Exam.Code:0938
Sub. Code: 33799

2055

B.E. (Electrical and Electronics Engineering)

Eighth Semester

OE-EE-802: Wireless Communication

Time allowed: 3 Hours Max. Marks: 50

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

x-x-x

I. Answer the following :-

a) What is frequency reuse in cellular systems?

b) Define small-scale fading in wireless communication.

c) Name any two 2.5G wireless technologies.

d) What is the role of a RAKE receiver in CDMA systems?

e) Differentiate between TDMA and FDMA.

f) What is the purpose of power control in cellular systems?

g) Name one advantage of using Orthogonal Frequency Division Multiplexing (OFDM).

h) What is the difference between space diversity and frequency diversity?

i) List one key feature of the GSM system architecture.

j) What is the role of Signaling System No. 7 (SS-7) in wireless networks? (10x1)

UNIT - I

II. Explain the evolution of mobile communication systems from 2G to 4G. Highlight the key technological advancements in each generation. (10)

III. Discuss the concept of frequency reuse and its importance in cellular system design. Explain how it impacts system capacity. (10)

IV. Describe the characteristics of the air interface in wireless communication. Explain the significance of digital modulation techniques in wireless systems. (10)

UNIT - II

V. Explain the concept of diversity techniques in mobile radio systems. Discuss how space diversity and frequency diversity can improve system performance. (10)

P.T.O.

VI. Compare and contrast FDMA and TDMA as multiple access techniques. Highlight their advantages and limitations. (10)

VII. Discuss the architecture and channel types of the GSM system. Explain the frame structure used in GSM. (10)

x-x-x