

Field and Waves I – Fall 2000

Preparation Assignment Due – November 8, 2000

1. Prove that you can find the characteristic impedance of a lossless transmission line by measuring the input impedance when the line is open circuited and when it is short circuited.

2. What are the SI units of
 - a) attenuation constant
 - b) phase constant
 - c) reflection coefficient
 - d) standing wave ratio

Preparation Assignment Due - November 9, 2000

1. If we have a break in the outer conductor of a co-ax so that we in effect have a large series resistance, what do we expect to see reflected if we excite the cable with a short pulse?

2. If we have a fault in the dielectric of a co-ax cable and produce a large shunt conductance, what do we expect to be reflected if we excite the cable with a short pulse?

3. If we have a large series inductor in the middle of the line, what do we expect to be reflected if we excite the cable with a short pulse?