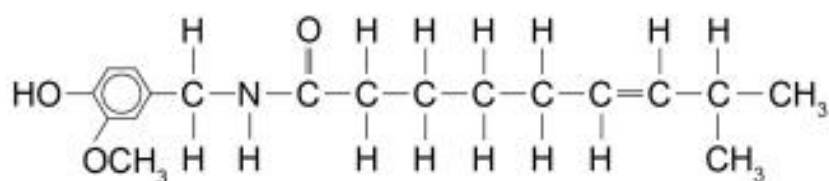


Question 30**(5 marks)**

Capsaicin, $C_{18}H_{27}NO_3$, is the compound that makes chillies taste hot on the tongue. The molecular structure of capsaicin is shown below.



Drinking milk is effective in reducing the 'hotness' of chillies, by dissolving the capsaicin due to the presence of fats in the milk and removing it from the tongue. Capsaicin does not dissolve in water, and so drinking water does not reduce the effect of the compound when eaten. Explain this observation, using your understanding of intermolecular forces.
