Introduction to Wireless and Cellular Communications

Computer Assignment 1

Performance of BPSK in AWGN

1. The purpose of this task is to obtain an estimate of the BER performance of BPSK in AWGN using a theoretical technique.

    (a) Generate $\frac{E_b}{N_0}$ (dB) in the range [0 (dB) 8 (dB)] in steps of 0.2 dB

    (b) Convert each value of $\frac{E_b}{N_0}$ from dB scale to normal scale

    (c) Compute the BER of BPSK in AWGN using the analytical expression

    (d) Plot semilogy: BER (Y-axis) versus $\frac{E_b}{N_0}$

A sample BER plot is shown