Sl. No.

# BE11-R4 : WIRELESS AND 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**

**1.** (a) Define Inter-networking with an example.
   (b) What is CDMA Technique ?  Explain with an example.
   (c) Differentiate between small scale and multi path fading.
   (d) What is Personnel Access Communication System ?
   (e) Explain some security aspects of Short Message System.
   (f) What are the defined quality of services in 3G Mobile services ?
   (g) What is Embedded JAVA ? Explain with an example.                    **(7x4)**

**2.** (a) What is GSM ? Explain the architecture and use of GSM.
   (b) Explain Analog Mobile Phone Service.  Explain the standard used in DAMPS.   **(9+9)**

**3.** (a) What is J2ME standard ?  What are the components used in development in J2ME ?
   (b) Explain the concept of WEP (Wired Equivalent Privacy).               **(9+9)**

**4.** (a) Whati is GPRS ?  Explain the architecture of GPRS.
   (b) What is PHS ? How it is used in Personal Wireless Communication System ?
   (c) Elaborate merits and demerits of TDMA. Describe IS-136 North American TDMA standards.                                                                    **(6+6+6)**

**5.** (a) What do you mean by Mobility Management ? Explain the two types of hand off schemes i.e. Soft hand off and Hard hand off.  Explain in which context one is used over the other.
   (b) What is the difference between Error Correction and Error Coding in the context of mobile data communication ?
   (c) Differentiate between Palm OS and Symbian OS.                        **(6+6+6)**

**6.** (a) Explain two different types of WLAN.  What are WLAN cards ?
   (b) What is the purpose of IEEE 802.15 standard ?  Explain the Bluetooth Architecture.
   (c) Explain 802.16 WiMAX protocols standards.                           **(6+6+6)**

**7.** Write short notes on **any three** of the following :
   (a) Pure and Slotted ALOHA
   (b) Packet Switched and Circuit Switched Data Services
   (c) WiMax Architecture
   (d) Nokia Toolkit
   (e) Wireless Local Loop Products                                        **(6+6+6)**

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