The resonant frequency for a particular nucleus at a specific position within a molecule is equal to the fundamental resonant frequency of that isotope (e.g., 50.000 MHz for $^{13}$C) times a factor which is slightly greater than 1.0 due to the chemical shift:

$$\text{resonant frequency} = v_0 \left( 1.0 + \delta \times 10^{-6} \right)$$

For example, a $^{13}$C nucleus at the C-4 position of cycloheptanone ($\delta$ 23.2 ppm) resonates at a frequency of:

$$50.000 \text{ MHz} \left( 1.0 + 23.2 \times 10^{-6} \right) = 50.000 \times (1.0000232) = 50,001,160 \text{ Hz}$$