Consider a trip from $O$ to $A$, to $B$ and then to $C$, as described by the vector diagram. The resultant displacement vector is $\mathbf{R} = \overrightarrow{OA} + \overrightarrow{AB} + \overrightarrow{BC}$, where the vector $\overrightarrow{B}$ is parallel to the $x$-axis.

The $x$-component of the vector $\mathbf{R}$ is given by

A) $R_x = a \cos \alpha - b \sin \beta - c$.

B) $R_x = a \cos \alpha + b \cos \beta + c$.

C) $R_x = a \cos \alpha + b \cos \beta - c$.

From inspection on the vector diagram, Answer A.