The low-frequency small-signal model around a BJT is shown in the figure below. The device small-
signal parameters are: $r_\pi$, $g_m$, $r_o$, and $\beta = g_m r_\pi$. Find expressions for the incremental resistances $R_{\text{base}}$, $R_{\text{collector}}$, and $R_{\text{emitter}}$ in terms of $R_B$, $R_C$, $R_E$, and the device small-signal parameters.