gas tak berwarna W.

[2 marks / 3 markah]

- (c) Diagram 8.3 shows the reaction scheme of white solid W.
Rajah 8.3 menunjukkan tindak balas bagi pepejal putih W.

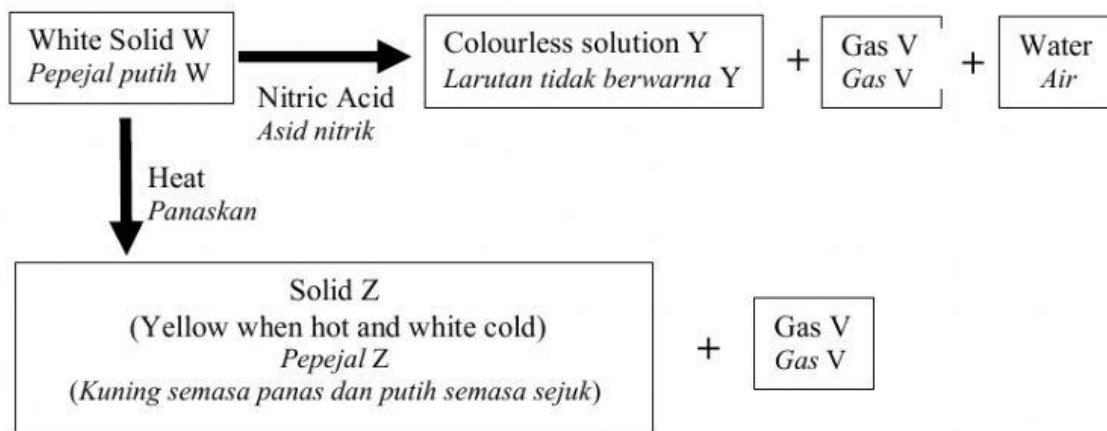


Diagram 8.3
Rajah 8.3

Based on diagram 8.3
Berdasarkan Rajah 8.3

- (i) Identify substances V, W, Y and Z
Kenalpasti bahan V, W, Y, dan Z

[4 marks]
[4 markah]

- (ii) Describe a chemical test to verify the cation and anion in solution Y.
Huraikan ujian kimia untuk mengesahkan kehadiran kation dan anion di dalam larutan Y.

[6 marks]
[6 markah]

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