7E4238

B.Tech. (Sem.VII) (Main/Back) Examination- Dec. 2012
Information Technology
7IT2 Wireless Communication & Networks (Common to CS & IT)

Time : 3 Hours

Total Marks : 80
Min. Passing Marks : 24

Instructions to Candidates :
Attempt any five questions, selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

UNIT - I

1. (a) Compare between 2G & 3G. Explain type of fading and error compensation. (8)
   (b) Discuss about the complete evolution of mobile radio communications. (8)

OR

1. (a) How to improve coverage and capacity in cellular systems? What is effect of multipath propagation? (8)
   (b) Compare between digital and analog data transmission with suitable examples. (8)

UNIT - II

2. (a) Compare different mechanisms with respect to idea, terminal. signal separation, advantages, disadvantages and comments of SDMA, TDMA, FDMA and CDMA. (16)

OR

2. (a) Why and when are different signaling channels needed? What are the differences between them? (8)
   (b) What are the functions of authentication of encryption in GSM? How is system security maintained? (8)

UNIT - III

3. (a) Compare IEEE 802.11 and HIPERLAN with respect to their ad hoc capabilities. Where is the focus of these technologies? (16)

OR

3. (a) What are the security problems of WLANs? What are the basic differences between wireless WANs and WLANs? What are the common features between them? Why is the PHY layer in IEEE 802.11 subdivided?(16)

UNIT - IV

4. What are general problems of mobile IP regarding security and support of QoS? What are advantages of Ad Hoc network? (16)

OR

Compare all Indirect TCP, snooping TCP, M- TCP and Transaction oriented TCP comparison with respect to mechanism, advantages and disadvantages. What is basic purpose of DHCP? (16)

UNIT - V

5. (a) Why is strong consistency of file systems problematic in a wireless and mobile environment? What are alternatives? (8)
   (b) What are the enhancements of WAE to the - classic, client/server model of the web? What are functions of this enhancement? (8)

OR

5. (a) What advantages has statelessness of HTTP? In what situation is state useful and how is it provided today? Where is long-term state stored, where short-term? (8)
   (b) What is the rule of a WTA server? What are the different ways of integrating WTA servers into the WAP architecture? (8)