VIII Sem (CBSGS) EXTc - Wireless N/w 25/11/16
wireless Network

(3 Hours)

Q.P. Code : 799802

[Marks : 80]

Note :(1) Q1 is compulsory.
    (2) Solve any three questions from remaining five.
    (3) Assume suitable data if required.

1.   (a) List out Quality of service [Qos] attributes in UMTS.   05
       (b) Explain 'Hidden Node' and 'exposed node' problem in wireless LANs.   05
       (c) How is power control implemented in CDMA?   05
       (d) Draw and explain with neat diagram, the components of Senser nodes.   05

2.   (a) Calculat the down link cell load factor and numbers of voice users per cell for a WCDMA system using the following data. What is the pole capacity of the cell?   10
       (1) Inforamation Rate (Ri) = 12.2 kbps
       (2) Chip rate (Rc) = 3.84 Mcps
       (3) Eb/Nt = 4 db
       (4) Average intereference factors due to others cells = 0.5
       (5) Orthogonality factor = 0.65
       (6) Interference margin = 3db.

       (b) What is Localization in wireless sensor network? Explain with examples centralized and distributed schemes in Localization algorithms.   10

3.   (a) Give the detailed radio Access Network overview. Explain in detail functions of Node B and RNC also draw UTRAN logical architecture.   10
       (b) Explain the ZigBee technology. Discuss different Network Topologies that are supported in Zigbee.   10

4.   (a) Explain Link budget analysis of requirements of wireless networks.   10
       (b) Explain Various Bluetooth connection establishment states. Draw a complete flow diagram.   10

5.   (a) Give technical requirements of IEEE 802.15.3a Physical layer w.r.t. data rates, power consumption, power management modes, scalability and interference, etc.   10
       (b) Why Network management design issue is a critical issue in wireless sensor network? Give reasons.   10

6.   (a) Write short notes on: 20
       (a) Wimax
       (b) Rake Receivers.

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144