

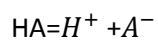
Answer on Question 82715 in General Chemistry

$$C(\text{HA})=0.106 \text{ M}$$

$$K_a=0.16$$

$$\text{.pH=?}$$

We write the dissociation equation of acid



$$K_a=\frac{[\text{H}^+]\times[\text{A}^-]}{[\text{HA}]}$$

$$\text{We can see } [\text{H}^+] = [\text{A}^-]$$

$$K_a=\frac{[\text{H}^+]^2}{[\text{HA}]}$$
 from which  $[\text{H}^+]=\sqrt{K_a \times [\text{HA}]} =\sqrt{0.16 \times 0.106} =\sqrt{0.01696}=0.13$

$$\text{.pH} = -\lg\{\text{H}^+\} = -\lg 0.13 = 0.885$$

Answer provided by [www.AssignmentExpert.com](http://www.AssignmentExpert.com)