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Roll No. .... 031063

6<sup>th</sup> Sem / Eltx

# **Subject:- Wireless and Mobile Communication/ Digital & Data Communication**

Time : 3Hrs. M.M. : 100

## **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1** Which of the following is not an example of wireless communication? (CO1)

  - a) Wi-Fi
  - b) Mobiles
  - c) Landline
  - d) Wireless Computer parts

**Q.2** Capacity of a cellular system is directly proportional to \_\_\_\_\_ (CO2)

  - a) Number of cells
  - b) Number of times a cluster is replicated
  - c) Number of Base stations
  - d) Number of users

**Q.3** Which of the following problem occurs due to adjacent channel interference ? (CO2)

  - a) Cross talk
  - b) Missed calls
  - c) Blocked calls
  - d) Near-far effect

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- Q.4 What are co-channel cells ? (CO2)

  - a) Cells having different base stations
  - b) Cells using different frequency
  - c) Cells using adjacent frequency
  - d) Cells using same frequency

Q.5 The process of subdividing a congested cell into smaller cells is called \_\_\_\_\_ (CO3)

  - a) Cell splitting b) Sectoring
  - c) Micro cell technique d) Repeaters

Q.6 Which type of antenna is used for edge excited cells ? (CO3)

  - a) Omnidirectional antenna
  - b) Grid antenna
  - c) Sectored directional antenna
  - d) Dipole antenna

Q.7 What is a cluster in a cellular system ? (CO4)

  - a) Group of frequencies
  - b) Group of cells
  - c) Group of subscribers
  - d) Dipole of mobile system

Q.8 What is the full form of WLAN ? (CO4)

  - a) Wide Local Area Network
  - b) Wireless Local Area Network
  - c) Wireless Land Access Network
  - d) Wireless Local Area Node

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Q.9 Bluetooth standard is named after \_\_\_\_ (CO5)

- a) King Ronaldo Bluetooth
- b) Pope Vincent Bluetooth
- c) King Herald Bluetooth
- d) Pope Francis Bluetooth

Q.10 What is frequency reuse? (CO3)

- a) Process of selecting and allocating channels
- b) Process of selection of mobile users
- c) Process of selecting frequency of mobile equipment
- d) Process of selection of number of cells

### SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Write Full form of TDD. (CO3)

Q.12 What is MSC? (CO2)

Q.13 What is hand off? (CO3)

Q.14 Write is hand of HSPA (CO4)

Q.15 Define wireless Communication (CO1)

Q.16 Expand UMTS (CO4)

Q.17 The smallest cells are calls are called as... (CO1)

Q.18 Define Cellular network (CO1)

Q.19 Frequency reuse factor=... (CO2)

Q.20 Write full form of VCO. (CO6)

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Write short note on 3G. (CO4)

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Q.22 What are the differences between cell splitting and cell sectoring? (CO2)

Q.23 What are the applications of wireless communication? (CO1)

Q.24 What is fading ? Explain types of fading . (CO1)

Q.25 Draw architecture of GSM. (CO4)

Q.26 What tools are required to disassemble a mobile phone ? (CO6)

Q.27 Discuss methods of fault finding in cell phone . (CO6)

Q.28 Write short note on HSPA. (CO5)

Q.29 Write applications of Bluetooth . (CO4)

Q.30 What is TDMA ? Explain . (CO4)

Q.31 Write short note on Wi-Fi. (CO4)

Q.32 write short note on multiple access (CO3)

Q.33 Write short note on LTE (CO3)

Q.34 Explain the concept of frequency reuse. (CO2)

Q.35 Write short on 1G. (CO1)

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain in detail, the architecture of GSM. (CO4)

Q.37 Give comparison between FDMA/TDMA/CDMA (CO3)

Q.38 Explain interference in detail in cellular telephone system. (CO1)

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