

Roll No. 

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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech (ECE) (Sem.-8)

**WIRELESS COMMUNICATION SYSTEM & NETWORKS**

Subject Code : DE-2.2

Paper ID : [A0332]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A****1. Answer briefly :**

- a. What is frequency non selective fading?
- b. What is slow fading?
- c. What is frequency hopped spread spectrum (FHSS)?
- d. Define TDMA and SDMA.
- e. What is pure ALOHA?
- f. Explain routing in wireless networks.
- g. What is common channel signalling?
- h. Define AMPS and ETACS?
- i. Explain Paging system in brief.
- j. What is reverse CDMA channel?

### SECTION-B

2. Explain the architecture and services of ATM network in detail.
3. Explain the concept of diversity and working of RAKE demodulator.
4. Explain the working and components of WLAN (IEEE 802.11). What are the hidden and exposed node problems in a WLAN? Discuss them briefly.
5. Explain Mobile network and transport layer protocol in detail.
6. How the capacity of cellular systems can be increased by cell splitting and segmentation?

### SECTION-C

7. Explain services, channel types, speech processing techniques and features of GSM system.
8. What is receiver diversity? With the help of mathematical expressions, explain and compare maximal ratio combining and equal gain combining.
9. Write a short notes on :
  - a) Bluetooth technology and 4G System.
  - b) WLL architecture and technologies.