

- 1) Why does pure water conduct electricity?
- 2) Is pure water a good or poor conductor of electricity? Explain why?
- 3) Does an aqueous solution of a very strong acid contain any OH^- ions? How so?
- 4) What determines whether a solution is acidic, neutral or basic?
- 5) If the $[\text{H}^+] = 1.0 \times 10^{-9} \text{ M}$, what is $[\text{OH}^-]$ in the same solution? What is the pH of this solution? Is it acidic or basic?

Base your answers to questions 77 through 79 on the information below.

A truck carrying concentrated nitric acid overturns and spills its contents. The acid drains into a nearby pond. The pH of the pond water was 8.0 before the spill. After the spill, the pond water is 1,000 times more acidic.

- 77 Name an ion in the pond water that has increased in concentration due to this spill. [1]
- 78 What is the new pH of the pond water after the spill? [1]
- 79 What color would bromthymol blue be at this new pH? [1]