Concept Question 8-1: For the half-band filter, why are the zeros equally spaced on the unit circle?

The zeros cause the rejection of discrete-time frequencies in the range $\pi/2 < \boldsymbol{\Omega} < 3\pi/2$, which in the z plane is $\mathbf{z} = e^{j\Omega}$ for $\pi/2 < \boldsymbol{\Omega} < 3\pi/2$.

Equal spacing of these zeros is the best way to reject all discrete-time frequencies in this range.