Strong, Weak, or Non-Electrolyte?

For the purposes of this course, use these criteria to determine if a substance is a strong, weak, or non-electrolyte when dissolved in water (aqueous solution):

1. All ionic compounds are strong electrolytes, because they mostly break up into ions as they dissolve in water. Even insoluble ionic compounds (e.g., AgCl, $PbSO_4$, $CaCO_3$) are strong electrolytes, because the small amounts that do dissolve in water do so principally as ions; i.e., there is virtually no undissociated form of the compound in solution.

2. Molecular compounds may be non-electrolytes, weak electrolytes, or strong electrolytes, depending on whether they dissolve without ion formation, a little ion formation, or mostly ion formation, respectively. Examples:

Molecular Compound	Electrolyte Type	Species in Solution