BE11-R4: WIRELESS AND MOBILE COMMUNICATION

NOTE:

1. **Answer question 1 and any FOUR from questions 2 to 7.**
2. **Parts of the same question should be answered together and in the same sequence.**

Time: 3 Hours **Total Marks: 100**

1.

a) Write any two advantages of a Client Server System using a LAN.
b) Consider the delay of pure ALOHA and slotted ALOHA at low load. Which one is less? Explain your answer.
c) What algorithm is used for encryption in GSM networks? In a GSM network, in which node this algorithm is implemented?
d) Explain the differences between CSMA/CA and RTS/CTS.
e) Explain circuit switching technique with the help of a diagram.
f) Write any four differences between Symbian OS and Windows CE.
g) Can Bluetooth and WLAN interfere with each other?

(7x4)

2.

a) What is a subnet? Explain the relation between hosts on LAN and subnet.
b) What are the advantages of CDMA and spread spectrum techniques over FDMA and TDMA in cellular applications.

(8+10)

3.

a) Draw and explain the frame structure for GSM.
b) Explain the services and features of CT2.
c) Explain the factors influencing small scale fading.

(6+6+6)

4.

a) Distinguish between WCDMA and CDMA.
b) Explain Frequency Hopping Spread Spectrum (FHSS) and Direct Sequence Spread Spectrum (DSSS). Also, write the differences between them.

(6+12)

5.

a) Explain WIMAX network architecture with the help of a diagram.
b) Define the term PAN. Explain any two PANs.

(10+8)

6.

a) Explain WLL architecture with the help of a diagram.
b) How to get Java for embedded devices and how to get Java for mobile devices?

(10+8)

7.

a) Write any three differences between CDMA and GSM.
b) Explain the pros and cons of circuit switched data services on cellular networks.
c) Write any three differences between 2G and 3G.

(6+6+6)