



ANDHRA ENGINEERING COLLEGE: ATMAKUR – 524322

\_\_\_B.TECH \_\_\_ SEM (R23) I-MID EXAMINATIONS, AUGUST-2025

BRANCH: **Computer Science Engineering**

SUBJECT & CODE: **COMPUTER NETWORKS&INTERNET PROTOCOLS & 23A05501T**

Max. Marks: 30

Name of the faculty: **OBULA RAJU D**

DATE: **11-08-2025**

Type: **DESCRIPTIVE**

Duration: **120 Mins**

DEPT: **CSE**

**Note:** This question paper contains two parts A and B.

Part A each question carries 2 marks, answer all question in part A & part B.

Part B each question carries 10 marks.

The marks obtained in part B are condensed to 15 marks.

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**PART-A (5x2=10)**

1. (a) What is the Internet? Explain Network Edge briefly with a diagram. 2M
- (b) Differentiate between Packet Switching and Circuit Switching with suitable diagrams. 2M
- (c) Define Guided Transmission Media and Wireless Transmission with one example each. 2M
- (d) What is Error Detection? Name one Error Correction technique. 2M
- (e) What are Switched Local Area Networks? Draw a neat diagram.(2M)

**PART-B (10x3=30)**

2. a) Explain the OSI Reference Model and TCP/IP Reference Model with neat diagrams.(5M)
- b) Explain Wireless Transmission techniques with examples and diagrams.(5M)

**(OR)**

3. a) Describe Guided Transmission Media with neat diagrams.(5M)
- b) Explain Delay, Loss, and Throughput in Packet-Switched Networks with illustrative diagrams. (5M)

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- 4.a) Explain Error Detection and Correction Techniques in the Data Link Layer with diagrams.(5M)
  - b) Discuss any two Elementary Data Link Protocols with diagrams where necessary.(5M)

**(OR)**

- 5 (a) Explain the Sliding Window Protocol with a neat diagram.(3M)



- (b) Explain Multiple Access Links and Protocols with suitable diagrams.(2M)
  - (c) Explain Link Virtualization (MPLS) with a diagram.(2M)
  - (d) Explain Data Center Networking and its importance with a block diagram.(3M)
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- 6. (a) Explain the concept of “A Day in the Life of a Web Page” in networking with diagrams.(7M)
- (b) Describe the role of Network Virtualization (MPLS) in modern networks with a diagram.(3M)

**(OR)**

- 7. (a) Explain Routing Algorithms in the Network Layer with suitable diagrams.(7M)
- (b) Explain Switched Local Area Networks with a neat diagram.(3M)