**205NET**

**2nd semester 1439 /1440**

**Assignment # 3**

Q1) Specify which transmission media is the best for the following senarios:

1. Communication system that sends a message in noisy circumference with a lot of interferences and the distance between a sender and a receiver is relatively small.
2. Communication system that need a wireless communication between a sender and a receiver over a large distance

Q2) What is the capacity of a channel that has a bandwidth 20 MHz and SNRdb =13.

Q3) For a telephone line, if an input signal power is measured as 0.5 W, and the noise level is measured as 4.5 μW . calculate the signal-to-noise ratio in dB?