

RFCD QUIZ

1. Use Smith Chart to find (a) load reflection coefficient (b) input impedance (c) VSWR for following circuit (Fig1): [6]

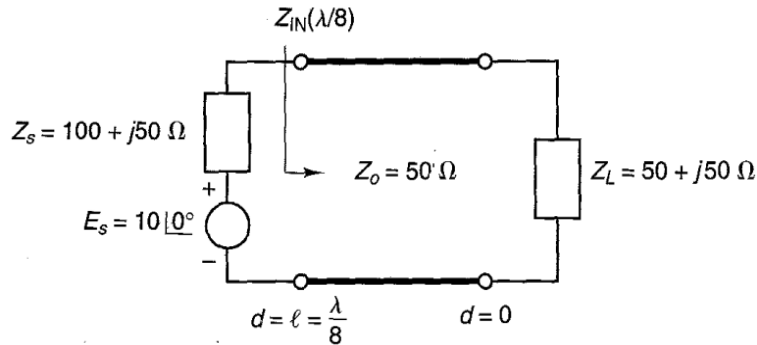


Figure 1

2. Hence or otherwise, find $V(\lambda/8)$, $I(\lambda/8)$, $P_{in}(\lambda/8)$, $V(0)$, $I(0)$, $P_{in}(0)$ in Fig.1. [20]

3. Find Input Impedance(Fig2): [6]

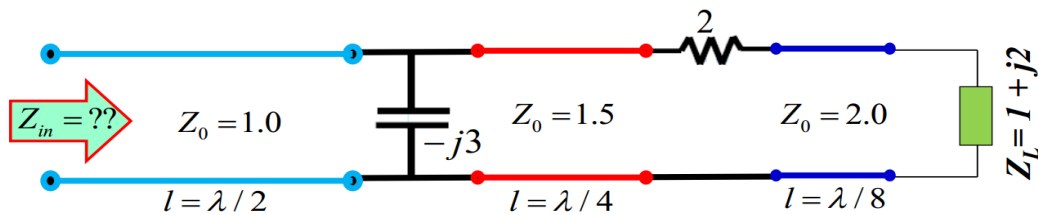


Figure 2

4. (a) what happens to the width of microstrip line with the decrease in ϵ_r for a given value of characteristic impedance and the substrate height? [4]

- (b) A certain transmission line (T-line) is known to obey following relationship:

$$Z_{in}(d) = Z_0 \frac{Z_L + jZ_0 \tan(\beta d)}{Z_0 + jZ_L \tan(\beta d)}$$

- You have already learned in RFCD how to realize capacitor and Inductor using this type of T-line. Can you suggest a way to realize a resistor using such a T-line? Explain. [4]