BE - ET - Sem VIII — WN [~~ELECTIVE~~]

(REV.)

53. copies

(3 Hours) [Total Marks : 100

N.B. (1) Question no. **1** is **compulsory.**
  (2) Answer any **four** questions from the remaining **six** questions
  (3) **Assume** suitable **data** wherever **necessary** with justification

1. (a) Compare WAP and internet protocol stacks. — CA   5
between (b) Compare CSMA-CD and CSMA-CS protocols   CA   5
   (c) Give definitions of scatter net, MAC address, parked units, sniff and hold mode.   5
   (d) Draw and explain neat diagram of components of sensor nodes.   5

2. (a) Describe in detail LR-WPAN device architecture with suitable diagram   10
   (b) Draw the spectrum of ultrawide band signal compared to Wi-Fi 802.11a signal. also   10
      explain radio frequency identification in detail.

3. (a) Give the detailed radio Access Network Overview. Explain in detail functions of   10
      Node B and R NC. also draw UTRAN logical architecture.
   (b) What is adaptive multirate (AMR) coded? comment on Quality of service in UMTS   10
      with respect to Qos attributes.

4. (a) Calculate the uplink cell load factor and number of voice users for a WCDMA   10
      system using the following data. What is the pole capacity of the cell?
         - Information rate (Ri)   = 12.2kbps
         -Chip rate (Rc)   = 3.84 mcps
         -Required Eb/N   = 4 dB
         -Required interference margin   = 3dB
         -Interference factor due to other cells= 0.5
         -Channel activity factor:0.65
   (b) Explain link budget analysis and requirements of wireless networks.   10

5. (a) Explain imode protocol stack. Also discuss programming model of WAP in detail.   10
   (b) Explain various in bluetooth connection establishment. Draw a complete flow   10
      diagram.   states

6. (a) Explain transmit and receive DSSS PPDU with frame structure in detail.   10
   (b) Explain reverse link features of CDMA 2000.   10

7. Write short notes on:-   20
      (a) HSDPA
      (b) Rake Receives
      (c) 802.11 std of wireless LAN
      (d) WiMax

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