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10EC81

Eighth Semester B.E. Degree Examination, June/July 2019
Wireless Communication

Time: 3 hrs.

Max. Marks: 100

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

PART – A

- 1 a. Describe with a neat flow diagram, the AMPS initialization operation. (12 Marks)
- b. Mention the difference between 1G, 2G and 3G cellular systems. (08 Marks)
- 2 a. With the help of neat block diagram, explain the common wireless cellular network components. (10 Marks)
- b. Explain mobile – terminated call operation in a cellular network with neat diagram showing the components and steps. (10 Marks)
- 3 a. Explain the capacity expansion techniques : cell splitting, cell sectoring and over laid cells (10 Marks)
- b. Explain the concept of mobility management, with a figure, explain the three basic function performed by the location management. (10 Marks)
- 4 a. With neat sketch, explain GSM network architecture. (10 Marks)
- b. Explain the various logical channels used in GSM. (10 Marks)

PART – B

- 5 a. Explain with neat flow diagram the authentication and ciphering mode operation in a GSM call set up operation. (12 Marks)
- b. Explain the inter-BSC-handover operation in GSM. (08 Marks)
- 6 a. Explain with neat diagram, the network nodes found in a CDMA 2000 wireless system. (10 Marks)
- b. Describe the generation of the CDMA reverse access channel with neat block diagram. (10 Marks)
- 7 a. Describe the error detection and correction codes used for wireless telecommunication. (10 Marks)
- b. Explain the rake receiver for a diversity technique, with a block diagram. (10 Marks)
- 8 a. Explain the Bluetooth W_{PAN} piconet and scatternet architecture. (10 Marks)
- b. Describe the typical wireless MAN deployment scenario in detail. (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.

