EC6801 – WIRELESS COMMUNICATION

ASSIGNMENT

1. Write an equation that relates the speed of light c, to carrier frequency f, and wavelength λ.
2. In your home, how many modern wireless communications networks are available to you? Identify the types of services, the types of technologies, the commercial names of the service providers, and the commercial names of the equipment manufacturers that offer these wireless access capabilities.
3. Show that the frequency reuse factor for a cellular system is given by k/S, where k is the average number of channels per cell and S is the total number of channels available to the cellular service provider.
4. Find the far-field distance for an antenna with maximum dimension of 1m and operating frequency of 900 MHZ.
5. A Vehicle receives a 900 MHZ transmission while traveling at a constant velocity for 10s. The average fade duration for a signal level 10dB below the rms level is 1ms.How far does the vehicle travel during a 10s interval? How many fades does the signal undergo at the rms threshold level during a 10s interval? Assume that the local mean remains constant during travel.

EC 6802 WIRELESS NETWORKS
ASSIGNMENT

1. Define BYOD (Bring Your Own Device). Explain the possible problems if we are implemented BYOD integration in Colleges, How do you rectify it? Give the solutions.

2. If a total of 33MHZ of bandwidth ia allocated to a particular FDD cellular telephone system which uses two 25 kHZ simplex channels to provide full duplex voice and control channels, compute no of channels available per cell if a system uses(a) 4-cell reuse,(b) 7-cell reuse (c) 12-cell reuse.If 1 Mhz of the allocated spectrum is dedicated to control channels,determine an equitable distribution of control channels and voice channels in each cell for each of three systems.

CS6003 ADHOC AND SENSOR NETWORK
ASSIGNMENT

1. Draw and explain the architecture of wireless sensor networks.
2. With neat diagram explain the various types of MAC reservation protocols.
3. Explain the hybrid routing protocol with an example.
4. Describe about the CSMA based MAC protocol for wireless sensor networks.
5. What is triangulation? Explain how it is efficient than other localization techniques.

EC6019 - DATA CONVERTERS

ASSIGNMENT

1. Design a sample and hold amplifier for High speed low voltage A/D converters.
2. Explain in detail about the architecture which employs a binary search algorithm in a feedback loop.
3. With necessary illustrations, explain the test Setup for measuring DAC distortion and Noise.
4. Describe in detail about ADC Code transitions measuring techniques.
5. Discuss in detail about residue generation in 10 bit two steps A/D converter.