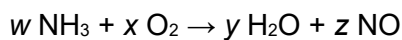


Q1.

Ammonia is oxidised as shown.



Which whole number values for w , x , y and z balance the equation?

	w	x	y	z	
A	2	3	3	2	<input type="radio"/>
B	4	7	4	4	<input type="radio"/>
C	4	5	6	4	<input type="radio"/>
D	6	7	9	6	<input type="radio"/>

(Total 1 mark)

Q2.

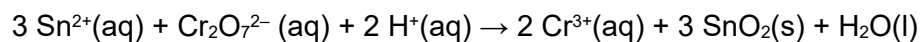
In which species is chlorine in its highest oxidation state?

- A** ClF_2^- ☐
- B** ClO_4^- ☐
- C** ClO_2 ☐
- D** ClF_3 ☐

(Total 1 mark)

Q3.

Which statement about this redox reaction is correct?

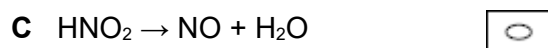
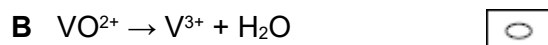
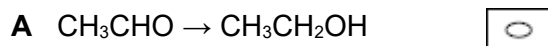


- A** Sn^{2+} is the oxidising agent and it gains electrons. ☐
- B** Sn^{2+} is the reducing agent and it gains electrons. ☐
- C** $\text{Cr}_2\text{O}_7^{2-}$ is the oxidising agent and it gains electrons. ☐
- D** $\text{Cr}_2\text{O}_7^{2-}$ is the reducing agent and it gains electrons. ☐

(Total 1 mark)

Q4.

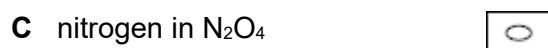
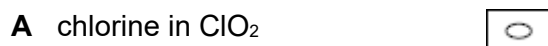
Which incomplete half-equation is balanced by adding two H^+ ions and one electron to the left-hand side?



(Total 1 mark)

Q5.

In which oxide is the named element in its highest oxidation state?



(Total 1 mark)

Q6.

In which of these substances is oxygen in the highest oxidation state?



(Total 1 mark)

Q7.

Which of these oxidation states is correct?

- A** Chlorine in Cl_2 is -1 ☐
- B** Chromium in $\text{K}_2\text{Cr}_2\text{O}_7$ is $+7$ ☐
- C** Fluorine in F_2O is -1 ☐
- D** Hydrogen in NaH is $+1$ ☐

(Total 1 mark)