



MATA TRIPURA SUNDARI
OPEN UNIVERSITY

Agartala, Tripura

CSB - 6111

**SCHOOL OF COMPUTER AND
INFORMATION TECHNOLOGY**

**DATA COMMUNICATION AND
COMPUTER NETWORKS**

**MASTERS OF COMPUTER
APPLICATION (MCA)**

MASTER OF COMPUTER APPLICATIONS (MCA)

PROGRAMME DESIGN COMMITTEE

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Prof. C.R.K. Murty Professor of Distance Education IGNOU, New Delhi	Prof. V.V. Subrahmanyam Professor of Computer Science	Prof. Jawed Wasim Professor of Computer Science Mangalayatan University, Aligarh

COURSE WRITERS

Dr. Md. Amir Khusrul Akhtar Associate Professor of Computer Science MTSOU, Tripura CSM-6111 Data Communication & Computer Networks	Dr. Manish Saxena Assistant Professor of Computer Science MTSOU, Tripura CSM-6113 Discrete Mathematics	Mr. Pankaj Kumar Assistant Professor of Computer Science Mangalayatan University, Aligarh CSM-6151 Programming with 'C' & Lab
Dr. Ankur Kumar Assistant Professor MTSOU, Tripura CSM-6112 Computer Organization & Architecture	Dr. Duvvuri B. K. Kamesh Assistant Professor of Computer Science MTSOU, Tripura CSM-6114 Accountancy and Financial Management	Ms. Vanshika Singh Assistant Professor of English MTSOU, Tripura ENM-6101 Professional Communication

COURSE EDITORS

Prof. S. Nagakishore Bhavanam Professor of Computer Science Mangalayatan University, Jabalpur	Dr. Manoj Varshney Associate Professor of Computer Science MTSOU, Tripura	IGNOU, New Delhi
Prof. Jawed Wasim Professor of Computer Science Mangalayatan University, Aligarh	Dr. M. P. Mishra Associate Professor of Computer Science	Dr. Akshay Kumar Associate Professor of Computer Science IGNOU, New Delhi

FORMAT EDITORS

Dr. Nitendra Singh Associate Professor of English MTSOU, Tripura	MTSOU, Tripura	Ms. Vanshika Singh Assistant Professor of English MTSOU, Tripura
Ms. Angela Fatima Mirza Assistant Professor of English	Dr. Faizan Assistant Professor of English MTSOU, Tripura	

MATERIAL PRODUCTION

- | | | |
|------------------------|------------------------|---------------------------|
| 1. Mr. Himanshu Saxena | 3. Mr. Jeetendra Kumar | 5. Mr. Ankur Kumar Sharma |
| 2. Ms. Rainu Verma | 4. Mr. Khiresh 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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1 No. Colony, Chandrapur Colony, VTC Indiranagar, Distt. Gomati- Tripura-799013
Mobile No: - 8448789806 | info@mtsou.com | www.mtsou.com



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IGNOU, New Delhi

Prof. V.V. Subrahmanyam
Professor of Computer Science

IGNOU, New Delhi

Prof. S. Nagakishore Bhavanam
Professor of Computer Science
Mangalayatan University, Jabalpur

Prof. Manoj Varshney
Professor of Computer Science
MTSOU, Tripura

COURSE WRITERS

Dr. Md. Amir Khusru Akhtar
Associate Professor of Computer Science
MTSOU, Tripura
CSM-6211 Web Programming

Dr. Ankur Kumar
Assistant Professor
MTSOU, Tripura
CSM-6212 Advance Cyber Security

Dr. Manish Saxena
Assistant Professor of Computer Science

MTSOU, Tripura
CSM-6213 Management Information & system

Dr. Duvvuri B. K. Kamesh
Assistant Professor of Computer Science
MTSOU, Tripura
CSM-6214 Design & Analysis of Algorithm

Mr. Pankaj Kumar
Assistant Professor of Computer Science

Mangalayatan University, Aligarh
CSM-6251 Data Structure using C++ & Lab

Dr. Manoj Varshney
Associate Professor of Computer Science
MTSOU, Tripura
ENM-6252 DAA and Web Programming Lab

COURSE EDITORS

Prof. S. Nagakishore Bhavanam
Professor of Computer Science
Mangalayatan University, Jabalpur

Prof. Jawed Wasim
Associate Professor of Computer Science
Mangalayatan University, Aligarh

Dr. Manoj Varshney
Associate Professor of Computer Science
MTSOU, Tripura

Dr. M. P. Mishra
Associate Professor of Computer Science

IGNOU, New Delhi

Dr. Akshay Kumar
Associate Professor of Computer Science
IGNOU, New Delhi

FORMAT EDITORS

Dr. Nitendra Singh
Associate Professor of English
MTSOU, Tripura

Ms. Angela Fatima Mirza
Assistant Professor of English

MTSOU, Tripura

Dr. Faizan
Assistant Professor of English
MTSOU, Tripura

Ms. Vanshika Singh
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6.

Mr. Pankaj Kumar

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,

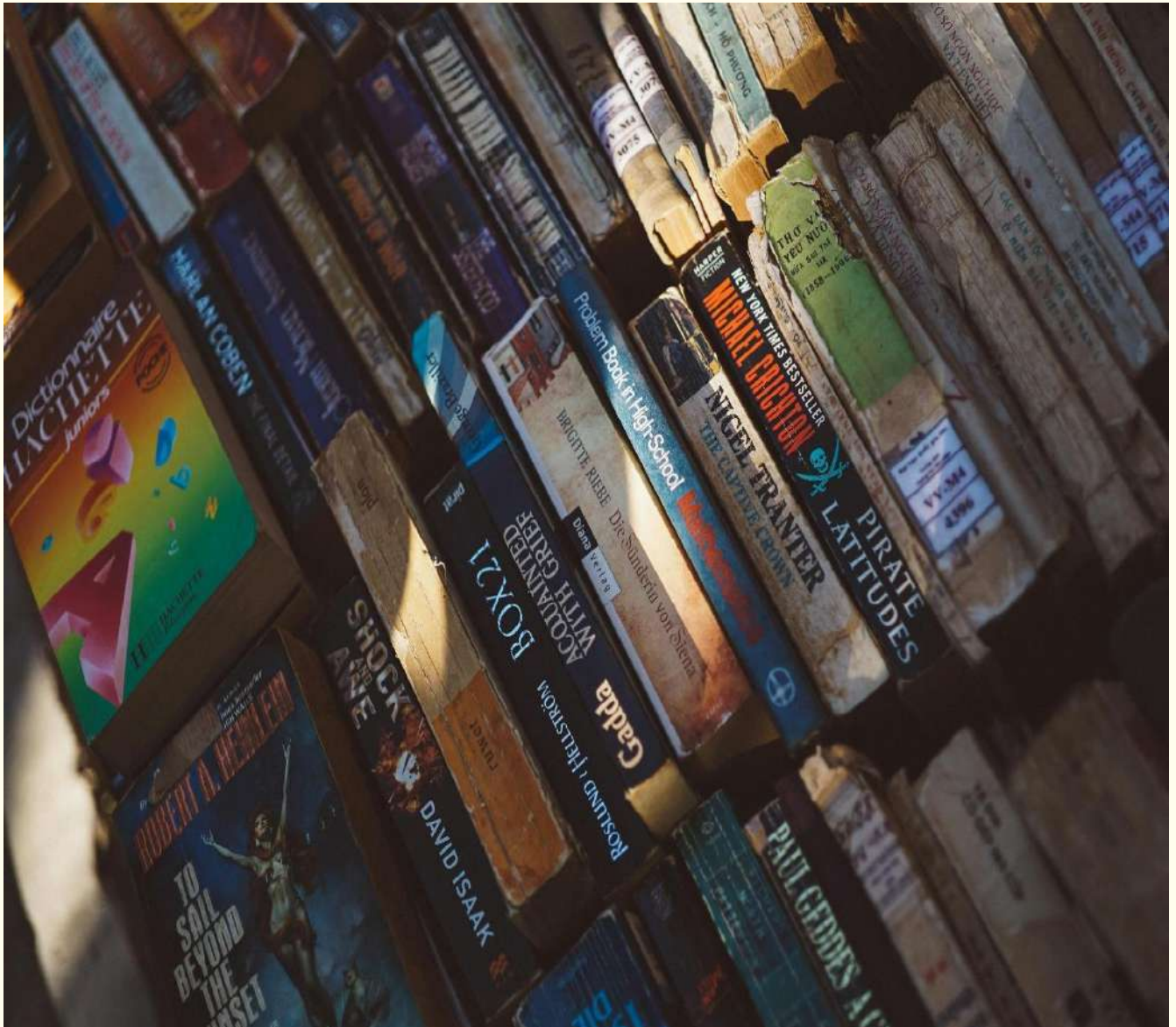
Unit-17: Phases of Planning and Building Web Sites,

Unit-18: the FTP, HTTP and WPP.



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