

Electronics and Communication Engineering Department

Subject: UEC401 Analog Communication Systems

Tutorial sheet-1

1. Differentiate between baseband and band-pass signal?
2. The carrier performs certain functions in radio communication. List those functions
3. Define decibel. Can it be negative? Give an example. What is the difference between dB and dBm?
4. An RF amplifier has an output power level of 100 mW. Express it in dBm.
5. Draw a functional block diagram of communication system. Briefly explain the function of each block.
6. What is modulation and demodulation in simple terms? State the basic requirement of communication system which can be met with the process of modulation.
7. List all the existing communication system used in everyday life. Categorize them as wired and wireless system along with their applications.
8. What are the different ways in which a signal can propagate over long distances?
9. Distinguish between half duplex and full duplex modes of transmission with examples.
10. Consider three voice signals , each having frequency range of 300 Hz-3400 Hz are required to FDM at 12 KHz, 16 KHz, and 20 KHz analog carrier signals. Illustrate the resultant spectrum at the output of FDM with the help of functional block diagram
11. Consider three voice signals , each having frequency range of 300 Hz-3400 Hz are required to FDM at 20 KHz, 24 KHz, and 28 KHz analog carrier signals. Find the minimum channel bandwidth of resultant FDM signal assuming 1 KHz as guard band between the channels to avoid interference.