

MIDTERM

Upload Solutions to Ninova - Due Date: 23:59 – Saturday Morning – May 31 2019

1)

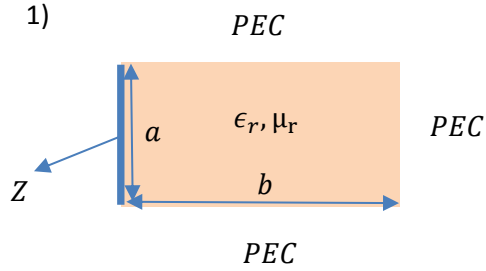


Figure 1

Derive the TE and TM modes for the waveguide given in Figure 2. Note that left side of the waveguide is ended with an impedance surface with impedance of  $Z$ .

2)

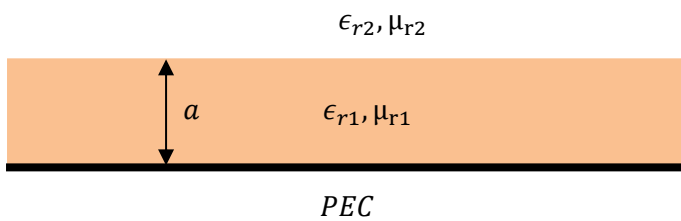


Figure 2

Derive the TE and TM modes for the grounded dielectric slab given in Figure 3. (Hint: You can search "Grounded Dielectric Slab" from books, or from internet.)