

Time allowed: 3 Hours

Max. Marks: 40

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

x-x-x

I. Answer the following:-

- a) What is the primary advantage of wireless communication over wired communication?
- b) What is one key difference between CDMA and W-CDMA?
- c) What are some limitations of GPRS compared to later technologies?
- d) Where is OFDM commonly used? (4x2)

UNIT - I

II. Explain the concept of cellular networks in mobile wireless communication systems. (8)

III. What is Bluetooth technology, and what are its primary applications in personal area networks? (8)

UNIT - II

IV. How does TDMA allocate time slots to different users, and what are the benefits of this approach in terms of spectrum efficiency? (8)

V. What is spectrum allocation, and why is it important in cellular communication systems? (8)

UNIT - III

VI. What is WCDMA and how does it relate to CDMA? (8)

VII. What is traffic routing in wireless networks, and why is it important for efficient network operation? (8)

UNIT - IV

VIII. Explain the key features and benefits of IEEE 802.11 standard for wireless home networking? (8)

IX. How does OFDM support high data rates in wireless communication systems? (8)

x-x-x