[4859]-189

B.E. (Information Technology)
b-MOBILE COMPUTING
(2008 Course) (Elective-II) (Semester-I)

Time : 3 Hours] *[Max. Marks : 100*

Instructions to the candidates:
1) Answer 3 questions from Section-I and 3 questions from Section-II.
2) Answers to the two sections should be written in separate answer books.
3) Neat diagrams must be drawn wherever necessary.
4) Figures to the right indicate full marks.
5) Assume suitable data, if necessary.

SECTION-I

Q1) a) Draw and explain basic cellular system and explain briefly various generations of mobile communication. **[10]**

b) What are the three measurements used to decide handoff? What are distance dependent fading, shadow fading and Rayleigh fading? **[8]**

OR

Q2) a) Draw the general PCS architecture and explain it. **[8]**

b) Explain hard hand off and soft hand off. Explain the procedure for adding and removing Base stations with MAHO soft hand off. **[10]**

Q3) a) Explain with diagram A3, A5 and A8 algorithm in GSM. **[8]**

b) What are different types of addresses and identifiers used in GSM. **[8]**

OR

Q4) a) Compare the authentication procedure in IS-41 and GSM. **[8]**

b) Explain VLR overflow and HLR failure restoration. **[8]**

Q5) a) Explain Mobile originated messaging and Mobile terminated messaging. **[8]**

b) Draw and explain SMS protocol stack. **[8]**

OR

Q6) a) What is number portability? Describe three types of number portability. **[9]**

   b) Write short note on Billing and Charging mechanism in GPRS. **[7]**

SECTION-II

Q7) a) Explain Wireless Application Protocol (WAP) model in detail. **[8]**

   b) Draw and explain international call set up procedure. **[8]**

OR

Q8) a) Explain GPRS architecture with neat diagram. **[8]**

   b) Compare W-CDMA and CDMA 2000. **[8]**

Q9) a) Explain in detail IP packet delivery. **[8]**

   b) Describe the goals and requirements of Mobile IP. **[8]**

OR

*Q10)*a) Explain various features and header format of IP v6. **[8]**

   b) Explain Dynamic source routing in MANET. **[8]**

*Q11)*a) Explain in detail Wireless Broad Band (WiMAX) technology. **[8]**

   b) Define Bluetooth. Explain in detail Bluetooth technology with protocol stack. **[10]**

OR

*Q12)*a) What are the advantages of Spread Spectrum technology? Explain with diagram Spread Spectrum Technology. **[10]**

   b) Write a short note on (4 Marks Each): **[8]**

   i) RFID.

   ii) W-LAN.

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