



Eighth Semester B.E. Degree Examination, July/August 2022
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. Explain the concept of signaling system #7? (08 Marks)
- b. Describe with a block diagram, the AMPS cellular system. Illustrate with a diagram the various signals that flow over the AMPS forward and reverse channels. (12 Marks)

- 2 a. Draw the neat diagram of common cellular system and explain the base station system components. (10 Marks)
- b. Explain with necessary diagram, the formats of MSISDN number, IMSI number and IMEI number. (10 Marks)

- 3 a. Explain the following capacity expansion techniques:
 - (i) Cell splitting
 - (ii) Cell sectoring.
 - (iii) Overlaid cells. (12 Marks)
- b. Explain the radio resource and power management concept. (08 Marks)

- 4 a. With a neat GSM network architecture, explain the Network Switching System (NSS). (10 Marks)
- b. Explain the GSM channel concept for following:
 - (i) Logical channels.
 - (ii) Broadcast channels.
 - (iii) Common control channels. (10 Marks)

PART – B

- 5 a. Explain with neat diagram, GSM inter MSC handover and intra BSC handover. (12 Marks)
- b. What is location area in a cellular system? What is location updating? Explain the basic steps involved in location updating (idle mode). (08 Marks)

- 6 a. With a neat block diagram, explain the generation of CDMA forward traffic channel. (10 Marks)
- b. Explain the different types of soft and hard handoffs supported by CDMA system. (10 Marks)

- 7 a. Explain the following :
 - (i) Error detection and correction coding. (10 Marks)
 - (ii) Block Interleaving. (10 Marks)
- b. With a neat diagram, explain diversity technique.

- 8 a. With suitable diagram, explain the components of the Bluetooth architecture. (10 Marks)
- b. What are the IEEE802.11 extensions? (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.