

# Atal Bihari Vajpayee Indian Institute of Information Technology & Management, Gwalior

## IT307: Wireless Communication Technologies

Minor Examination (Session 2023–24)

**Maximum Time: 1.5 Hours**

**Max Marks: 25**

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*Note: Attempt all questions. Neat sketches are expected wherever required.*

1. Explain the basic differences between analog and digital wireless communication systems. (4 Marks)
2. Describe frequency reuse in cellular systems. Derive the expression for cluster size  $N$ . (6 Marks)
3. What are the major impairments in a wireless channel? Explain fading and shadowing with diagrams. (5 Marks)
4. Differentiate between FDMA, TDMA, and CDMA. Provide suitable examples. (5 Marks)
5. Write short notes on: (a) Bluetooth technology (b) Wi-Fi standards (5 Marks)