



**MATA TRIPURA SUNDARI
OPEN UNIVERSITY**

Tripura

CSM-6111

SCHOOL OF COMPUTER AND INFORMATION TECHNOLOGY

**DATA COMMUNICATION &
COMPUTER NETWORKS**

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Gomati-Tripura

MASTERS OF COMPUTER SCIENCE

MASTER OF COMPUTER APPLICATIONS

(MCA)

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2. Ms. Rainu Verma

3. Mr. Jeetendra Kumar
4. Mr. Khishresh Sharma

5. Mr. Ankur Kumar Sharma
6. Mr. Pankaj Kumar

Block-I: Fundamental Concepts & Network Architecture

Unit-1: Introduction to Computer Networks – Goals, Applications, and Benefits

Unit-2: Network Structures, Architectures, and Topologies

Unit-3: OSI and TCP/IP Reference Models – Layers, Functions, and Protocols

Unit-4: Physical Layer – Transmission Media, Switching Techniques, ISDN, and Terminal Handling

Block-II: Data Link Layer & Network Layer

Unit-5: Channel Allocation – LAN Protocols, ALOHA Variants (Pure & Slotted ALOHA)

Unit-6: Medium Access Control – CSMA/CD, CSMA/CA, Collision-Free Protocols, IEEE Standards (Ethernet, Wi-Fi, FDDI)

Unit-7: Data Link Layer – Framing, Error Detection & Correction, Sliding Window Protocols, HDLC

Unit-8: Network Layer Functions – Addressing, Routing Algorithms, Congestion Control

Block-III: Transport Layer & Network Services

Unit-9: IP Addressing & Networking – IPv4, IPv6, Subnetting, CIDR, Internetworking

Unit-10: Transport Layer – Functions, Protocols, and Design Issues

Unit-11: Connection-Oriented & Connectionless Services, TCP Window Management

Unit-12: User Datagram Protocol (UDP) and Transmission Control Protocol (TCP)

Block-IV: Application Layer & Network Security

Unit-13: Flow Control, Error Control, and Quality of Service (QoS) in Transport Layer

Unit-14: Network Security Fundamentals – Encryption, Hashing, Firewalls, Intrusion Detection

Unit-15: Secure Communication – DES, AES, RSA, Digital Signatures, Domain Name System (DNS)

Unit-16: Internet Protocols & Services – SMTP, FTP, HTTP, SNMP, Cryptography & Compression Techniques

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CSM-6213 Management Information & system

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CSM-6214 Design & Analysis of Algorithm

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ENM-6252 DAA and Web Programming Lab

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Block-I: Introduction

Unit-1: What is Markup Language Basic Structure of HTML

Unit-2 : Difference Between HTML and XHTML

Unit-3: Head Section and Elements of Head Section Meta Tags

Unit-4: CSS Tags Script Tag Table Tag Div Tag Header Tags Paragraph, pan, Pre Tags

Block-II: Designing Pages with HTML & CSS

Unit-5: Anchor Links and Named Anchors Image Tag Object Tag frame Tag Forms Form Tag attributes of Form POST and GET Method

Unit-6: Field set and Legend Text input, Text area Checkbox and Radio Button Dropdown.

Unit-7: Dynamic HTML, Document Object Model, Features of DHTML,

Unit-8: CSSP (Cascading Style Sheet Positioning)

Unit-9: JSSS (Java Script assisted Style Sheet)

Block-III: Java Script

Unit-10: Objects,

Unit-11: Methods, Events and Functions,

Unit-12: Tags, Operators, Data Types,

Unit-13: Literals and Type Casting in JavaScript,

Unit-14: Programming Construct Array and Dialog Boxes

Block-IV: Front Page

Unit-15: Front Page Basics,

Unit-16: Web Terminologies,

Unit-17: Phases of Planning and Building Web Sites,

Unit-18: the FTP, HTTP and WPP.

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