

2062
B.E. (Electrical and Electronics Engineering)
Eighth Semester
EE-809: Wireless 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

Q.No.1 (i) What is MSC?

(ii) Compare and contrast FDMA, CDMA and TDMA.

(iii) Differentiate between soft and hard handoff in mobile communication.

(iv) What is co-channel interference?

(v) What is the difference between wireless and fixed telephone networks? (5x2=10)

Part- A

Q.No. 2 (a) With a neat diagram, explain the steps involved during mobile terminated call operation.

(b) Explain the hardware view of cellular network with diagram. (6, 4)

Q.No.3 (a) Explain the concept of cell splitting and cell sectoring with diagram.

(b) Explain the concept of frequency reuse for cellular system. For a mobile system of cluster size 7, determine the frequency reuse distance if the cell radius is 5 km. Repeat the calculation for a cluster size of 4. (5, 5)

Q. No.4 (a) Briefly explain about the features of 4G and the challenges to be faced by it along with possible solutions to overcome those challenges.

(b) What are the various spread spectrum modulation techniques? Explain these techniques. (5, 5)

Part-B

Q.No.5 (a) With neat block diagram, explain the RAKE receiver and also list the potential problems of RAKE receiver.

(b) Explain error detection and correction codes used for wireless systems. (6, 4)

Q.No.6 Explain the TDMA hyperframe structure with diagram in detail. (10)

Q.No.7. (a) Explain the frame structure in GSM along with different burst format.

(b) Write a note on Personal Access Communication System. (5; 5)

x-x-x