In amplitude modulation, sinusoidal carrier frequency used is denoted by ω_c and the signal frequency is denoted by ω_m. The bandwidth ($\Delta\omega_m$) of the signal is such that $\Delta\omega_m < \omega_c$. Which of the following frequencies is not contained in the modulated wave? *[2017]*

○ $\omega_m + \omega_c$

○ $\omega_c - \omega_m$

○ ω_m

○ ω_c

Modulated carrier wave contains frequency ω_c and $\omega_c \pm \omega_m$