Electrochemical Series Exercise 2

Answer all questions based on the table below:

Half-cell reaction	E^o /V
$W^{2+}(aq) + 2e^- \rightleftharpoons W(s)$	-2.38
$X^{3+}(aq) + 3e^- \rightleftharpoons X(s)$	-1.66
$Y^{2+}(aq) + 2e^- \rightleftharpoons Y(s)$	+0.34
$Z^+(aq) + e^- \rightleftharpoons Z(s)$	+0.80
$Fe^{2+}(aq) + 2e^- \rightleftharpoons Fe(s)$	-0.44
$O_2(g) + 2H_2O(l) + 4e^- \rightleftharpoons 4OH^-(aq)$	+0.40

1. State the strongest reducing agent. W, X, Y, Z

2. State the strongest oxidizing agent. W^{2+}, X^{3+}, Y^{2+}, Z^+

3. Is Fe^{2+} stronger oxidizing agent than X^{3+}? Yes, No

4. Which species causes iron to rust faster? W^{2+}, X^{3+}, Y^{2+}

5. Which species will prevent iron from rusting? X, Y, Z

6. Can X^{3+} oxidise W? Yes, No

7. Can X reduces Y^{2+}?

8. What is the emf of the cell between electrochemical cell of Fe/W

9. What is the emf of the cell between electrochemical cell of X/Z?

10. Which of the species is stable toward oxidation in air and water? W, X, Y, Z