

**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)  
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

**IV B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, APRIL-2019**Subject: Wireless Communications and Networks

Branch: ECE

Time: 3 hours

Max. Marks: 75

**PART – A****I. Answer ALL questions of the following**

5x1Mark=5 Marks

1. Write a short note on GOS.
2. Explain about fading statistics.
3. Differentiate Large Scale and Small Scale propagation model.
4. What is hopping
5. Give the classification of sensor network.

**II. Answer ALL questions of the following**

10x2Mark=20 Marks

1. Differentiate Cellular telephony and Cordless telephony.
2. Discuss about system capacity in cellular system.
3. What are demerits of Log –Distance path loss model?
4. What are advantages of Ericsson Multiple Breakpoint Model?
5. Name the different types of time selective fading.
6. Give the conditions for fast fading and slow fading.
7. Why was OFDM selected for WiMAX?
8. List the services provided by IEEE 802.11.
9. Define and Explain Hyperlan?
10. Explain Uplink and Downlink data transfer in GPRS.

**PART-B****Answer ALL questions of the following**

5x10 Marks= 50Marks

1. a) Why do paging system need to provide low data rates. How does a low data rate lead to better coverage  
b) What are advantages of WLL over a wired approach to subscribe loop support.

OR

2. a) Describe the evolution of wireless radio communication systems.  
b) Mention the limitations of wireless networks
3. Write about the following models and mention merits and demerits of each  
a. Okumura Model b. Hata Model

OR

4. From the free space propagation model derive the equation for received power.
5. Explain about the spread spectrum sliding correlator channel sounding mechanism in wideband channel

OR

6. Write about Clarke's model for flat fading in detail.
7. Discuss about standards and the security aspects in the Bluetooth.

OR

8. a) Name the four states that a Bluetooth terminal can take and explain the difference among these states  
b) Explain the continuously variable slope delta modulator (CVSD) scheme for voice encoding in Bluetooth.
9. How GPRS technology is different from GSM technology. Briefly describe the functions of these network elements in GPRS architecture which are different from GSM architecture.

OR

10. Write a short note on : a) HYPERLAN b.) HYPERLAN-2