



**UNIVERSITY DEPARTMENTS, ANNA UNIVERSITY CHENNAI
B.E /B.TECH (F.T)DEGREE END SEMESTER EXAMINATIONS APRIL/MAY 2011
INFORMATION TECHNOLOGY BRANCH
SIXTH SEMESTER (REGULATIONS 2004)**

IT384 Mobile Computing

Time: 3Hrs

Max. Marks: 100

Answer ALL Questions

Part-A (10 x 2 = 20 marks)

1. How do you construct a sectorized antenna? Show its radiation patterns.
2. How do you overcome multi-path propagation effect on signaling?
3. What are the advantages of cellular system with small cells?
4. Draw the message flow diagram for mobile originated call(MOC).
5. List the different power save states of Bluetooth device.
6. What are the functions of Access Point (AP) in WLAN?
7. State the reason for using slow start/fast retransmits in TCP.
8. Why routing in ad-hoc networks is complicated?
9. Compare technical features of IEEE 802.11, IEEE 802.11g
10. Write WML script to display a greeting message on a mobile device.

Part-B (5x 16 = 80 marks)

11. a) Explain Direct Sequence Spread Spectrum technology. (8)
b) Describe the solution to hidden terminal problem. (8)
12. a) i. Explain GSM functional architecture. (8)
ii. Describe intra-MSC handover mechanism. (8)
(OR)
b) i Describe A5 authentication algorithm in GSM (8)
ii. Explain GPRS architecture. (8)
13. a) Explain IEEE 802.11 protocol architecture and MAC management (16)
(OR)
b) i. Describe the working principle of Bluetooth network. (8)
ii. Compare the features of various types HIPERLAN. (8)
14. a) i. Explain how a mobile client establish configuration using DHCP. (8)
ii. Explain IP packet delivery from/to mobile node. (8)
(OR)
b) i. List the various issues in wireless routing compared to wired networks.(6)
ii. Describe DSDV and DSR routing protocols in ad-hoc networks. (10)
15. a) i. Explain the functions of I-TCP and Snooping TCP. (8)
ii. Describe the selective retransmission method in TCP. (8)
(OR)
b) i. Describe the architecture of WAP and the functions of each layer. (10)
ii. Explain how to establish secure session using WTLS. (6)