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06EC81

Eighth Semester B.E. Degree Examination, Dec.2013/Jan.2014
Wireless Communication

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. Explain briefly the evolution of different generations of cellular systems. (10 Marks)
 b. With a neat timing diagram, explain the AMPS hand-off operation. (10 Marks)
- 2 a. With the help of net block diagram, explain the working of a subscriber device. (08 Marks)
 b. Explain the functions of VLR, HLR and MSC. (06 Marks)
 c. Explain the subscriber device identification parameters. (06 Marks)
- 3 a. What factors determine frequency re-use distance? (04 Marks)
 b. Explain the different power saving schemes. (06 Marks)
 c. Discuss the different capacity expansion technique in cellular communication. (10 Marks)
- 4 a. With a neat schematic explain the working of GSM network and system architecture. (10 Marks)
 b. Discuss with the help of a neat diagram the working of signaling model also explain the different protocols. (10 Marks)

PART – B

- 5 a. What is MSRN? What is the purpose of MSRN? Explain the GSM call setup using the MSRN. (10 Marks)
 b. With a neat diagram explain:
 i) GSM service request operations.
 ii) GSM authentication operations. (10 Marks)
- 6 a. With a neat diagram, explain the elements of the CDMA 2000 packet core network. (10 Marks)
 b. Explain the generation of the CDMA paging channel signal. (10 Marks)
- 7 a. Why is the free space path loss model in-appropriate to apply to wireless cellular operation? (04 Marks)
 b. Describe FHSS and DSSS operation. (08 Marks)
 c. If a certain CDMA radio base station can output a 50 watt carrier signal, how much power is on the pilot channel? How much power on the synchronization channel. (08 Marks)
- 8 a. Discuss the design issues of IEEE 802.11 and also provide the working of BDS, DS and ESS networks. (10 Marks)
 b. Describe the basic wireless MAN. (04 Marks)
 c. Describe the differences between WLAN and WPAN. (06 Marks)
