USN | | | | | | | | | | **10EC81**

Eighth Semester B.E. Degree Examination, Jan./Feb. 2021
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. With a neat flow diagram, explain AMPs mobile terminated call. **(07 Marks)**
   b. Explain the working of SS7 system with a neat diagram. **(07 Marks)**
   c. Explain the 3G characteristic by cell size and its data rate. **(06 Marks)**

2 a. Explain global title and global title translation. **(05 Marks)**
   b. With a neat block diagram, explain the subscriber device. **(08 Marks)**
   c. With a neat block diagram, explain wireless cellular system components. **(07 Marks)**

3 a. Explain the different capacity expansion techniques, used in cellular system with neat diagrams. **(09 Marks)**
   b. Write a short note on channel allocation scheme used in cellular system. **(03 Marks)**
   c. Discuss the concept of power management as applied to Wireless Communication system. **(08 Marks)**

4 a. Explain GSM channel concept. **(10 Marks)**
   b. Explain GSM signaling model with a neat diagram. **(10 Marks)**

PART – B

5 a. What are GSM identities and explain GSM call setup operation using the MSRN with a neat diagram. **(06 Marks)**
   b. Mention different call setup operations in GSM system and explain GMS authentication operation with a neat flow diagram. **(08 Marks)**
   c. Define handoff technique. Mention different types of handoff technique and explain GSM intra-BSC hand over. **(06 Marks)**

6 a. With a neat diagram, explain CDMA paging channel signal generation. **(06 Marks)**
   b. Explain CDMA mobile station initialization. State with neat block diagram. **(06 Marks)**
   c. What is the difference between soft-softer handoff, soft handoff and softer handoff in CDMA system? Explain the same. **(08 Marks)**

7 a. List the various diversity techniques used in Wireless Communication and explain RAKE receiver with a neat block diagram. **(10 Marks)**
   b. Explain multipath and Doppler effect for wireless mobile system. **(06 Marks)**
   c. Briefly explain block interleaving technique used by mobile wireless system. **(04 Marks)**

8 a. Explain Bluetooth piconet architecture. **(10 Marks)**
   b. With a neat diagram, explain IEEE 802.15.1 Bluetooth WPAN architecture. **(10 Marks)**

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