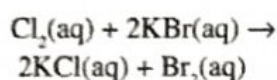


- 1) Acidified potassium dichromate(VI) solution is added into potassium iodide solution in a beaker. Which of the following represents the ionic equation for the redox reaction?

- A $\text{Cr}_2\text{O}_7^{2-}(\text{aq}) + 6\text{I}^-(\text{aq}) + 14\text{H}^+(\text{aq}) \rightarrow 2\text{Cr}^{3+}(\text{aq}) + 3\text{I}_2(\text{aq}) + 7\text{H}_2\text{O}(\text{l})$
 B $\text{Cr}_2\text{O}_7^{2-}(\text{aq}) + 2\text{I}^-(\text{aq}) + 14\text{H}^+(\text{aq}) \rightarrow 2\text{Cr}^{3+}(\text{aq}) + \text{I}_2(\text{aq}) + 7\text{H}_2\text{O}(\text{l})$
 C $\text{CrO}_4^{2-}(\text{aq}) + 6\text{I}^-(\text{aq}) + 12\text{H}^+(\text{aq}) \rightarrow \text{Cr}^{3+}(\text{aq}) + 3\text{I}_2(\text{aq}) + 6\text{H}_2\text{O}(\text{l})$
 D $\text{CrO}_4^{2-}(\text{aq}) + 2\text{I}^-(\text{aq}) + 14\text{H}^+(\text{aq}) \rightarrow \text{Cr}^{3+}(\text{aq}) + \text{I}_2(\text{aq}) + 7\text{H}_2\text{O}(\text{l})$

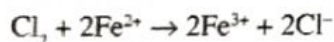
- 2) A redox reaction can be represented by the following equation.



What can be observed if chlorine is replace with iodine?

- A Purple gas is produced.
 B Colourless solution is produced.
 C No visible change.
 D Brown colour of iodine turns colourless.

- 3) The following equation represents a reaction between chlorine and iron(II) sulphate solution.



Which of the following is true about the reaction?

- A Iron(III) ion is oxidised.
 B Chlorine is reduced.
 C Chlorine is the reducing agent.
 D Iron(II) ion is the oxidising agent.

- 4) Diagram 6 shows a set up of apparatus to investigate a redox reaction.

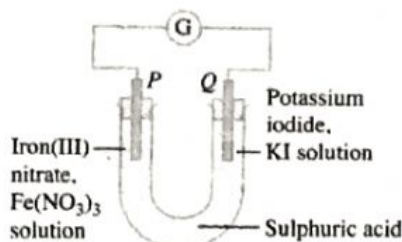


Diagram 6

Which of the following is true?

	Direction of the flow of electrons	Oxidation	Reduction
A	Q to P	P	Q
B	Q to P	Q	P
C	P to Q	P	Q
D	P to Q	Q	P

- 5) Diagram 7 shows a set up of apparatus to investigate a redox reaction involving transfer of electron at a distance.

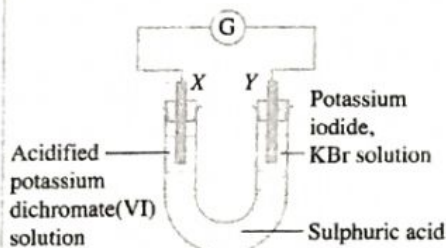


Diagram 7

What is observed at the electrode X and electrode Y?

	Electrode X	Electrode Y
A	Orange solution turns green	Colourless solution turns brown
B	Orange solution turns green	Brown solution turns colourless
C	Purple solution turns colourless	Colourless solution turns brown
D	Purple solution turns green	Brown solution turns colourless

Application

- 6) What is the oxidation number for manganese in MnO_4^{2-} ?
 A -2 C +6
 B -4 D +7
- 7) What is the oxidation number for chromium in $\text{Cr}_2\text{O}_7^{2-}$?
 A +2 C -2
 B +6 D -3
- 8) Diagram 8 shows a set up of apparatus to investigate a redox reaction involving transfer of electron at a distance.

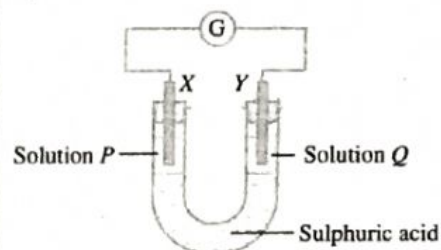


Diagram 8

What are the solution P and solution Q should be used so that the electrons are flow from electrode X to electrode Y?

	Solution P	Solution Q
A	Bromine water	Iron(II) sulphate solution
B	Potassium bromide solution	Chlorine water
C	Acidified potassium manganate(VII) solution	Potassium iodide solution
D	Acidified potassium dichromate(VI) solution	Bromine water

- 9) Diagram 9 shows a set-up of apparatus to investigate a redox reaction involving transfer of electron at a distance.

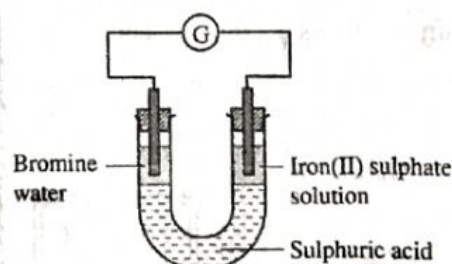


Diagram 9

Which of the following represents the ionic equation