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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech IV Year II Semester Regular & Supplementary Examinations July-2021

WIRELESS COMMUNICATION & NETWORKS

(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

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|---|--|----|----|
| 1 | a Explain about Cellular Telephone Systems. | L1 | 4M |
| | b Give a detailed explanation of TDMA. | L3 | 4M |
| | c What is 3G communication? Give the details about UMTS. | L4 | 4M |

OR

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|---|--|----|----|
| 2 | a What is frequency reuse concept? Take the following 'N' values and discuss about the concept. a) N = 4 b) N = 7 | L3 | 6M |
| | b Discuss briefly about CSMA protocols. | L2 | 6M |

UNIT-II

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|---|--|----|----|
| 3 | a Define the terms Diffraction and Scattering. | L1 | 6M |
| | b Give the basic classification of Small Scale fading. | L4 | 6M |

OR

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|---|--|----|----|
| 4 | a Find the far-field distance for an antenna with maximum dimension of 1m and operating frequency of 900MHz. | L1 | 4M |
| | b Discuss Rayleigh & Ricean distributions. | L2 | 8M |

UNIT-III

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|---|---|----|----|
| 5 | a Explain in detail about Least Mean Square Algorithm (LMS). | L2 | 6M |
| | b Explain in detail about Linear Transversal Equalizer with neat diagram. | L2 | 6M |

OR

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|---|---|----|----|
| 6 | Explain the following diversity techniques in detail. | | |
| | a Maximal ratio Combiner | L2 | 6M |
| | b Scanning Diversity | L2 | 6M |

UNIT-IV

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|---|--|----|----|
| 7 | a Discuss about multicarrier modulation techniques in OFDM with suitable diagrams. | L3 | 6M |
| | b Discuss the generation of subcarriers using the IFFT with a neat diagram. | L4 | 6M |

OR

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|---|--|----|----|
| 8 | a Explain Vector Coding? | L1 | 6M |
| | b Explain the terms Guard time and Cyclic extension. | L2 | 6M |

UNIT-V

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|---|--|----|----|
| 9 | a Explain the difference between wireless and fixed telephone network. | L2 | 6M |
| | b Explain in detail X.25 protocol architecture. | L2 | 6M |

OR

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|----|---------------------------------------|----|----|
| 10 | a Elaborate packet switching Network. | L6 | 6M |
| | b Explain the mobile IP operation. | L5 | 6M |

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