

2063

M.E. (Electronics and Communication Engineering)  
Second Semester

ECE-1203: 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 Hard Handoff? Where is it implemented? (2)
- (b) What is co-channel interference? (2)
- (c) What is Coherence bandwidth? (2)
- (d) What is frequency interleaving? (2)
- (e) Why more guard period is provided in RACH channel? (2)

Part-A

- 2.(a) What are Intelligent Networks? Explain their role in Wireless Communication. (5)
- (b) What are various techniques to enhance capacity & coverage in cellular communication? (5)
- 3 (a) What are Carrier Sense Multiple Access protocols? (5)
- (b) Explain the architecture of GSM 900 and list its air interface specifications. (5)
4. (a) In frame structure of GSM of normal time slot, why would the 26 equalizer training bits be placed in the middle of the frame rather than at the beginning? What is the reason for having an 8.25 bit guard period after the data bursts? (5)
- (b) What are security aspects of GSM? Explain in detail. (5)

Part-B

5. (a) Draw the Network Reference Model of CDMA & give its key features. (5)
- (b) What are the roles of propagation models in wireless communication? Explain any outdoor or indoor propagation model in detail. (5)
6. (a) What is small scale fading? Explain factors influencing small scale fading and types of small scale fading. (5)
- (b) With neat block diagram explain how RAKE receiver provides diversity to improve the performance of CDMA receiver. (5)
7. Write technical notes on the followings: (5)
- (a) IS-95 (5)
- (b) Long Term Evolution (5)

x-x-x