Important Questions

**Mobile and Wireless Communication (NEC-801)**

**UNIT- Ist**

**Q1.** What are the different types of small scale fading? Give a comparison between flat fading and frequency selective fading.

**Q2**. Write short notes on the following:

1. Path loss model.
2. Free space path loss model.

**Q3.** Compare the performance analysis between different multiple access techniques.

**Q4.** Derive the received signal strength (power) formula for free space propagation model.

**Q5.** Explain coherence time and coherence bandwidth.

**Q6.** If a transmitter produces 50 W of power, express the transmit power in units of (a) dBm, and (b) dBW. If 50 W is applied to an unity gain antenna with a 900MHz carrier frequency, determine the received power in dBm at a free space distance of 100m from the antenna. What is PR (10 km)? Assume unity gain for the receiver antenna.

**Q7.** Describe the important features of wireless LAN technology.

**Q8.** Discuss the importance of adjacent channel interference. How capacity improvement is achieved using cell splitting approach?

**Q9.** What is handoff? Explain queuing concept in handoff. What are the advantages of delayed handoff?

**Q10.** What are various techniques possible to improve coverage and capacity in cellular system? Show that frequency reuse factor is given by K/S where K is average number of channel per cell and S is the total number of channel available.

**Q11.** Verify the cluster size N= i2 + j2 +ij, where i and j are the integers used to determine the co-channel cells.