

Seventh Semester

Computer Science and Engineering

CS 2045/10144 CSE 43 — WIRELESS NETWORKS

(Regulation 2008/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the disadvantages of cellular systems.
2. Compare open loop power control and closed loop power control.
3. Write MAC frame structure of IEEE 802.11.
4. Define extended service set.
5. Why are guard bits required?
6. Mention the use of GGSN.
7. Why is IP-in-IP encapsulation mandatory in Mobile IP?
8. List the advantages of On-demand protocols.
9. Mention the use of mobile multicast routing.
10. List the features supported by WML Script.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Compare SDMA, TDMA, FDMA and CDMA. (8)  
(ii) Explain hidden and exposed terminal problems with suitable example. (8)

Or

- (b) (i) Explain various metrics used to decide handoff along with its strategies. (8)
- (ii) Explain the working principles of cellular networks. (8)
12. (a) (i) Explain IEEE 802.11 protocol architecture. (8)
- (ii) Explain various services provided by IEEE 802.11. (8)

Or

- (b) (i) Discuss about IEEE 802.11 physical layer. (8)
- (ii) Explain about WiMAX and wireless local loop. (8)
13. (a) (i) Explain GSM architecture and international roaming for GSM. (8)
- (ii) Discuss about various security issues in mobile communication. How it could be resolved? (8)

Or

- (b) (i) Discuss about VoIP (8)
- (ii) Discuss the functionalities of GPRS. (8)
14. (a) (i) Explain Mobile IP encapsulation. (8)
- (ii) Discuss about HMIPv6. (8)

Or

- (b) (i) How the packets are transferred in mobile networks? Discuss about it. (8)
- (ii) Discuss about snooping TCP and transaction oriented TCP (8)
15. (a) (i) Discuss about WAP architecture and WAP protocols. (8)
- (ii) Explain about WTLS. (8)

Or

- (b) (i) Discuss about WSP/B over WTP. (8)
- (ii) Explain WTA and WML. (8)