

Marks
2

- The formulation of a pharmaceutical to be delivered by injection includes sodium chloride to make it isotonic with blood plasma. Why is this necessary?

3

- A solution of volume 2.00 L was prepared by mixing equal volumes of nitric acid (0.10 M) and sulfuric acid (0.10 M). To this, sodium hydroxide (10.0 g) was added. Assuming no volume change, what is the pH of the final solution?

pH =

3

- Acetic acid (100 mL, 0.20 M) is mixed with solid sodium hydroxide (0.010 mol). Calculate the final pH of the solution. pK_a of acetic acid = 4.76

pH =