

# Wireless Transmission Questions

ECEn 526

Wireless Networking

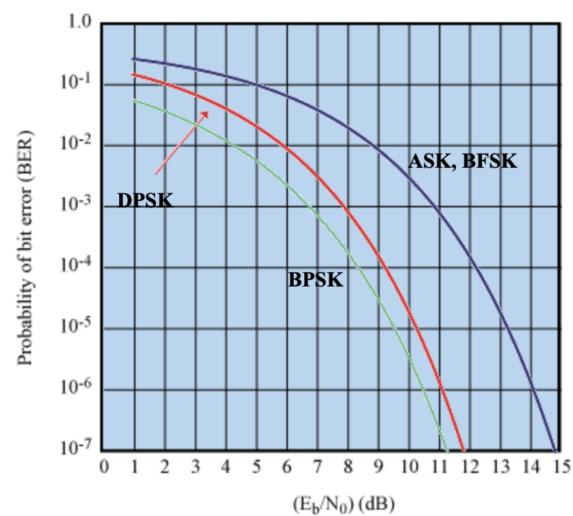
February 11, 2021

Question	Points	Score
1	3	
2	1	
3	1	
4	1	
5	2	
6	3	
7	2	
8	1	
<b>Total:</b>	14	

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- 2

3. (1 point) Explain why the *signal strength* of two wireless devices will change even if the devices are not moving.

4. (1 point) Using the figure above, which modulation scheme has the best performance? Explain how you determined that.



5. (2 points) Explain the relationship between modulation, data rate, and bit error? Explain a situation where you would prefer a lower data rate over a higher data rate.
6. (3 points) What improvement does OFDM make compared to other frequency division multiplexing (FDM) approaches? List two benefits that OFDM provides.
7. (2 points) Describe the general idea behind spread spectrum techniques. What are the benefits?

8. (1 point) Below is a spectrogram (waterfall plot) of a wireless transmission taken on campus. What type of spread spectrum technique is this transmission using? How can you tell?

