In class I showed why you can’t have TM\textsubscript{m0} or TM\textsubscript{0n} modes. Using a similar approach, show why you can have TE\textsubscript{m0} and TE\textsubscript{0n} modes. Make a simple sketch (i.e., an \textit{xyz} coordinate system with labeled arrows showing the non-zero components of the fields).