

USN

--	--	--	--	--	--	--	--	--	--

06EC81

Eighth Semester B.E. Degree Examination, December 2011

Wireless Communication

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. Mention the differences between 1G and 2G cellular systems. (06 Marks)
 b. Explain CDMA 2000. (04 Marks)
 c. Briefly explain the technique employed in an early AM wireless transmitter system, with a diagram. (10 Marks)
- 2 a. Explain common cellular network components. (10 Marks)
 b. Explain mobile terminated call operation in AMPS (advanced mobile phone system). (10 Marks)
- 3 a. Mention the cellular capacity expansion techniques. (10 Marks)
 b. Explain the concept of frequency reuse for cellular systems. For a mobile system of cluster size of 7, determine the frequency reuse distance if the cell radius is 5km. Repeat the calculation for a cluster size of 4. (10 Marks)
- 4 a. Explain GSM logical channel concept. (10 Marks)
 b. Mention the GSM identities. (10 Marks)

PART – B

- 5 a. Explain the steps for call setup in GSM. (10 Marks)
 b. How call handoff is done in GSM technology? (10 Marks)
- 6 a. Compare FDMA, TDMA and CDMA air interfaces. (08 Marks)
 b. Explain the CDMA spectrum spreading operation. (12 Marks)
- 7 a. Briefly explain the different types of coding technique used in wireless telecommunications. (10 Marks)
 b. Explain rake receiver for a diversity technique, with a block diagram. (10 Marks)
- 8 a. Explain the architecture of a Bluetooth/WPAN, with a diagram. (10 Marks)
 b. Describe the basic wireless MAN and its four antenna scheme. (10 Marks)

* * * * *

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.

