For the candidates admitted from academic year 2016 - 2017 onwards under New CBCS

CORE: PROGRAMMING IN C

Year   **:** I
Hours / Week : 4

Semester   **:** I
Subject Code: 13UCS/USC1C01

Credits   **: 4**

UNIT I

Overview of C: Importance of C – Basic Structure of C programs – Executing a 'C' Program – Sample Programs;

Constants, Variables and Data Types: Character Set – C tokens – Keywords and Identifiers – Constants – Variables – Data Types – Declaration of Variables – Assigning Values to Variables – Declaring a Variable as Constant.

UNIT II

Operators and Expressions: Arithmetic Operators – Relational Operators – Logical Operators – Assignment Operators – Increment and Decrement Operators – Conditional Operator – Bitwise Operators – Special Operators – Arithmetic Expressions – Evaluation of Expressions – Precedence of Arithmetic Operator – Some Computational Problems – Type Conversions in Expressions – Operator Precedence and Associativity – Mathematical Functions;

Managing Input and Output Operations: Reading a Character – Writing a Character – Formatted Input – Formatted Output.

UNIT III

Decision Making and Branching: Decision Making with IF Statement – Simple IF Statement – The IF … ELSE Statement – Nesting of IF … ELSE Statement – The ELSE IF Ladder – The Switch Statement – The ?: Operator – The GOTO Statement;

Decision Making and Looping: The WHILE Statement – The DO Statement – The FOR Statement – Jumps in LOOPS.

UNIT IV

        Array: One-dimensional Arrays – Declaration of One-dimensional Arrays – Initialization of One-dimensional Arrays – Two-dimensional Arrays – Initializing Two-dimensional Arrays – Multi-dimensional Arrays;

        User-defined Functions: Elements of User-defined Functions – Definition of Functions – Return Values and their Types – Function Calls – Function Declaration – Category of Functions – No Arguments and no Return Values – Arguments with Return Values – No Arguments but Return Multiple Values – Nesting of Functions.

UNIT V

        Pointers: Introduction – Understanding pointers – Accessing the Address of a Variable – Declaring Pointer Variables – Initialization of Pointer Variables – Accessing a Variable through its Pointers;

        File Management in C: Introduction – Defining and Opening a File – Closing a File – Input /Output Operations on Files – Error Handling During I/O Operations – Random Access to Files – Command Line Arguments.

TEXT BOOK:

        1. Programming in ANSI C, Fifth Edition, E. Balagurusamy, Tata McGraw Hill Education Private Limited, New Delhi, 2011.

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For candidates admitted from academic year 2016 – 2017 onwards under New CBCS

CORE : OBJECT ORIENTED PROGRAMMING WITH C++

Year   : I   **Semester   : II**
Hours / Week : 4   **Subject Code : 13UCS/USC2C02**

Credits   : 4

UNIT I
Object Oriented Programming Paradigram: Basic concepts — Benefits — Application — Structure of C++ program — Basic data types — User Defined Data types — Derived data types — Manipulators — Type cast operator — Conversions — Control structures

UNIT II
Functions: Function Prototyping — Call by reference — return by reference — Inline function — Default arguments.

Class & Objects: Specifying a class — Define member function — Arrays within a class - Memory allocation — Arrays of Object — Objects as function Arguments — Constructors Parameterized constructor — Copy Constructor — Dynamic constructor — Destructors.

UNIT III
Operator Overloading & type conversion: Define Operators Overloading — Overloading unary operators — Binary operators — Type conversion.

Inheritance: Defining derived class — Single inheritance — Multi level inheritance — Multiple inheritance — Hierarchical inheritance — Hybrid inheritance — Constructors in derived class.

UNIT IV
Pointers, Virtual functions and polymorphism: Pointer to Objects — this pointer — virtual functions — Pure Virtual Functions.
Files: Opening and Closing a File — Detecting end of file — File pointers and their manipulations — Command — line arguments.
UNIT V
Templates: Class templates — Function templates — Overloading of template function — Member function templates.
Exception Handling: Basics — Exception handling mechanism — Throwing mechanism — Catching mechanism — Specify Exceptions.

TEXT BOOK:
1. Object oriented programming with C++, E. Balagurusamy, Tata McGraw Hill Education Private Limited, N.Delhi, 5th Edition, 2012.
REFERENCE BOOK
Robert Lafore, Object oriented programming in C++, 4th Edition, Pearson, 9th Impression, 2013.

CORE: DATABASE MANAGEMENT SYSTEM

Year : II	**Semester : III**
Hours / Week : 4	**Subject Code :** 13UCS/USC3C03
	Credits : 4

UNIT I:

Introduction to Database Systems: – Database System Applications, Database Systems Versus File Systems – View of Data – Data Models – Database Languages – Database Users and Administrators, Transaction Management, Database System Structure, Application Architectures, History of Database Systems.   (Chapter 1, Page No.:1 - 21)- Entity-Relationship Model: - Basic Concepts – Mapping Constraints – Keys –Design Issues - Entity Relationship Diagram – Weak Entity Sets (Chapter 2, Page No.:27-49) – Design of an E-R Database Schema – Reduction of an E-R Schema to Tables. (Chapter 2, Page No.: 56-68)

UNIT II:

Relational Model: – Structure of Relational Databases – The Relational Algebra – Extended Relational Algebra Operations – Modification of the Database – Views – The Tuple Relational Calculus, The Domain Relational Calculus. (Chapter 3, Page No.: 79 – 126)

UNIT III:

SQL :– Basic Structure - Set Operations – Aggregate functions – Nested Queries – Derived Relations – Views – Modification of the database (Chapter 4, Page No.: 135-163) – Data Definition Language – Embedded SQL (Chapter 4, Page No.: 168-175)   – Other SQL Features (Chapter 4, Page No.: 180-182).

UNIT IV:

Relational Database Design: - First Normal Form – Pitfalls in Relational Database Design – Normalization Using Functional Dependencies - Decomposition (Chapter 7, Page No.: 257 -279) – Normalization Using Multivalued Dependencies – Normalization Using Join Dependencies. (Chapter 7, Page No.: 289 - 293)

UNIT V:

Object Oriented Databases: – The Object Oriented Data Model – Object Oriented Languages – Persistent Programming Languages – Persistent C++ Systems.(Chapter 8, Page No.: 307 -330)- Object Relational Databases: – Nested Relations – Complex Types – Inheritance – Reference Types - Querying with Complex Types – Functions and Procedures – Comparison of Object Oriented and Object Relational Databases. (Chapter 8, Page No.: 335-357)

TEXT BOOKS:

1. A.Silberschatz, H.Korth and S.Sudarsan, Database System Concepts, TATA McGraw Hill Inc., 2002, Fourth Edition. (All Units)

REFERENCE BOOKS:

1. Bipin.C.Desai, An Introduction to Database System,West Publishing Company, 2004.
2. C.J.Date, An Introduction to Database Systems, Addition – Wesley, 2007, eighth edition

For candidates admitted from academic year 2013 – 2014 onwards under New CBCS

CORE: .NET TECHNOLOGY -I

Year : II		**Semester : III**
Hours / Week : 5		**Subject Code :** 16UCS/USC3C04
		Credits : 4

UNIT I

Getting started in Visual Basic .Net: Starting Visual Basic .Net- Creating a shortcut to start VB.Net- What is IDE- Opening and closing Windows and toolbars- Opening an Existing project- Using the Auto hide facility- Docking and undocking the windows- placing a window at a suitable location- Resizing a Window – Creating a Useful application- Placing the controls on a form- Selecting a form and the controls- Resizing the form and the controls – Relocating the controls – using the properties window- Setting the properties of form and controls – using the solution explorer – Setting the startup object- Writing an Event procedure.

UNIT II

Setting properties using the Properties window: Classification of properties – Various properties of form- Various properties of Label. Setting Properties Using Event Procedures: Introduction- Setting the text property of label and button- Auto list members and parameters information- Comments – Case sensitivity – Indent sensitivity – Line break for a Line of code- Correcting errors in the code- Setting run time properties: Project event procedure

UNIT III

Visual basic .Net programming Languages: Variables and data types – Hungarian naming convention for data types – Displaying the output on the screen- Dealing with variables – Building the project: My Variables – Addition of Numbers – Dealing with strings – Arithmetic operators – Using various data types – Hexadecimal, Decimal, Octal, and binary system of numbers – Textbox control – Radio button control – Programming statements: If… Then and If.. Then…End If- Programming Statement: If…. Then…Else…End If- Constants

Visual basic .Net programming Languages: Logical operators – Checkbox Control- Iteration Statement – Beware of Infinite Loop – Do while loop Statement- Do loop While Statement- Do until loop statement- Do loop Until statement- For Next Statement- Nesting of the For loops – Arrays.

UNIT IV

Visual basic .Net programming Languages: Using the import statement – Know the functions – The msgbox functions – Function call and arguments – The project "Message box tour" – The text editor toolbar- The input box function- Comparison Operators- List box Control- Programming Statement: Select Case- Concept of Computer- Control and flow charts – Programming design language.

Menus and Dialog Boxes: Basic elements of menu- Generic procedure of creating menus – Creating a simple menu application – Enhancing a simple menu application – Modifying the

UNIT V

Using Built-in Functions: Build-in functions – Mathematical functions – Strings handling functions – Date and Time handling functions – Data type inspection functions –Data type conversion functions – Function format() – Financial functions – Miscellaneous functions – Option statements – Built-in functions Demonstration Application – Seeking Built-in help.

Working with Files: Introduction to Files - Classification of Files – Generic Procedure of processing files – Handling files and folders using functions – Handling files and folders using classes – Directory class – File class – File and Folder manipulation Application – File processing using functions – File processing using streams – Project file processing .

TEXT BOOK:

1. Visual Basic.Net, ShirishChavan, Dorling Kindersley (India) Pvt. Ltd, Third Impression, 2009

PART III Core Subject 4
CORE: DATA STRUCTURES AND ALGORITHMS

Year : II	**Semester** : III	
Hours / Week : 5	**Subject Code :** 13UCS/USC3C05	
	Credits : 5	

UNIT I

Introduction: Over view — Creation and analyses of programs — Arrays: Basics — Representation of arrays — Sparse Matrices — Stacks: Basics — Functions — Evaluation of expressions— Multiple Stacks — Queues: Basics — Functions — Circular Queues — Multiple Queues.

UNIT II

Linked Lists: Single Linked Lists — Linked Stacks and Queues — Storage Pool — Applications — Polynomial Addition — Equivalence Relations —Double Linked Lists: Dynamic Storage Management —. Garbage collection and Compaction.

UNIT III

Trees: Basic Terminology — Binary Trees — Representation and Traversals — Threaded Binary trees — In order traversal — Binary tree representation of Trees — Sets — Union, Find algorithms — Graphs: Transitive Closure — Warshall 's Algorithm — Shortest path problem: Djikstra's algorithm — Minimum Spanning Trees: Prim's algorithm.

UNIT IV

Searching Techniques: Binary, Sequential and Fibonacci searches — Sorting Techniques: Internal sorting sorting with tapes and disks — balanced merge sort — Polyphase merge sort.

UNIT V

Symbol Tables: Static tree and dynamic tree implementations — Hash tables — Index Techniques: Tree indexing— B trees — Trie indexing — Linked File organizations: File Organisations — Sequential, ISAM, Random — Multilists — Inverted Files — Cellular Partitions.

TEXT BOOKS:

1. Fundamentals of Data Structures, Ellis Horowitz and SartajSahni, Computer Science Press, 2002 (UNITS — I, II, III First Paragraph, IV, V).
2.Data Structures Using Pascal, Tanenbaum A. M. and Augestein M. J., Prentice hall, 2nd edition, 1996 (UNIT — III Second Paragraph).

REFERENCE BOOKS:

1. Data Structures through C, YashwantKanetkar, BPB publications, 2003.
2. Data Structures — Algorithms & Applications in C++, SartajSahni, McGraw-Hill, 1998.
3. Data Structures & Algorithm Analysis in C, Mark Allen Weiss, Addison Wesley, 1999.

CORE: JAVA PROGRAMMING

Year	**: II**	**Semester**	**: IV**
Hours / Week: 6		**Subject Code**	**: 16UCS/USC4C06**
		Credits	**: 4**

Unit I

Introduction to java- Introduction to Classes- Inheritance Concepts- Packages and Interfaces: Packages – Access protection Importing packages – interfaces. Exception Handling: Fundamentals – Exception types – Using Try and Catch – nested Try – statements – throw, throws, finally.   (Page Number: 129-246)

Unit II

Multithreaded programming: Thread model – Creating a thread, creating multiple threads – Using Alive ( ) and join ( ) – synchronization – Inter threaded communication. String Handling: String constructors – string operations – character extraction – string comparison – searching – modification – string buffer.(Page Number: 273-297,347-376)

Unit III

I/O: File – Stream classes – Byte streams – character streams – serialization – (Page Number: 537-585) AWT: Controls- Layout manager-Menus (page Number: 735-797)

Unit IV

Applet: Basics – Architecture – Passing parameters to Applets – Skeleton – Simple Applet – Event handling: Event model –Event class –Event listener interface.   (Page Number: 627-684)

Unit V

Java Beans: - Advantages – Application building tools – Using Bean Developer   kit (BDK) - JAR files – Developing simple Bean using the BDK.   (Page Number: 886-898)
RMI: Basics – TCP/IP client sockets – inet Address – URL – Datagram's.(Page Number: 587-629)

Text Book:

1. Herbert Schildt, The Complete Reference -java 2, TATAMcGraw Hill, 2002, Fifth Edition

Reference Books:

1. Patrick Naughton, The JAVA Hand Book, TATAMcGraw Hill, 1997
2. Harley Haim, The internet computer reference, TATAMcGraw Hill,1998, Second Edition

CORE: COMPUTER ORGANIZATION AND ARCHITECTURE

Year   : II   **Semester   : III**
Hours / Week: 4   **Subject Code :** 16UCS/USC4C07
                                                                              Credits   : 4

UNIT I

Central Processor Organization: ALU — Stack organization Instruction formats — Addressing Modes - Data transfer and manipulation — program control program interrupt — parallel processing — pipeline — memory interleaving.

UNIT II

Input/output Organization: peripheral devices — I/O Bus and interface modules — micro processor interface isolated and memory mapped I/O — asynchronous data transfer — handshaking Direct memory access.

UNIT III

Priority interrupts — parallel priority interrupt - I/O processor CPU — IOP communication INTEL 8089 I/O processor — multiprocessor system Organization.

UNIT IV

Arithmetic processor design — comparison and subtraction of unsigned binary numbers — Addition and subtraction algorithm — Multiplication algorithm — Division algorithm — Processor configuration — Design of control — Micro programmed calculator.

UNIT V

Memory Organization — Microcomputer memory — Associative memory — Virtual memory Cache memory — Memory management hardware.

TEXT BOOK:

1. Computer System Architecture, Morris Mano, Eighth Printing (Second Edition),October 1990.

CORE: MODERN STRUCTURED ANALYSIS AND DESIGN TECHNIQUES

Year   : II   **Semester   : IV**
Hours / Week : 5   **Subject Code : 16UCS/USC4C08**

                                                                    Credits   : 4

UNIT I
System: Definition — Types — Systems development Lifecycle — Roles of Systems analyst.
System Analysis: Fact-Finding Techniques — Fact Analysis Techniques — Cost Benefit Analysis.
UNIT II
Structured Analysis Tools: Decision Tables — Decision tree - Structured English — pseudocode — Dataflow diagrams — Data Dictionary — Context Diagrams — System Structure Chart — E-R diagrams —2 examples per tool.
UNIT III
Structured Design — Principles and Tools Input (Form) design — Validation — Output (report) design — Database (File) Design— Procedure (Module) design -- Module cohesion — Module coupling — Size & span of control — Module transformation.
UNIT IV
Documentation Tools: NassiSchneidermann diagrams (Structured Flowchart) — HIPO charts — Warnier Orr diagrams.
Modem Tools: An Introduction: CASE tools(Any 1) -- Class diagrams — Interaction diagrams — Use Case Diagrams.
UNIT V
System Implementation: phases — Training — Testing — Types — Structured Walkthroughs — Quality Assurance Levels — Security of system — Applications.
TEXT BOOK:
1. Analysis and Design of Information Systems, James. A. Senn, McGraw-Hill, 1989. (All Units)
REFERENCE BOOKS:
1. Modern Structured Analysis, Edward Yourdon, Prentice Hall, 1996. (All Units)
2. Fundamentals of Systems Analysis: Using Structured Analysis & Design Techniques, Fitzgerald & F. Fitzgerald, John Wiley & sons, 1987. (Unit II)
3. UML Distilled, Martin Fowler, —, 2nd Edition, 2002. (Unit IV)
4. Systems Analysis & Design, Elias. M. Awad, Galgotia Publications, 1996. (All Units)

Year : II		**Semester** : IV
Hours / Week : 5		**Subject Code** : 16UCS/USC5C09
		Credits : 4

Unit I

INTRODUCTION: What is an Operating System?-Mainframe Systems-Desktop Systems-Multiprocessor Systems-Distributed Systems-Clustered System-Real-Time Systems-Handheld Systems. Operating-System Structures:-System Components-Operating-System Services-System Calls-System Programs-System Structure-Virtual Machines.(Pages 3-19, 55-80)

Unit II

PROCESS MANAGEMENT: Process Concept-Process Scheduling-Operations on Processes-Cooperating Processes-Inter process Communication. CPU Scheduling:-Basic Concepts-Scheduling Criteria- Scheduling Algorithms-Multiple-Processor Scheduling-Real-Time Scheduling. Deadlocks:-System Model-Deadlock Characterization-Methods for Handling Deadlocks-Deadlock Prevention- Deadlock Avoidance- Deadlock Detection-Recovery from Deadlock. (Pages 95 – 109, 151-170, 243 - 264)

Unit III

STORAGE MANAGEMENT: Memory Management:-Background-Swapping-Contiguous Memory Allocation-Paging-Segmentation- Segmentation with Paging. Virtual Memory:-Background-Demand Paging-Process Creation-Page Replacement-Allocation of Frames-Thrashing. (Pages 273-309, 317 – 348)

Unit IV

File-System Implementation:-File-System Structure- File-System Implementation-Directory Implementation-Allocation Methods-Free-Space Management. Mass-Storage Structure:-Disk Structure-Disk Management-Swap-Space Management-RAID Structure-Disk Attachment-Stable-Storage Implementation-Tertiary-Storage Structure. (Pages 411 – 430, 491 – 516)

Unit V - CASE STUDIES:

Windows2000: History-DesignPrinciples-SystemComponents-Environmental Subsystems-File System-Networking-Programmer Interface. Windows XP: History-Design Principles-System Components-Environmental Subsystems-File System-Networking-Programmer Interface.   (Pages 743-780, 789 – 839)

TEXT BOOK :
1. SILBERSCHATZ, GALVIN, GAGNE, OPERATING SYSTEM CONCEPTS, Wiley India Edition (sixth edition), 2007

REFERENCE BOOKS:
1. DeitelDeitelChoffnes, Operating Systems, Pearson Education (third edition), 2003.
2. Stuart E. Madnick, John J.Donovan, Operating Systems, Tata McGraw Hill (third edition),2003

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CORE: CYBER SECURITY

Year :III	**Semester** : V
Hours / Week :4	**Subject Code :** 16UCS/USC5C10
	Credits : **4**

Unit I

Foundations of Cryptography and Security :- Ciphers and Secret Message, Security Attacks and Services. Mathematical Tools for Cryptography : Substitutions and Permutations, Modular Arithmetic, Euclid's Algorithm, Finite Fields, Polynomial Arithmetic. Design Principle of Block ciphers: Theory of Block Cipher Design. Cipher Network Structures, DES and Triple DES, Modes of Operation (ECB, CBC, OFB, CFB) , Strength of DES

Unit II

Block Cipher Algorithms:- IDEA, CAST, Blowfish , Twofish , Rijndael (AES). Pseudo Random Numbers and stream ciphers: Pseudo random sequences, Linear Congruential Generators, Cryptographic Generators, Design of Stream Cipher , RC4, RC5.

Unit III

Public Key Cryptography:- Prime Numbers and Testing for Primality, Factoring Large Numbers, Discrete Logarithms RSA, Diffie- Hellman, ElGamal , Introduction of Elliptic acre Cryptosystems Key Management , Key Exchange Algorithms, Public – Key Cryptography Standards. Hashes and Message Digests: Message Authentication, MD5, SHA-1, RIPEMD, HMAC.

Unit IV

Digital Signatures, Certificates, and Standards:- Digital Signature Standard (DSS and DSA), Public key Infrastructure, Digital Certivicates and Basics of PKCS Standards. Authentication: Kerberos V 4 and V 5, X.509 Authentication Service. Electronic Mail Security : Pretty Good Privacy (PGP) , S /MIME, X.400 . IP and Web Security Protocols: IPSec and Virtual Private Networks, Secure Sockets and Transport Layer (SSL and TLS).

Unit V

System Security: - Computer Virus, Firewall and Design Principles, Cryptography and Network Security. Electronic Commerce Security: Electronic Payment Systems, Secure Electronic Transaction (SET), Protocols (CyberCash, iKey) Ecash (DigiCash), Smart Card Based Systems.

TEXT BOOKS:
Cryptography and Network Security, William Stalling, 4th Edition, PHI.

REFERENCE BOOKS:

1. Applied Cryptography: Protocols & Algorithms, Schneier& Bruce, MGH

CORE: .NET TECHNOLOGY –II

Year : III	Semester : V
Hours / Week: 4	Subject Code : 16UCS/USC5C11

Credits   : 4

UNIT I

Evaluation of .Net- Overview of .Net Framework- Exploring Visual studio IDE- Basic IDE operations.
C# Fundamentals: Identifiers, Keywords, Variables, and constants, Expressions and operators- Selection statements: if, Switch-loops: While, do While, For,foreach-Jump Statement: Goto, Break, Continue.

UNIT II

Exception handling: Try.. Catch.. Finally and throw statements, Checking and Unchecking, Exploring name spaces, Classes and objects, Structs.
OOPS: Encapsulation, Inheritance, Polymorphism, Abstraction and Interfaces. Using Pointers, Delegates and Events.
Dynamic Data type and Dynamic Language Runtime.
UNIT III
Windows Forms: Creating and Customizing
WPF: Controls – Properties and Events
Multithreading: Creating and Scheduling a thread – Synchronizing Threads – Thread Pooling.
File Handling: Working with files – File Compression.

UNIT IV
ADO.Net: Understanding SQL and ADO.Net Entity framework – Data binding in windows forms – Data binding in ASP.Net Applications.
UNIT V
ASP.Net: Web services: Architecture – Properties – ASP.Net AJAX – Security.
Windows services: Various class and installation. Deploying windows and web applications.

TEXT BOOK:
1.C#.Net Programming Black book, Dreamtech Press, 2011.
REFERENCE BOOK:
1. E.Balagurusamy, Programming in C#:A Primer, 3rd Edition, TATA McGrew Hill Education Pvt Limited, New Delhi, 2012.
2. Kevin Hoffman. Microsoft Visual C#, Pearson Education, 2006.
3.V.K.Jain, The Complete Guide to C# Programming, Dreamtech Press, 2001.

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CORE: SOFTWARE ENGINEERING

Year   : III   **Semester**   : VI
Hours / Week : 5   **Subject Code :** 16UCS/USC6C12
                                                Credits   **: 5**

UNIT I
Introduction — software engineering the software process software process models — the linear sequential model — the proto type model — the RAD model — evolutionary software process models — component based development — the formal methods model — fourth generation techniques.

UNIT II
Requirements analysis — requirements elicitation for software — analysis principles -- software prototyping specification — the software requirements — specification — specification review.

UNIT III
Software design and software engineering — the design process — design principles — design concepts — effective modular design — design heuristics for effective modularity — the design model — design documentation.

UNIT IV
Quality concepts. — the quality movement — software quality assurance — software reviews — formal technical reviews — formal approaches to SQA — statistical software quality assurance — software reliability — mistake proofing for software — the ISO 9000 quality standards — the SQA plan.

UNIT V
Software testing fundamentals — test case design - white box testing — basis path testing — control structure testing — black box testing — unit testing — Integration testing — validation testing — system testing.

TEXT BOOK:
1. Software Engineering a Practical Approach, Roger S Pressman, McGraw Hill International Edition, Fifth Edition, 2001.

CORE: WEB PROGRAMMING

Year   : III   **Semester   : VI**
Hours / Week : 5   **Subject Code : 16UCS/USC6C13**

                                                         Credits   : 5
CSS
Unit I
   XML Document: Hello XML- Creating, saving, loading XML document- Structuring data- Advantages of XML document- Attributes –Empty Element tags- XSL.
Unit II
   Document type definition: DTD files- Internal and External DTDs- Element Declaration-Child Elements –Empty elements- Attribute declaration- Attribute types .
Unit III
   CSS layouts: CSS units- The Display property- Box properties- Size – Positioning – Formatting pages. CSS Text styles: Fonts- Color- Text- Backgrounds.

PHP

Unit IV
   Getting started- Data types – Variables- Constants- Operators- Unary operators-Binary operators-Arrays- Conditional Statements- Iterations-Looping.
Unit V
   Functions: User defined functions- Built in functions- PHP Server variables- Working with date and time- Performing mathematical operations. Working with forms- Form elements- Adding elements to a form.

TEXT BOOK:
   1. Ellistte Rusty Harold, XML1.1. Bible, IDG Books Pvt Ltd,7 Edition3rd (Unit I,II III)
   2. Ivan Bayross, HTML, JavaScript, DHTML and PHP, 4th revised edition, Reprinted 2011.

REFERENCE BOOKS:
   1. Heather Williamson, The Complete Reference XML, TATAMcGraw Hill.2002, Fifth Edition.
   2. William J.Pardi T.C. Hill, XML in Action, Microsoft Press,1999, Second Edition.
   3. Heather Williamson, The Complete Reference HTML, TATAMcGraw Hill,2002 Fifth Edition.

CORE: COMMUNICATION NETWORKS

Year : III	**Semester : VI**
Hours / Week : 5	**Subject Code : 16UCS/USC6C14**
	Credits : 5

UNIT I

Uses of Computer Networks — Applications of networks —, network structure — network architectures — ISO reference model example networks.

UNIT II

Transmission and multiplexing — analog transmission — digital transmission — X.2 1 digital interface — circuit, packet switching — terminal. handling — telephone, wireless and satellite communication systems.

UNIT III

Data link layer: Elementary data link protocols — sliding window protocols protocols efficiency and verification. Network layer: Virtual circuits and datagram's — routing algorithms — congestion.

UNIT IV

Transport and Session layers: Transport protocol design issues — interconnection of packets switching networks — session layer design issues teammate procedure call.

UNIT V

Presentation layer: network security and privacy — traditional, public key cryptography — data encryption standard — text compression. Application layer.Network Protocols: TDMA,CDMA, SMS – GSM- GPRS.

TEXT BOOK:

1. Computer networks, Andrew S. Tanenbum, Prentice Hall of India Pvt. Ltd.

REFERENCE BOOKS:

1. Data communication networks and distributed processing, Vyless D. Black.
2. Introduction to business telecommunication, George w.
3. Computer networks and distributed processing, James Martin.