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06EC81

Eighth Semester B.E. Degree Examination, June/July 2013
Wireless Communications

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

PART – A

- 1 a. Describe with a neat flow diagram, the AMPS initialization operation. (12 Marks)
b. Briefly discuss the characteristics of 3G mobile network. (08 Marks)
- 2 a. Discuss the functions of transcoder controller in a base station system. (06 Marks)
b. With a relevant flow diagram briefly explain the call release operation. (10 Marks)
c. State the role of AUC in the mobile authentication process. (04 Marks)
- 3 a. What are different types of hand off? Explain the hand off operation with relevant figures. (10 Marks)
b. Explain the concept of power control and management in a typical cellular network. (10 Marks)
- 4 a. Explain with a neat block diagram the GSM network interfaces. (08 Marks)
b. Discuss the various dedicated control channels of GSM. (06 Marks)
c. Write a short note on various frame formats used for GSM traffic. (06 Marks)

PART – B

- 5 a. Explain with a neat flow diagram the authentication and ciphering mode operation in a GSM call set up operation. (12 Marks)
b. Explain the intra BSC-hand over operation in GSM. (08 Marks)
- 6 a. Explain in detail the CDMA forward channel frame format. (10 Marks)
b. Explain with a neat flow diagram the mobile terminated call timeline in CDMA systems. (10 Marks)
- 7 a. Discuss the concept of convolutional and turbo encoders. (06 Marks)
b. Explain in detail the various path loss models. (10 Marks)
c. Draw a neat block diagram of RAKE receiver. (04 Marks)
- 8 a. List the features of IEEE 802.11X technologies. (05 Marks)
b. Describe basic wireless MAN. (07 Marks)
c. Explain details of Bluetooth protocol stack with relevant figures. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.