**18ECI03**

**Hall Ticket Number:**

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| **IV/IV B.Tech (Regular) DEGREE EXAMINATION** | | | |
| **May, 2022** | **Electronics and Communication Engineering** | | |
| **Eighth Semester** | **WIRELESS COMMUNICATIONS** | | |
| **Time:** Three Hours | | **Maximum:** 50 Marks | |
| *Answer Question No.1 compulsorily.* | | | (10X1 = 10 Marks) |
| *Answer ONE question from each unit.* | | | (4X10=40 Marks) |
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| 1. | a) | Define Co-Channel Reuse Ratio |  |
|  | b) | What are the basic requirements for the wireless service? |  |
|  | c) | What is handoff? |  |
|  | d) | What is selection diversity? |  |
|  | e) | What is the need for equalization? |  |
|  | f) | What do u mean by time diversity? |  |
|  | g) | What is TDMA? |  |
|  | h) | **What is the difference between Multiple Access & Multiplexing?** |  |
|  | i) | List the advantages of third generation (3G) Network? |  |
|  | j) | List the benefits of spread spectrum |  |
| **Unit -I** | | | |
| 2. | a) | Explain the difference between Soft Hand-off and Hard hand-off? | 5M |
|  | b) | Illustrate the Handoff scenario at cell boundary. | 5M |
|  |  | **(OR)** |  |
| 3. |  | Explain cellular frequency reuse concept with neat diagram for cluster size N= 7. | 10M |
|  |  | **Unit -II** |  |
| 4. |  | Explain adaptive equalizer at the receiver with neat diagram and mathematical equations. | 10M |
|  |  | **(OR)** |  |
| 5. |  | Explain in detail about four space diversity reception methods. | 10M |
| **Unit -III** | | | |
| 6. | a) | Explain features of FDMA. | 5M |
|  | b) | What are the Differences between FDMA and TDMA | 5M |
|  |  | **(OR)** |  |
| 7. | a) | Draw and explain uplink and down link CDMA (IS- 95) Model? | 5M |
|  | b) | Explain the Principles and applications of Multiple Access Techniques? | 5M |
|  |  | **Unit -IV** |  |
| 8. | a) | Find what are the advantages of 4G over 3G? | 5M |
|  | b) | We Explain the limitations of 3G technology in wireless networks? | 5M |
|  |  | **(OR)** |  |
| 9. | a) | Explain AIR Interface Technology? | 5M |
|  | b) | How 4G is evaluated? | 5M |

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