

Short Quiz - 5

EE-407

Set A

Name: _____

ID No: _____

Q.1 (a) Design a quarter wavelength microstrip section that will match a load $Z_L = 9 - j5 \Omega$ with a $Z_0 = 50 \Omega$ transmission line. Assume the available microstrip have $h=1.5 \text{ mm}$, $\epsilon_r=2.2$, $\mu_r=1$, $t/h=0$. (Given: $\epsilon_0=8.854 \times 10^{-12}$, $\mu_0=4\pi \times 10^{-7}$)

(b) If the propagating signal has a frequency of 5 GHz, what modification needs to be integrated in the design (if any).