

ELEG 5693 Assignment # 4

1. A wireless system operates at 1800 MHz with symbol period $30 \mu\text{s}$. The speed of the mobile station is 120 km/hr. The wireless channel has a power delay profile described in the following table.
 - (a) Find the maximum Doppler spread and coherence time of the channel.
 - (b) Find the maximum delay spread, mean delay spread, and rms delay spread.
 - (c) Find the coherence bandwidth of the channel.
 - (d) Is this fast fading or slow fading?
 - (e) Is this flat fading or frequency selective fading?

Delay (μs)	0	1.6	5.0
Relative power	0.2	0.5	0.3