Acid Strength and Conductivity Worksheet

Scoring guide · one credit per question · review written work against each rubric

Acid Strength and Conductivity

Question 1

Choice (1)

At the same starting concentration, the stronger acid ionizes to a greater extent.

Question 2

The dissolved hydronium and negative ions can move in an electric field and carry charge.

Question 3

Choice (1)

Concentration is amount per unit volume. Strength reflects the extent of proton transfer under specified conditions.

Question 4

The more concentrated sample can supply more ions even if a smaller fraction ionizes. Ion mobility and other conditions can also affect conductivity.

Comparing Acid Samples

Question 5

Choice (1)

P shows 95 of 100 starting particles ionized, the largest fraction.

Question 6

25 out of 100 ionized. (25 ÷ 100) × 100 percent = 25 percent.

Question 7

Choice (4)

Of 100 starting particles, 5 ionized. The remaining 95 are un-ionized.

Question 8

P ionizes 95 particles compared with 25 in Q. Each ionized acid particle makes a hydronium and a negative ion, so P has more mobile ions at the same volume.