

BE11-R4 : WIRELESS & 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) Compare FDMA, TDMA and CDMA.
 - (b) What is the difference between Home Location Register & Visitor Location Register ?
 - (c) What are various tele-services provided by GSM ?
 - (d) What are advantages and disadvantages of using small cells in a cellular structure ?
 - (e) Explain various characteristics of GPRS.
 - (f) Discuss various channel types defined in UMTS.
 - (g) What are advantages and disadvantages of Infra-red technology ? (7x4)
2.
 - (a) What are the different identity numbers used in GSM ?
 - (b) What is handoff ? Explain the different handoff strategies. (9+9)
3.
 - (a) Using a neat diagram, explain the DECT protocol architecture.
 - (b) Explain hidden and exposed terminal problems. Can CSMA/CA handle these issues ? How ? (9+9)
4.
 - (a) Explain the functions of MAC layer and its sublayers in WiMAX. What is the structure of MAC layer PDU in WiMAX (IEEE 802.16) ?
 - (b) What is Frequency Hopping Spread Spectrum (FHSS) ? Explain IEEE802.11 Physical layer using Frequency Hopping Spread Spectrum. (9+9)
5.
 - (a) What is a piconet ? How is it formed ? What happens when a node moves from one piconet to another ?
 - (b) What are the advantages and disadvantages of WLANs ? Discuss the basic WLAN architecture. (9+9)
6.
 - (a) What are the features of Palm OS ? Describe in detail the Palm OS architecture.
 - (b) What is L2CAP ? Discuss its channels, packet types and packet format. (9+9)
7. Write short notes on the following :
 - (a) Multipath Propagation
 - (b) Wireless Local Loop (WLL)
 - (c) Bluetooth protocol stack (6+6+6)

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