

2063

B.E. (Electronics and Communication Engineering)  
Seventh Semester  
EC-710: Wireless and Mobile Communication

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Part.

x-x-x

- 1.(a) What is Cell dragging ? How to avoid it? (2)
- (b) Which modulation schemes are used in EDGE technology & why? (2)
- (c) What is Co-Channel Channel Interference? (2)
- (d) What is VoIP? (2)
- (e) What is delay spread? (2)

**Part- A**

- 2.(a) What are the main constrains in implementing frequency re-use. Describe briefly the techniques to enhance capacity & coverage of cellular communication. (5)
- (b) What is EDGE technology? How is it different from GPRS technology? (5)
3. (a) A cellular service provider decides to use a digital TDMA scheme which can tolerate a signal-to-interference ratio of 18 dB in the worst case. Find the optimal value of N for (i) Omni directional antennas, (ii) 120° sectoring, and (iii) 60° sectoring. Should sectoring be used? If so, which case (60° or 120°) should be used? (Assume path loss exponent =4). (5)
- (b) What is handoff? Discuss various handoff strategies. (5)
4. (a) What is Wireless Local Loop ? (5)
- (b) What is Bluetooth technology? Discuss role of Bluetooth in Personal Area Networks. (5)

**Part-B**

- 5.(a) What is RAKE receiver ? Explain it with the help of block diagram. (5)
- (b) What is Frequency diversity? How do we implement Frequency diversity in wireless communication? (5)
- 6.(a) What is Equalization ? Why equalizers are required in communication receiver? (5)
- (b) What is FDMA? What are the advantages & disadvantages of FDMA with respect to TDMA? (5)
7. Write technical notes on the followings:
  - (a) SDMA (3)
  - (b) IP based telephony (3)
  - (c) IS-95 system (4)

x-x-x

