No. of Printed Pages : **1**

Sl. No.

BE11-R4 : WIRELESS & MOBILE COMMUNICATION

NOTE :

1. Answer question 1 and any FOUR questions from 2 to 7.

2. Parts of the same question should be answered together and in the same sequence.

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

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1. (a) List the advantages of Wireless Local Area Networks.
(b) Discuss the concept of frequency reuse in cellular system.
(c) Discuss the architecture of a GSM system.
(d) Explain Direct Sequence spread spectrum technique in detail.
(e) Explain Bluetooth standard for Personal Area Networks (PANs).
(f) Differentiate between Circuit Switching and Packet Switching.
(g) Discuss about the security aspects in the Bluetooth. **(7x4=28)**

2. (a) Compare and Contrast the features of TDMA, FDMA and CDMA techniques.
(b) Discuss various types of Handoff techniques used in cellular networks.
(c) Explain the various methods that increase the Wireless Coverage and Capacity.
(d) What are the design goals to be achieved while designing WLANs ? **(5+5+4+4)**

3. (a) Explain IS-95 CDMA forward channel and reverse channel.
(b) Explain various logical channels used in GSM.
(c) How the application of Mobile devices can be developed using Nokia Toolkit ? **(4+5+9)**

4. Write short notes on following :
(a) WCDMA
(b) Space diversity
(c) Multipath Fading
(d) WLL Architecture **(4+4+4+6)**

5. (a) Explain the factors that influence small scale fading.
(b) List the fundamental goals of security in any information system. Explain authentication and encryption in GSM. **(8+10)**

6. (a) Compare between Wi-Fi and WiMAX standards.
(b) What is Carrier Sense Multiple Access (CSMA) ? Explain Non persistent CSMA and 1-Persistant CSMA in detail. **(8+10)**

7. (a) What is Bluetooth and How the Bluetooth communication process takes place between two devices ?
(b) Discuss the features of GPRS.
(c) Explain the medium access control frame of the IEEE802.11 ? **(5+4+9)**

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