The image shows a graph titled "Frequency Response of IIR Filter For $a=1$, $q=0.5$". The graph plots the frequency response of an IIR filter with normalized frequency on the x-axis and $H(f)$ in dB on the y-axis. The graph compares the designed response with the theoretical response, indicated by blue and red lines, respectively. The graph shows a sharp drop at the normalized frequency of $0.4$, followed by a smoother decay towards higher frequencies.