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Digital Assignment- II

Programme	:	**B.Tech (ECE)**	Semester	:	**WS 2022-23**
Course	:	**Wireless and Mobile Communication**	Code	:	**BECE307L**
			Class Nbr	:	
Faculty	:	**Dr. Hemanth C**	Slot	:	**A1**

1. For the power delay profiles shown in Figure 1, estimate the mean delay, rms delay spread 90% correlation and 50% correlation coherence bandwidths.

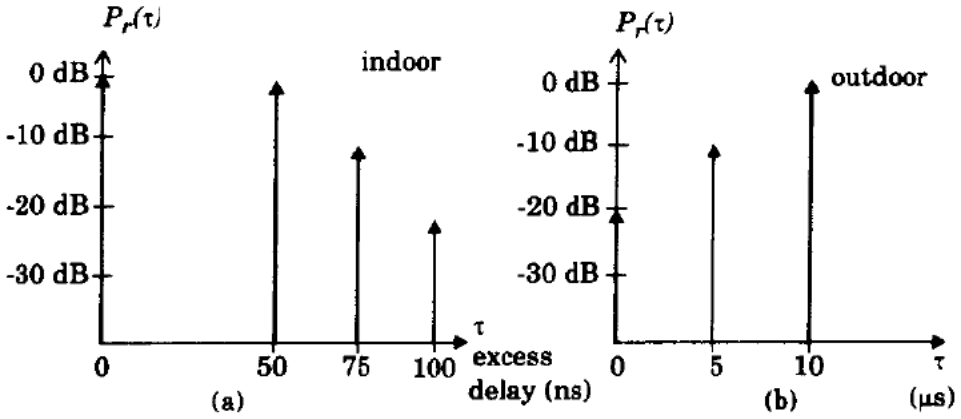

Figure 1

2. If a particular modulation provides suitable BER performance whenever $\frac{\sigma}{T_s} \leq 0.1$, determine the smallest symbol period T_s that may be sent through the RF channels shown in Figure 1.
3. For a mobile receiver operating at 860MHz and moving at 100kmph
    a. Sketch the Doppler spectrum if a CW signal is transmitted and indicate the max and min frequencies
    b. Calculate the level crossing rate and average fade duration if ρ=-20dB.
4. Study and understand the architecture of GSM, GPRS, and LTE. Compare and contrast the typical entities, architecture and operation of the three systems.