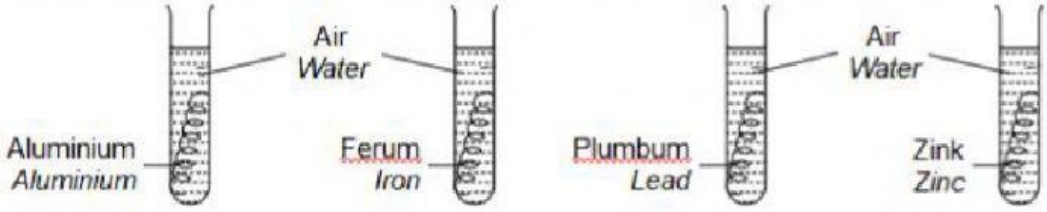
Apakah nombor pengoksidaan bagi oksigen dalam hidrogen peroksida, H_2O_2?
What is the oxidation number of oxygen in hydrogen peroxide, H_2O_2?

A -2
B -1
C 0
D +1

Rajah 1 menunjukkan empat tabung uji yang mengandungi logam yang berbeza direndam di dalam air.
Diagram 1 shows four test tubes that contain different metals immersed in water.



Rajah 1 / *Diagram 1*

Buku Teks Kimia Tingkatan 5 m/s 53

Logam manakah yang paling cepat terkakis.
Which metal is the fastest to corrode?

A Aluminium
Aluminium
B Ferum
Iron
C Plumbum
Lead
D Zink
Zinc

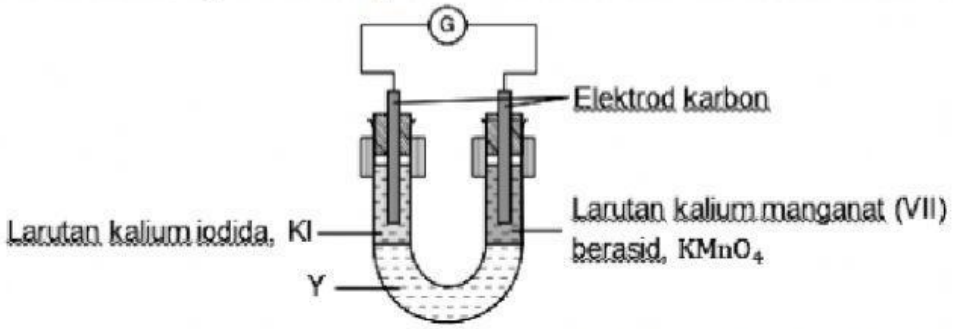
Bahan manakah yang digunakan untuk menukarkan ion ferum (II) kepada ion ferum (III)?
Which substance is used to change iron (II) ion to iron (III) ion?

A Zink
Zinc
B Sulfur dioksida
Sulphur dioxide
C Air bromin
Bromine water
D Larutan kalium iodida
Potassium iodide solution

LIVEWORKSHEETS

Rajah 3 menunjukkan susunan radas bagi pemindahan elektron pada suatu jarak dalam tiub-U.

Diagram 3 shows the apparatus set-up for the transfer of electrons at a distance in U-tube.



(Buku Teks Kimia Tingkatan 5, m/s 7)

Rajah 3/ *Diagram 3*

Nyatakan fungsi bagi Y.

State the function of Y.

A Membenarkan pemindahan elektron dari terminal negatif kepada terminal positif.
Allows the transfer of electrons from negative terminal to positive terminal.

B Menerima elektron dari larutan kalium iodida.
Accepts electrons from potassium iodide solution.

C Bertindak sebagai agen pengoksidaan.
Act as an oxidizing agent.

D Membenarkan pengaliran ion dari kedua-dua larutan.
Allows the flow of ions from both solutions.

Berdasarkan nilai E° berikut, susun ion berikut dalam tertib menaik kekuatan agen pengoksidaan.

Based on the E° values, arrange those ions in ascending order of strength as oxidizing agents.

Tindak balas sel setengah	E°
$Ni^{2+}(ak) + 2e^- \rightleftharpoons Ni(p)$	-0.25
$Ca^{2+}(ak) + 2e^- \rightleftharpoons Ca(p)$	-2.87
$Sn^{2+}(ak) + 2e^- \rightleftharpoons Sn(p)$	-0.14

A Ni^{2+}, Ca^{2+}, Sn^{2+}
B Ca^{2+}, Ni^{2+}, Sn^{2+}
C Sn^{2+}, Ca^{2+}, Ni^{2+}
D Ni^{2+}, Sn^{2+}, Ca^{2+}

Persamaan kimia berikut merupakan suatu tindak balas redoks.

The following chemical equation is a redox reaction.

$$Mg + 2HCl \rightarrow MgCl_2 + H_2$$

Apakah perubahan nombor pengoksidaan magnesium?

What is the change in oxidation number of magnesium?

A 0 → +2
B +2 → 0
C 0 → -2
D -2 → 0

LIVEWORKSHEETS

Persamaan ion berikut mewakili suatu tindak balas redoks.
The following ionic equation represents a redox reaction.

$$Zn + Cu^{2+} \rightarrow Zn^{2+} + Cu$$

Pernyataan manakah yang betul?
Which statement is correct?

A Ion kuprum (II) kehilangan elektron
Copper (II) ion losts electron

B Ion kuprum (II) dioksidakan
Copper (II) ion is oxidized

C Atom zink mengalami penurunan
Zinc atom undergoes reduction

D Atom zink merupakan agen penurunan
Zinc atom is a reduction agent

(a) Jadual 1 menunjukkan persamaan bagi dua tindak balas
Table 1 shows the equation of two reactions.

Tindak balas ***Reaction***	**Persamaan Kimia** ***Chemical Equation***
X	$FeSO_4 + Mg \rightarrow Fe + MgSO_4$
Y	$AgNO_3 + NaCl \rightarrow AgCl + NaNO_3$

Jadual 1/*Table 1*

Tentukan sama ada setiap tindak balas tersebut merupakan tindak balas redoks atau tidak. Terangkan jawapan anda berdasarkan perubahan nombor pengoksidaan.
Determine whether each reaction is a redox reaction or not. Explain your answer in terms of change of oxidation number.

LIVEWORKSHEETS