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Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 21767

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Seventh Semester

Information Technology

IT 2402/IT 72/10144 IT 702 — MOBILE COMMUNICATION

(Regulations 2008/2010)

Time Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What limits the range of wireless LAN?
2. How does near/far effect influence TDMA systems?
3. What limits the data rates that can be achieved with GPRS and HSCSD using real devices?
4. Why is the physical layer in IEEE802.11 subdivided?
5. Compare infrastructure and ad-hoc networks.
6. What is triangular routing?
7. What advantages does the use of Pv6 offer for mobility?
8. List the advantages in transaction-oriented TCP.
9. State the purpose of WAP.
10. Why WML is needed?

PART B — (5 × 16 = 80 marks)

11. (a) (i) State and explain four different types of MAC protocols used in mobile communication. (10)

(ii) Compare and contrast three common multiple access techniques. (6)

Or

(b) (i) State different channel assignment techniques. (8)

(ii) List and explain types of handoff and their characteristics. (8)

12. (a) (i) Sketch and explain the reference architecture of WiMAX. (12)

(ii) How wireless local loop works? Explain. (4)

Or

(b) (i) Present the overview of IEEE802.11 system and protocol architecture. (10)

(ii) Explain the different types of inter-frame spacing meant for waiting in MAC protocol in IEEE802.11 (6)

13. (a) (i) Present the functional architecture of a GSM system and explain each block. (10)

(ii) Draw the GSM TDMA frame, slot and burst format and explain the meaning of each field in one slot. (6)

Or

(b) What is the goal of GPRS? Explain the network and protocol architecture of GPRS.

14. (a) Sketch the schematic of a mobile IP network and explain the packet delivery between the mobile and corresponding node.

Or

(b) Explain the following protocols used in mobile transport layer.

(i) Indirect TCP (4)

(ii) Snooping TCP (4)

(iii) Mobile TCP and (4)

(iv) Transaction-oriented TCP. (4)

15. (a) (i) Draw and explain WAP protocol architecture. (12)

(ii) Present a schematic of integration of WAP components. (4)

Or

(b) (i) What is WTA? Explain logical architecture of WTA with block diagram. (8)

(ii) Explain an i-mode protocol stack with suitable diagram. (8)
