**14** Two isolated planets A and B have masses $M_A$ and $M_B$ respectively. Their centres are a distance $D$ apart and they rotate with a uniform angular velocity $\omega$ about an axis which is perpendicular to the line joining their centres.

If the distance of planet A from the axis of rotation is $R$, which of the following does not give the expression for the centripetal force on planet B?

**A** $\dfrac{GM_AM_B}{D^2}$ **B** $\dfrac{GM_AM_B}{(D-R)^2}$ **C** $M_AR\omega^2$ **D** $M_B(D-R)\omega^2$