

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

M.Tech I Year II Semester Regular Examinations August-2026

ADVANCED COMPUTER NETWORKS

Time: 3 Hours

Max. Marks: 60

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

UNIT-I

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|---|---|--|-----|----|----|
| 1 | a | Explain the working of Mobile IP and its role in supporting mobility. | CO1 | L1 | 6M |
| | b | Analyze the infrastructure and characteristics of Wireless Mesh Networks (WMNs). | CO1 | L2 | 6M |

OR

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|---|---|--|-----|----|----|
| 2 | a | Illustrate Least-Cost-Path algorithms with a suitable network graph. | CO1 | L2 | 6M |
| | b | Compare Intra-domain and Inter-domain routing protocols (e.g., OSPF vs BGP). | CO1 | L2 | 6M |

UNIT-II

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|---|---|--|-----|----|----|
| 3 | a | Illustrate the TCP congestion control mechanism, including slow start and avoidance. | CO2 | L3 | 6M |
| | b | Compare standard TCP with Mobile Transport Protocols in wireless environments. | CO2 | L2 | 6M |

OR

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|---|---|---|-----|----|----|
| 4 | a | Define the Transport Layer and explain its primary responsibilities. | CO2 | L2 | 6M |
| | b | Analyze the differences between Transmission Control Protocol (TCP) and User Datagram Protocol (UDP). | CO2 | L2 | 6M |

UNIT-III

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|---|---|--|-----|----|----|
| 5 | a | Explain the working of the Web and the HTTP protocol. | CO3 | L3 | 6M |
| | b | Illustrate the architecture of Electronic Mail in the Internet (SMTP, POP3, IMAP). | CO3 | L2 | 6M |

OR

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|---|---|--|-----|----|----|
| 6 | a | Analyze the implementation of P2P File Sharing networks. | CO3 | L2 | 6M |
| | b | Discuss the Domain Name System (DNS) hierarchy and resolution process. | CO3 | L1 | 6M |

UNIT-IV

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|---|---|---|-----|----|----|
| 7 | a | Discuss the principles of Code Division Multiple Access (CDMA). | CO4 | L3 | 6M |
| | b | Analyze the handoff process in cellular and mobile networks. | CO4 | L1 | 6M |

OR

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|---|---|---|-----|----|----|
| 8 | a | Explain the management of mobility in wireless networks. | CO4 | L2 | 6M |
| | b | Compare the performance of 802.11 LANs under different traffic loads. | CO4 | L1 | 6M |

UNIT-V

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|---|---|---|-----|----|----|
| 9 | a | Discuss the mechanisms for streaming stored video over the internet. | CO5 | L3 | 6M |
| | b | Illustrate the functioning of real-time conversational protocols like RTP/RTCP. | CO5 | L2 | 6M |

OR

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|----|---|---|-----|----|----|
| 10 | a | Define Multimedia networking and list its major applications. | CO5 | L2 | 6M |
| | b | Analyze the Quality of Service (QoS) requirements for multimedia traffic. | CO5 | L3 | 6M |

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