



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



2019 - 2020

Bachelor of Computer Application

Semester-III

Subject: Principles of Management

Month	Topic
July	Unit-I Introduction of Management: Introduction, meaning and concept of management, nature, scope, characteristics and importance of management, role and functions of management, level of management, difference between management and administration, brief review of management thoughts of F.W.Taylor, Henry Fayol, Elton Mayo, Peter Drucker etc.
August	Unit-II Managerial planning and Decision-Making Planning meaning and definition, characteristics and importance of planning, planning process, benefits of ideal planning, limitations of planning, types of plans. Forecasting definition method Unit-III Staffing and Organization
September	definition of staffing needs and importance of organisation, principles of organisation types difference between accountability and responsibility, centralization of authority and decentralisation of authority Unit IV Directing and controlling,

Ashe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwagmare
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

October

definition and importance of it, Principles and techniques of directing need and importance of control process of control techniques of control.

Unit V

Recent, Trends in business Management change management, TQM, Benchmarking Six Sigma, Management Development definition need and importance of management development process methods and techniques.

Ashe
Co-ordinator (ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-III

Subject: OOPS Using C++

Month	Topic
July	Unit I Introduction to C++ Basic Concepts, object oriented programming ,Class, Object, Data Abstraction, benefits and application of OOP, Structure of C++program, Creating a source file, compiling and Linking, Tokens, Expressions and controls structures Introduction, Tokens, Keywords, Identifiers and Constants, Data types-Basic ,User defined and derived, Symbolic constant, Type Compatibility, Variables-Declaration and Dynamic initialization, Reference variable, Operators in C++,Scope resolution operator, Member Referencing operator ,Memory management operators precedence, Control structures-if -else, do while, for, switch
August	Unit II Function in C++ Introduction, the main function, prototyping, call by reference, return by reference, Inline Function-Making an outside function Inline, Arguments-default, constant, Math library functions. Unit III Classes and objects Introduction, rating for class and objects defining, members, functions inside and outside class, nesting of member functions private member, functions Arrays within a class, memory allocation of objects, static data members and static member functions, Array Of objects, objects as function agreements friend, functions returning objects constructors, types of constructor destructors.

Ashe
Co-ordinator
(ADC)
Modern College of Computer Science & I.T.,
Aurangabad.

K. K. Kulkarni
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

September	<p>Unit IV Inheritance Introduction, base, class and derived class examples, types of inheritance virtual, base class, abstract class, constructors in derived class.</p> <p>Unit V Polymorphism compile time, polymorphism function, overloading, operator overloading introduction overloading, unary and binary,</p>
October	<p>operator overloading using friend function, overloading insertion and extraction operators string manipulation using operator overloading runtime polymorphism, pointers to objects pointer to Derived classes virtual functions and pure virtual functions.</p>

gsibe
Co-ordinator (ADC)
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-III

Subject: Business Laws-I

Month	Topic
July	Unit I Indian contract act 1872: Meaning and definition of agreement and contract, features of contract Act, types of contract, essentials of valid contract offer and acceptance breach of contract Unit II Sell of goods act 1930 Meaning and important definition sell of goods act agreement to sell vs, contract of sell essential of valid contract of sell, conduction and warranty sell,
August	Auction and Hire purchase agreement, buyers and sellers' rights and duties. Unit III Negotiable Instrument act 1881 concept and important definition of Act promissory note and cheque, characteristic of the act dishonour of negotiable instrument discharge of negotiable instrument bills of exchange.
September	Unit IV Consumer protection act 2002 meaning and important definition of Act, significance of consumer protection, objectives of the Act, working of consumer protection council composition of consumer disputes redressal agencies
October	Unit V Cyber and IT act 2000 important definition IT act 2000 cyber fraud and cheating copyright meaning and definition licence of the copyright digital signature digital signature certificate

Asibe
Co-ordinator
(ADC)
Modern College of Computer Science & I.T.,
Aurangabad.

Kwagmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-III

Subject: DBMS

Month	Topic
July	Unit I Introduction Theory Data tables DBMS, Characteristics of DBMS need of DBMS attributes entity ER diagrams relationship ODBMS two tier and three tier architecture.
August	Unit II Transactions Theory Concept of transaction acid properties transaction and system concepts states of transaction civilization backup and recovery.
September	Unit III Concurrency Theory Concurrent transaction to phase blocking techniques concurrency control locking techniques ER diagram deadlock. Unit IV Normalisation Theory of EF codd rules,
October	normal forms based on primary key 1 NF,2NF, 3NF BCNF. Unit V MS access Theory and Practical primary key foreign key creating tables in MS access creating primary key foreign key and create queries to fetch data.

Ashe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-III

Subject: E-Business Essential

Month	Topic
July	Unit I Introduction to e-business origin: concept, Nature, definition, features, merits, demerits Unit II E- Business environment information society building process for community,
August	multi option society ethics in electronic business Unit III Business and ICT meaning history importance of internet internet versus online service basic knowledge of computer network worldwide wave web page website
September	Unit IV Business models and supply chain management classification of e-business models' definition of supply chain management elements of SC key issues in SCM
October	Unit V E-payments money and E-payments, different forms of e-payments e banking RTGS NEFT EFT internet banking mobile banking, Google pay Paytm etc and Revision

Shilpa
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
-iC-Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-III

Subject: Data Structure and Algorithm

Month	Topic
July	Unit I Introduction to data structure introduction to data structure type, primitive secondary simple compound linear and Nonlinear data structure Unit II Linear data Structure linear data structure array linked list,
August	Queue Stacks, operations on linear data Structure memory representation of linear data structure Unit III Nonlinear data structure non-linear data Structure, pre-graphs binary tree,
September	structures networks, operations on non-linear data Structure, implementation of data structure in computer memory Unit IV Algorithms concept features and characteristics designing of algorithms for insertion and deletion of records in Array linked list Stack, Queue, Traversal of linked list stack, Queue, binary tree
October	Unit V Graft theory and shorting graph theory terminology sequential representation of graph adjacency Matrix, Linked list presentation of grapes operations on graph Traversing graph, bubble shot, selection short, merge sort insertion sort.

Ashe
(ABC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaylmore

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-IV

Subject: Cost Accountancy

Month	Topic
December	Unit I Cost Accounting: Definition, Nature and Scope of Cost Accounting, Distinction between Cost, Financial and Management Accounting, Classification and Elements of Cost, Material, Labour.
January	Unit II Cost: Prime Cost, Factory/Works Cost, Administrative Cost, Total Cost, Cost of Sales Unit III Preparation of Cost sheet:
February	Unit IV Material: Purchasing, Purchase requisition EOQ purchase procedure receiving and recording of material, Documents, Goods Received Note, Bin Card issue of materials average method
March	Unit V Wages Compensation, methods of wage payment fix rate piece rate contract bonus halsey and Rowan plan.

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwagimane
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY



Reg. No. F-11895/"A'bad"

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

Bachelor of Computer Application

Semester-IV

Subject: Java Programming

Month	Topic
December	Unit I: Overview of Java language: Java history, Java features, how Java differ from C and C++, JVM, Java environment Java programming structure, types of comment, Java tokens, reserve keywords, identifiers, Literals, Operators, separators, variables, constant, data types, array, type casting control statement: branching statement, looping statement
January	Unit II: Classes, objects and method: Introduction, defining classes: fields declaration, methods declaration, creating objects, visibility control, use of 'this' keywords, method parameters, method overloading, static members, final method, inheritance and its types, method overriding, final variable, method and final class, Interface package and exception handling: defining and implementing interface,
February	inner classes, package: create package, accessing package, exception, type of error, multiple catch statement, creating user defined exception, finally clause Unit III: String and Stream: String classes, string buffer classes, stream classes: types of streams, byte stream classes, character stream classes Applets: Introduction to Applet, types of Applet, Applet versus Application, Applet class, advantages of Applet,
March	Applet Lifecycle, my first Applet, Applet tag, passing parameters to Applet Graphics: Basic Shapes: draw line, draw Arc, fill Arc, draw polygon, fill polygon, colour and colour methods, fonts

Asibe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



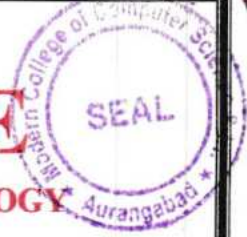
Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-IV

Subject: MIS and DSS

Month	Topic
December	<p>Unit I: Concept, Definition, Characteristics, Objectives, Role and impact of MIS Management as a control system, MIS: A Support to the management, Application of MIS, organisation effectiveness, decision making concept, decision making process, organisation decision making & MIS and decision making.</p> <p>Unit II: Information: A quality product, IT enables services, e-business, wireless technology etc. Information system in business,</p>
January	<p>computer based information system, limitation and disadvantages of IS, Human as an information processor, knowledge and knowledge management system, business intelligence.</p> <p>Unit III: System concept and control: types of system, general models of MIS, need of system analysis, system development, life cycle, development process of MIS, Strategic Design of MIS,</p>
February	<p>business process, Process mode of an organisation, MIS and BPR.</p> <p>Unit IV: DSS: concept and philosophy, objectives and characteristics of DSS, major functions of DSS, components of DSS, DSS generates and tools, limitations of DSS, GDSS, components of GDSS, MIS and benefits of DSS</p>
March	<p>and ONLINE DATA PROCESSING</p> <p>Unit V: Knowledge system, expert system, applications of ES, benefits and limitation of ES, ERP implementation, SCM, CRM.</p>

Ashe
Coordinator

Modern College of Computer Science & I.T.

Aurangabad

Kingmare
HC Principal

Modern College of Computer Science & I.T.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-IV

Subject: Business Law-II

Month	Topic
December	Unit I: Contract act: special contract- law of indemnity, guarantee contract, law of bailment and pledge, Agency Contracts. Unit II: Company law 2013: introduction of company Act, meaning and definition, features of co Act, types of company,
January	share capital and its types, incorporation formation of company, Memorandum and Articles of Association. Unit III: SEBI act 1992: Introduction of the Act, meaning and definitions, basic characteristics of the Act,
February	obligation of SEBI, issue of capital, disclosure, listing and its role in stock market. Unit IV: Cyber and IT act 2000 (with Amendment): need and significance in modern era, character and user of Internet technology, on line contracts, hacking, phishing, privacy terrorism, privacy, section 66A.
March	Unit V Micro, small and medium enterprises development Act 2006 (MSMED Act - 2006): Introduction, definitions, features of the Act, establishment of National Board of MSME, power & duties of the board, classification of MSME, promotional majors of the Act.

Ashe
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
WC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-IV

Subject: Entrepreneurship development

Month	Topic
December	Unit I: Originating Theories of Entrepreneurship: Economic theory, sociological theory, physiological theory, innovative theory Entrepreneurship by Joseph Schumpeter. Theory of Achievement Motivation by MC Clelland-The kakinada Experiment. Hoselitz sociological theory.
January	Unit II: Types of entrepreneurship: Recent trends-Sociopreneur, edupreneur, ecopreneur and agropreneur. Women entrepreneurs, Self Help Groups. Unit III: Identification of business opportunities: Environment scanning- meaning and benefits, factors considered for environment scanning, socio-cultural, economic,
February	technical, demographic, legal and political, geographical and international factors, sources and steps involved in identification of business opportunities. Unit IV: Market research: Meaning, need and importance of market research Techniques in market research- Field survey technique Test marketing, Delphi technique, Desk research, Observation method and Experiment method.

Asibe
CADC
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmore

VC Principal
Modern College of Computer Science & I.T.
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

March	Unit V: Innovation in Entrepreneurship: Purposeful innovation- concept, need, process, principles of purposeful innovation, Incubation centres- Meaning, services and role of incubation centres.
-------	--

Ashe
Coordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
WC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-IV

Subject: Advance Networking

Month	Topic
December	Unit I Basic of computers networks computer networks, definition, goals, application, structure, components, Topology-Bus, Star, Ring, Mesh, types of networks LAN, MAN, WAN, internet broadcast and networks communication. types serial parallel modes of communication: simplex half duplex full duplex server-based LANs and peer-to-peer LANs, Comparison of both, protocols and standards
January	Unit II Network Models: Design issues of the layer protocol Hierarchy ISO-OSI reference model layers in the OS I model functions of each layer terminology, SAP, connection-oriented services, connectionless services, peer entities Internet model (TCP/ IP), comparison of ISO-oh yes, I and TCP IP model, Addressing - physical addresses,
February	Logical addresses, Port addresses. Unit III Transmission Media: Guided media(wired), Coaxial cable, twisted pair, fibre optics cable on guided media wireless. Network Connectivity Devices - Category of connectivity devices passive and
March	active herbs repeaters bridges, transparent bridges loop problem painig tree source routing bridges, switches router getaways network security devices firewall packet filter firewall Proxy firewall.

(Signature)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
HC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



2020-21

Bachelor of Computer Application

Semester-I

Subject: - Accountancy I

Month	Topic
November	Unit-I: Double Entry Accounting System introduction concept & Advantages, Accounting Cycle, types of account, journalizing rules,
December	subsidiary books, ledger, Trial balance journalizing rules, subsidiary books, ledger, Trial balance Unit II: Cash Book- Single Column & double column
January	Unit-III: Trading, profit and loss account and balance sheet (simple exercise on sole trade, final account expected)
February	Unit- IV: Partnership Account: - Introducing, preparation of partnership final accounts.
March	Unit- V: Depreciation, Introduction, meaning and definition, methods of depreciation, Fixed instalment method, Reducing balance method

Ashe
Co-ordinator
(A.P.C.)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

WC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

Bachelor of Computer Application

Semester-I

Subject: - Industrial Economics

Month	Topic
November	Unit-I: Definition and scope of business/ industrial economics- Micro, macro-economic-significance of economics systems
December	Unit-II: Indifference curve Analysis, properties of indifference curves, consumer equilibrium, income effect, price effect and substitution effect.
January	Unit- III: Production- meaning - laws of returns.
February	Unit- IV: Economics Development: - Concept of economic development,
March	indicators of economic development, Obstacles in the economic development of underdeveloped countries, features of underdeveloped economy with reference to India.

Ashe
(ADD)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)




Reg. No. F-11895/"A'bad"

BCA

Semester-I

Subject: - Business Statistics

Month	Topic
November	Unit-I: Introduction, origin & growth of statistics, definitions, functions, scopes and limitations. Unit-II: Organizing survey, planning statistical the survey, scope of survey techniques of data collection Sampling and sample designs.
December	Unit III: Sampling and Sample design Unit- IV: Classification and tabulation of data.
January	Unit- V: Measures of Central Value- Mean, Median and Mode
February	Unit VI: Measures of Dispersion- Range, quartile deviation, mean deviation, standard deviation
March	Unit- VII: Correlation Analysis: - Introduction utility of the study of correlation, correlation and causation types of correlation-positive and negative correlation Karl Pearson's coefficient of correlation.


Asabe
(ADC)
Coordinator
Modern College of Computer Science & I.T.,
Aurangabad.


Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-I

Subject: - Communication Skills

Month	Topic
November	Unit-I: Meaning, nature, scope, importance, functions and limitations of communication Unit-II: Elements of communication-Principles of communication, Barriers to effective communication.
December	Unit- III: Communication Skills: - b. Oral Communication: - Effective speaking: - Principles of effective oral communication, speech preparation - guidelines for effective speech. listening skills-telephonic and group communication- Board and union meetings-interviews, their types, techniques and styles.
January	b. Written Communication: - Meaning and objective of written communication-Medias of written communication- Features of written communication.
February	Preparation, analysis and interpretation of reports. Business letter writing application, references, preparation of tenders and quotations-drafting of sales circular letters
March	Unit- IV: Use of electric equipment in business communication-A hands on experiments on telex, fax, pager, cellular phone, computer and internet.

Ashe
Co-ordinator
(AAC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-I

Subject: - Basic of Web Technology

Month	Topic
November	Unit-I: HTML & Forms Introduction to HTML, WWW, W3C, Web publishing, common HTML, Tags physical & Logical, some basic tags like, changing background colour of page, text colour etc., Text formatting tags, tags ordered & Unordered List Tags, Inserting image, Links: text, image links, image mapping
December	Unit-II: Tables Tables, Frames, Form Introduction with text box, text area, buttons, List box, radio, checkbox, header & footer, Index form creating, mobile responsive, videos, songs.
January	Unit- III: CSS Introduction to Style sheet, types of style sheets- Inline, External, Embedded CSS, text formatting properties,
February	CSS Border, margin properties, Positioning Use of classes in CSS, colour properties, use of <div> & , padding, CSS multiple columns
March	Unit- IV: JavaScript Basic Introduction to Java Script, variable, commands, operations, syntax, objects, data types, JavaScript DOM theory.

Ashe
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghnare

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

Bachelor of Computer Application

Semester-II

Subject: - Accountancy II

Month	Topic
April	Unit-I: Goodwill of partnership firm Meaning, Need, factors affecting goodwill, methods of vaulting goodwill, average profit method, super profit method
May	Unit-II: Accounts of non-trading concern - preparation of recipes and payment accounts, Income and expenditure account and balance sheet
June	Unit- III: - Company Final Accounts Treatment of provision, treatment of dividends, interim and final dividend on shares, income tax on dividends, payment of dividends, unclaimed dividends,
July	Unit- III: - Company Final Accounts treatment of preliminary expenses, capital profit, Income tax provision, advance payment, payment of tax, TDS, simple exercise expected.
August	Unit- IV: - Single entry system Concept-ascertainment of profit from records of single-entry method.

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

Bachelor of Computer Application

Semester-II

Subject: - Industrial Organization

Month	Topic
April	Unit-I: Concept of Industrialization: -What is industrialization, its determinants problems of Industrialization social responsibility of business.
May	Unit-II: Scale of operation and size of business units (with special reference to India). Economics of scales, meaning of large medium and small size business relative advantages and disadvantages
June	Unit- III: - Concept of concentration of power, combinations, process of integration vertical horizontal lateral and diagonal and service integration types; pools, trusts carte Holding companies,
July	syndicates mergers and amalgamation multi-directorship interlocking, restructuring and rationalization.
August	Unit- IV: - Industrial policy resolutions of 1991 & WTO Corporate structure of business and essentials of corporate governance

Asibe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwalehmare
VC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-II

Subject: - Mathematics

Month	Topic
April	Unit-I: Logarithms, rules for multiplication division and exponentiation
May	Unit-II: Permutations, combinations and binomial theorem
June	Unit- III: - Determinate different methods of calculating determinants.
July	Unit- IV: - Matrix- representation- Addition, subtraction, multiplication and division.
August	Inverse, Transpose, Adjoint cofactor-singular arrays vectors.

Ashe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-II

Subject: -Programming In C

Month	Topic
April	Unit-I: 1) Introduction and importance of C language 2) Constants, Variables data types: - character set constant - keywords and identifiers variables data types declaration and assignment of variable defining symbolic constants.
May	Unit-II: <ul style="list-style-type: none">Operators and expressions: - arithmetic, relational and logical operations assignment, increment and expression its evaluation hierarchy of arithmetic operations evaluations, precedence and associativity mathematical functions.Decision making and branching: - If statement switch statement GOTO statement-the? Operators.Decision making and looping: WHILEDO, and FOR statements
June	Unit- III: - Arrays: <ul style="list-style-type: none">One dimensional - Two dimensional and multidimensional arrays Handling of character set: - <ul style="list-style-type: none">Declaration & initialization of string variables reading from and writing to screen arithmetic operations string handling functions. Structures and Unions: - <ul style="list-style-type: none">Definitions initialization and assigning values to members arrays of structure and arrays within structure with in structure union size of Structures.
	Unit- IV: - pointers: - Declaration and initialization of pointers- pointer expression- pointer and arrays- pointer and character strings pointers and functions points and structures pointer on pointers

(Signature)
Coordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

July	<ul style="list-style-type: none">File maintenance in "C" Defining. opening and closing a file input operation on a file random
August	access to file command line arguments User defined functions: - Form of "C" functions calling a function nesting of functions recursion functions with arrays.

Ashe
Co-ordinator (ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

Bachelor of Computer Application

Semester-II

Subject: -Principles of Management

Month	Topic
April	Unit-I: Definition, nature and scope of management, importance, management as an art, science and professions, different approaches to management.
May	Unit-II: Evolution of management though contribution of Taylor, Fayol, Follet, Drucker.
June	, Unit- III: -Management process, planning, organizing, staffing, direction, controlling, coordination, leadership
July	Unit- IV: - Functional management, Human resources management,
August	marketing management, financial management, material management

Ashe
(CADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Annual Teaching Plan 2021-22

Bachelor of Computer Application

Semester-I

Subject: - Accountancy I

Month	Topic
October	Unit-I: Double Entry Accounting System introduction concept & Advantages, Accounting Cycle, types of account, journalizing rules, subsidiary books, ledger, Trial balance journalizing rules, subsidiary books, ledger, Trial balance
November	Unit II: Cash Book- Single Column & double column Unit-III: Trading, profit and loss account and balance sheet (simple exercise on sole trade, final account expected)
December	Unit- IV: Partnership Account: - Introducing, preparation of partnership final accounts. Unit- V: Depreciation, Introduction,
January	Unit- V: Depreciation, Introduction, meaning and definition, methods of depreciation, Fixed instalment method, Reducing balance method

Ashe
Co-ordinator (APC)
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
WC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-I

Subject: - Industrial Economics

Month	Topic
October	Unit-I: Definition and scope of business/ industrial economics- Micro, macro-economic-significance of economics systems
November	Unit-II: Indifference curve Analysis, properties of indifference curves, consumer equilibrium, income effect, price effect and substitution effect.
December	Unit- III: Production- meaning - laws of returns. Unit- IV: Economics Development: - Concept of economic development,
January	indicators of economic development, Obstacles in the economic development of underdeveloped countries, features of underdeveloped economy with reference to India.

Asibe
Co-ordinator (ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

Bachelor of Computer Application

Semester-I

Subject: - Business Statistics

Month	Topic
October	Unit-I: Introduction, origin & growth of statistics, definitions, functions, scopes and limitations. Unit-II: Organizing survey, planning statistical the survey, scope of survey techniques of data collection Sampling and sample designs.
November	Unit III: Sampling and Sample design Unit- IV: Classification and tabulation of data. Unit- V: Measures of Central Value- Mean, Median and Mode
December	Unit VI: Measures of Dispersion- Range, quartile deviation, mean deviation, standard deviation
January	Unit- VII: Correlation Analysis: - Introduction utility of the study of correlation, correlation and causation types of correlation-positive and negative correlation Karl Pearson's coefficient of correlation.

Ashe
Coordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kulagharane

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

Bachelor of Computer Application

Semester-I

Subject: - Communication Skills

Month	Topic
October	Unit-I: Meaning, nature, scope, importance, functions and limitations of communication Unit-II: Elements of communication-Principles of communication, Barriers to effective communication.
November	Unit- III: Communication Skills: - a. Oral Communication: - Effective speaking: - Principles of effective oral communication, speech preparation - guidelines for effective speech. listening skills-telephonic and group communication- Board and union meetings-interviews, their types, techniques and styles.
December	a. Written Communication: - Meaning and objective of written communication-Medias of written communication- Features of written communication. Preparation, analysis and interpretation of reports. Business letter writing application, references, preparation of tenders and quotations-drafting of sales circular letters
January	Unit- IV: Use of electric equipment in business communication-A hands on experiments on telex, fax, pager, cellular phone, computer and internet.

Ashe
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

K. Waghmore
VC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-I

Subject: - Basic of Web Technology

Month	Topic
October	Unit-I: HTML & Forms Introduction to HTML, WWW, W3C, Web publishing, common HTML, Tags physical & Logical, some basic tags like, changing background colour of page, text colour etc., Text formatting tags, tags ordered & Unordered List Tags, Inserting image, Links: text, image links, image mapping
November	Unit-II: Tables Tables, Frames, Form Introduction with text box, text area, buttons, List box, radio, checkbox, header & footer, Index form creating, mobile responsive, videos, songs.
December	Unit- III: CSS Introduction to Style sheet, types of style sheets- Inline, External, Embedded CSS, text formatting properties, CSS Border, margin properties, Positioning Use of classes in CSS, colour properties,
January	use of <div> & , padding, CSS multiple columns Unit- IV: JavaScript Basic Introduction to Java Script, variable, commands, operations, syntax, objects, data types, JavaScript DOM theory.

Asibe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-III

Subject: Principles of Management

Month	Topic
October	Unit-I Introduction of Management: Introduction, meaning and concept of management, nature, scope, characteristics and importance of management, role and functions of management, level of management, difference between management and administration, brief review of management thoughts of F.W.Taylor, Henry Fayol, Elton Mayo, Peter Drucker etc.
November	Unit-II Managerial planning and Decision-Making Planning meaning and definition, characteristics and importance of planning, planning process, benefits of ideal planning, limitations of planning, types of plans. Forecasting definition method Unit-III Staffing and Organization
December	definition of staffing needs and importance of organisation, principles of organisation types difference between accountability and responsibility, centralization of authority and decentralisation of authority Unit IV Directing and controlling,

Asibe
Co-ordinator
(ADCS)

Modern College of Computer Science & I.T.,
Aurangabad.

Kulag hmore
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



definition and importance of it, Principles and techniques of directing need and importance of control process of control techniques of control.

January

Unit V

Recent, Trends in business Management change management, TQM, Benchmarking Six Sigma, Management Development definition need and importance of management development process methods and techniques.

Abhe
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-III

Subject: OOPS Using C++

Month	Topic
October	Unit I Introduction to C++ Basic Concepts, object oriented programming ,Class, Object, Data Abstraction, benefits and application of OOP, Structure of C++program, Creating a source file, compiling and Linking, Tokens, Expressions and controls structures Introduction, Tokens, Keywords, Identifiers and Constants, Data types-Basic ,User defined and derived, Symbolic constant, Type Compatibility, Variables-Declaration and Dynamic initialization, Reference variable, Operators in C++,Scope resolution operator, Member Referencing operator ,Memory management operators precedence, Control structures-if -else, do while, for, switch
November	Unit II Function in C++ Introduction, the main function, prototyping, call by reference, return by reference, Inline Function-Making an outside function Inline, Arguments-default, constant, Math library functions. Unit III Classes and objects Introduction, rating for class and objects defining, members, functions inside and outside class, nesting of member functions private member, functions Arrays within a class, memory allocation of objects, static data members and static member functions, Array Of objects, objects as function agreements friend, functions returning objects constructors, types of constructor destructors.

Asibe
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kiwaghmore
Principal
Modern College of Computer Science & I.T.
Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

December	<p>Unit IV Inheritance Introduction, base, class and derived class examples, types of inheritance virtual, base class, abstract class, constructors in derived class.</p> <p>Unit V Polymorphism compile time, polymorphism function, overloading, operator overloading introduction overloading, unary and binary,</p>
January	<p>operator overloading using friend function, overloading insertion and extraction operators string manipulation using operator overloading runtime polymorphism, pointers to objects pointer to Derived classes virtual functions and pure virtual functions.</p>

Ashe
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



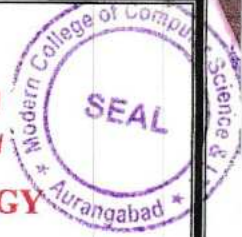
Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-III

Subject: Business Laws-I

Month	Topic
October	Unit I Indian contract act 1872: Meaning and definition of agreement and contract, features of contract Act, types of contract, essentials of valid contract offer and acceptance breach of contract Unit II Sell of goods act 1930 Meaning and important definition sell of goods act agreement to sell vs, contract of sell essential of valid contract of sell, conduction and warranty sell,
November	Auction and Hire purchase agreement, buyers and sellers' rights and duties. Unit III Negotiable Instrument act 1881 concept and important definition of Act promissory note and cheque, characteristic of the act dishonour of negotiable instrument discharge of negotiable instrument bills of exchange.
December	Unit IV Consumer protection act 2002 meaning and important definition of Act, significance of consumer protection, objectives of the Act, working of consumer protection council composition of consumer disputes redressal agencies
January	Unit V Cyber and IT act 2000 important definition IT act 2000 cyber fraud and cheating copyright meaning and definition licence of the copyright digital signature digital signature certificate

Asibe
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kaaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-III

Subject: DBMS

Month	Topic
October	Unit I Introduction Theory Data tables DBMS, Characteristics of DBMS need of DBMS attributes entity ER diagrams relationship ODBMS two tier and three tier architecture.
November	Unit II Transactions Theory Concept of transaction acid properties transaction and system concepts states of transaction civilization backup and recovery.
December	Unit III Concurrency Theory Concurrent transaction to phase blocking techniques concurrency control locking techniques ER diagram deadlock. Unit IV Normalisation Theory of EF codd rules,
January	normal forms based on primary key 1 NF,2NF, 3NF BCNF. Unit V MS access Theory and Practical primary key foreign key creating tables in MS access creating primary key foreign key and create queries to fetch data.

Asibe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kesagimare

VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-III

Subject: E-Business Essential

Month	Topic
October	Unit I Introduction to e-business origin: concept, Nature, definition, features, merits, demerits Unit II E- Business environment information society building process for community,
November	multi option society ethics in electronic business Unit III Business and ICT meaning history importance of internet internet versus online service basic knowledge of computer network worldwide wave web page website
December	Unit IV Business models and supply chain management classification of e-business models' definition of supply chain management elements of SC key issues in SCM
January	Unit V E-payments money and E-payments, different forms of e-payments e banking RTGS NEFT EFT internet banking mobile banking, Google pay Paytm etc and Revision

Ashe
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kishore
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-III

Subject: Data Structure and Algorithm

Month	Topic
October	Unit I Introduction to data structure introduction to data structure type, primitive secondary simple compound linear and Nonlinear data structure Unit II Linear data Structure linear data structure array linked list,
November	Queue Stacks, operations on linear data Structure memory representation of linear data structure Unit III Nonlinear data structure non-linear data Structure, pre-graphs binary tree,
December	structures networks, operations on non-linear data Structure, implementation of data structure in computer memory Unit IV Algorithms concept features and characteristics designing of algorithms for insertion and deletion of records in Array linked list Stack, Queue, Traversal of linked list stack, Queue, binary tree
January	Unit V Graft theory and shorting graph theory terminology sequential representation of graph adjacency Matrix, Linked list presentation of grapes operations on graph Traversing graph, bubble shot, selection short, merge sort insertion sort.

Asibe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

K. Waghmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-II

Subject: - Accountancy II

Month	Topic
March	Unit-I: Goodwill of partnership firm Meaning, Need, factors affecting goodwill, methods of valuing goodwill, average profit method, super profit method
April	Unit-II: Accounts of non-trading concern - preparation of recipes and payment accounts, Income and expenditure account and balance sheet Unit- III: - Company Final Accounts Treatment of provision,
May	treatment of dividends, interim and final dividend on shares, income tax on dividends, payment of dividends, unclaimed dividends, Unit- III: - Company Final Accounts treatment of preliminary expenses, capital profit, Income tax provision,
June	advance payment, payment of tax, TDS, simple exercise expected. Unit- IV: - Single entry system Concept-ascertainment of profit from records of single-entry method.

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghnore
WC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-II

Subject: - Industrial Organization

Month	Topic
March	Unit-I: Concept of Industrialization: -What is industrialization, its determinants problems of Industrialization social responsibility of business.
April	Unit-II: Scale of operation and size of business units (with special reference to India). Economics of scales, meaning of large medium and small size business relative advantages and disadvantages
May	Unit- III: - Concept of concentration of power, combinations, process of integration vertical horizontal lateral and diagonal and service integration types; pools, trusts carte Holding companies, syndicates mergers and amalgamation multi-directorship interlocking, restructuring and rationalization.
June	Unit- IV: - Industrial policy resolutions of 1991 & WTO Corporate structure of business and essentials of corporate governance

Ashe
(CADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kulaghamare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-II

Subject: - Mathematics

Month	Topic
March	Unit-I: Logarithms, rules for multiplication division and exponentiation
April	Unit-II: Permutations, combinations and binomial theorem
May	Unit- III: - Determinate different methods of calculating determinants.
	Unit- IV: - Matrix- representation- Addition,
June	subtraction, multiplication and division. Inverse, Transpose, Adjoint cofactor-singular arrays vectors.

Ashe
Coordinator
(CADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

Bachelor of Computer Application

Semester-II

Subject: -Programming In C

Month	Topic
March	Unit-I: 1) Introduction and importance of C language 2) Constants, Variables data types: - character set constant - keywords and identifiers variables data types declaration and assignment of variable defining symbolic constants. Unit-II: <ul style="list-style-type: none">• Operators and expressions: - arithmetic, relational and logical operations assignment,
April	increment and expression its evaluation hierarchy of arithmetic operations evaluations, precedence and associativity mathematical functions. <ul style="list-style-type: none">• Decision making and branching: - If statement switch statement GOTO statement-the? Operators.• Decision making and looping: WHILEDO, and FOR statements Unit- III: - Arrays: <ul style="list-style-type: none">• One dimensional - Two dimensional and multidimensional arrays
May	Handling of character set: - <ul style="list-style-type: none">• Declaration & initialization of string variables reading from and writing to screen arithmetic operations string handling functions. Structures and Unions: - <ul style="list-style-type: none">• Definitions initialization and assigning values to members arrays of structure and arrays within structure with in structure union size of Structures. Unit- IV: - pointers: -

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	Declaration and initialization of pointers-
June	<p>pointer expression- pointer and arrays- pointer and character strings pointers and functions points and structures pointer on pointers</p> <ul style="list-style-type: none">• File maintenance in "C" <p>Defining. opening and closing a file input operation on a file random access to file command line arguments</p> <p>User defined functions: -</p> <p>Form of "C" functions calling a function nesting of functions recursion functions with arrays.</p>

Ashe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-II

Subject: -Principles of Management

Month	Topic
March	Unit-I: Definition, nature and scope of management, importance, management as an art, science and professions, different approaches to management.
April	Unit-II: Evolution of management though contribution of Taylor, Fayol, Follet, Drucker.
May	, Unit- III: -Management process, planning, organizing, staffing, direction, controlling, coordination, leadership
June	Unit- IV: - Functional management, Human resources management, marketing management, financial management, material management

Ashe
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-IV

Subject: Cost Accountancy

Month	Topic
March	Unit I Cost Accounting: Definition, Nature and Scope of Cost Accounting, Distinction between Cost, Financial and Management Accounting, Classification and Elements of Cost, Material, Labour.
April	Unit II Cost: Prime Cost, Factory/Works Cost, Administrative Cost, Total Cost, Cost of Sales Unit III Preparation of Cost sheet:
May	Unit IV Material: Purchasing, Purchase requisition EOQ purchase procedure receiving and recording of material, Documents, Goods Received Note, Bin Card issue of materials average method
June	Unit V Wages Compensation, methods of wage payment fix rate piece rate contract bonus halsey and Rowan plan.

Ashe
Coordinator
CA/ICS

Modern College of Computer Science & I.T.,
Aurangabad.

Kusagmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-IV

Subject: Java Programming

Month	Topic
March	Unit I: Overview of Java language: Java history, Java features, how Java differ from C and C++, JVM, Java environment Java programming structure, types of comment, Java tokens, reserve keywords, identifiers, Literals, Operators, separators, variables, constant, data types, array, type casting control statement: branching statement, looping statement
April	Unit II: Classes, objects and method: Introduction, defining classes: fields declaration, methods declaration, creating objects, visibility control, use of 'this' keywords, method parameters, method overloading, static members, final method, inheritance and its types, method overriding, final variable, method and final class, Interface package and exception handling: defining and implementing interface,
May	inner classes, package: create package, accessing package, exception, type of error, multiple catch statement, creating user defined exception, finally clause Unit III: String and Stream: String classes, string buffer classes, stream classes: types of streams, byte stream classes, character stream classes Applets: Introduction to Applet, types of Applet, Applet versus Application, Applet class, advantages of Applet,
June	Applet Lifecycle, my first Applet, Applet tag, passing parameters to Applet Graphics: Basic Shapes: draw line, draw Arc, fill Arc, draw polygon, fill polygon, colour and colour methods, fonts

Asibe
Co-ordinator (ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kedaghnare

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-IV

Subject: MIS and DSS

Month	Topic
March	Unit I: Concept, Definition, Characteristics, Objectives, Role and impact of MIS Management as a control system, MIS: A Support to the management, Application of MIS, organisation effectiveness, decision making concept, decision making process, organisation decision making & MIS and decision making. Unit II: Information: A quality product, IT enables services, e-business, wireless technology etc. Information system in business,
April	computer based information system, limitation and disadvantages of IS, Human as an information processor, knowledge and knowledge management system, business intelligence. Unit III: System concept and control: types of system, general models of MIS, need of system analysis, system development, life cycle, development process of MIS, Strategic Design of MIS,
May	business process, Process mode of an organisation, MIS and BPR. Unit IV: DSS: concept and philosophy, objectives and characteristics of DSS, major functions of DSS, components of DSS, DSS generates and tools, limitations of DSS, GDSS, components of GDSS, MIS and benefits of DSS
June	and ONLINE DATA PROCESSING Unit V: Knowledge system, expert system, applications of ES, benefits and limitation of ES, ERP implementation, SCM, CRM.

(Signature)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad

(Signature)
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-IV

Subject: Business Law-II

Month	Topic
March	Unit I: Contract act: special contract- law of indemnity, guarantee contract, law of bailment and pledge, Agency Contracts. Unit II: Company law 2013: introduction of company Act, meaning and definition, features of co Act, types of company,
April	share capital and its types, incorporation formation of company, Memorandum and Articles of Association. Unit III: SEBI act 1992: Introduction of the Act, meaning and definitions, basic characteristics of the Act,
May	obligation of SEBI, issue of capital, disclosure, listing and its role in stock market. Unit IV: Cyber and IT act 2000 (with Amendment): need and significance in modern era, character and user of Internet technology, on line contracts, hacking, phishing, privacy terrorism, privacy, section 66A.
June	Unit V Micro, small and medium enterprises development Act 2006 (MSMED Act - 2006): Introduction, definitions, features of the Act, establishment of National Board of MSME, power & duties of the board, classification of MSME, promotional majors of the Act.

Ashe
Coordinator (ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwadmane

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-IV

Subject: Entrepreneurship development

Month	Topic
March	Unit I: Originating Theories of Entrepreneurship: Economic theory, sociological theory, physiological theory, innovative theory Entrepreneurship by Joseph Schumpeter. Theory of Achievement Motivation by MC Cleland-The Kakinada Experiment. Hoselitz sociological theory.
April	Unit II: Types of entrepreneurship: Recent trends-Sociopreneur, edupreneur, ecopreneur and agropreneur. Women entrepreneurs, Self Help Groups. Unit III: Identification of business opportunities: Environment scanning- meaning and benefits, factors considered for environment scanning, socio-cultural, economic,
May	technical, demographic, legal and political, geographical and international factors, sources and steps involved in identification of business opportunities. Unit IV: Market research: Meaning, need and importance of market research Techniques in market research- Field survey technique Test marketing, Delphi technique, Desk research, Observation method and Experiment method.

Ashe
Co-ordinator (APDC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.

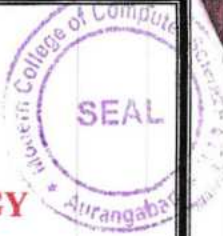


PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

June	Unit V: Innovation in Entrepreneurship: Purposeful innovation- concept, need, process, principles of purposeful innovation, Incubation centres- Meaning, services and role of incubation centres.
------	--

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



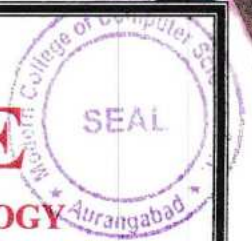
Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-IV

Subject: Advance Networking

Month	Topic
March	Unit I Basic of computers networks computer networks, definition, goals, application, structure, components, Topology-Bus, Star, Ring, Mesh, types of networks LAN, MAN, WAN, internet broadcast and networks communication. types serial parallel modes of communication: simplex half duplex full duplex server-based LANs and peer-to-peer LANs, Comparison of both, protocols and standards
April	Unit II Network Models: Design issues of the layer protocol Hierarchy ISO-OSI reference model layers in the OS I model functions of each layer terminology, SAP, connection-oriented services, connectionless services, peer entities Internet model (TCP/ IP), comparison of ISO-oh yes, I and TCP IP model, Addressing -physical addresses,
May	Logical addresses, Port addresses. Unit III Transmission Media: Guided media(wired), Coaxial cable, twisted pair, fibre optics cable on guided media wireless. Network Connectivity Devices - Category of connectivity devices passive and
June	active herbs repeaters bridges, transparent bridges loop problem paining tree source routing bridges, switches router getaways network security devices firewall packet filter firewall Proxy firewall.

Ashe
Coordinator

Modern College of Computer Science & I.T.,
Aurangabad.

K. D. Ghuman
Principal

Modern College of Computer Science & I.T.,
Aurangabad.

Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE


OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



	Requirements Analysis; Requirements Validation and Management.
September	<p>Size Estimating Cost Estimation Models: COCOMO, COCOMO II; Software Risk Management.</p> <p>Activities in Requirement Determination: a) Requirements Anticipation b) Requirements Investigation c) Requirement Specifications</p> <p>Unit IV Unit Software Requirement Specification (SRS): Structure and contents of the requirements specification analysis modelling, types of requirements-functional and non-functional, Quality criteria, requirements definition, SRS format, Fundamental problems in defining requirements. 2) Structure and standards followed for SRS.</p>
October	<p>3) characteristics of good SRS-Unambiguous, complete, verifiable, consistent, modifiable, traceable, usable during maintenance.</p> <p>Unit V Maintenance: Types of Maintenance, Maintenance Cost, Reverse Engineering, Introduction to legacy systems.</p> <p>Documentation: Types, Role of Documentation maintenance.</p>


Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.


IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-V

Subject: Retail Management (Elective)

Month	Topic
July	<p>Unit I Introduction to retailing Meaning, Definition, Scope of Retailing, Role and Functions of 12 retailers, Advantages of Retailing Organized and Unorganized Retailing, Indian Retail Scenario Vs. Global Retail Scenario, Role of Retail in Nation's Economy.</p> <p>Unit II Theories and Formats of Retailing 1.Environmental Theory 2 Cyclical Theory</p>
August	<p>3. Conflictual Theory Formats of Retailing Store based, Nou store and Service retailing.</p> <p>Unit III Retailing Planning and Development: Understanding the Retail Customer Marketing Research for Retailing Strategic Retail Planning Process Retail Strategies: Growth Strategies Positioning a outlet developing a retail trend strategy, expansion strategy. pricing strategy, Retail Location and Site Selection.</p>
September	<p>Unit IV Merchandise Management: Meaning of Merchandising Factors influencing V Merchandising. Basics & Types of Retail Merchandising, Concept & Process of merchandise Planning, Methods of Merchandise Procurement, Retail Pricing and Evaluating.</p> <p>Unit V Retail HRM & New Trends in Retailing: identifying Manpower requirements,</p>

(Signature)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



October

Recruitment, Selection & Training, Emerging Trends in Retailing in India, Technology in Retailing. Non-son tiling te-retailing) The Impact of Information Technology in retailing Legal aspects in retailing, Social issues in retailing. Ethical issues in retailing. Innovative Retail During & Post COVID-19 Pandemic.

Ashe
Co-ordinator
(ADC)
Modern College of Computer Science & I.T.,
Aurangabad.

Kuldeep Kumar
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-II

Subject: - Accountancy II

Month	Topic
December	Unit-I: Goodwill of partnership firm Meaning, Need, factors affecting goodwill, methods of vaulting goodwill, average profit method, super profit method Unit-II: Accounts of non-trading concern - preparation of recipes and payment accounts, Income and expenditure account and balance sheet
January	Unit- III: - Company Final Accounts Treatment of provision, treatment of dividends, interim and final dividend on shares, income tax on dividends,
February	payment of dividends, unclaimed dividends, treatment of preliminary expenses, capital profit, Income tax provision, advance payment, payment of tax, TDS, simple exercise expected.
March	Unit- IV: - Single entry system Concept-ascertainment of profit from records of single-entry method.

Ashe
Coordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kesavnare

W/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-II

Subject: - Industrial Organization

Month	Topic
December	Unit-I: Concept of Industrialization: - What is industrialization, its determinants problems of Industrialization social responsibility of business.
January	Unit-II: Scale of operation and size of business units (with special reference to India). Economics of scales, meaning of large medium and small size business relative advantages and disadvantages
February	Unit- III: - Concept of concentration of power, combinations, process of integration vertical horizontal lateral and diagonal and service integration types; pools, trusts carte
March	Holding companies, syndicates mergers and amalgamation multi-directorship interlocking, restructuring and rationalization.
March	Unit- IV: - Industrial policy resolutions of 1991 & WTO Corporate structure of business and essentials of corporate governance

Ashe
Coordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-II

Subject: - Mathematics

Month	Topic
December	Unit-I: Logarithms, rules for multiplication division and exponentiation Unit-II: Permutations,
January	combinations and binomial theorem Unit- III: - Determinate different methods of calculating determinants.
February	Unit- IV: - Matrix- representation- Addition, subtraction, multiplication and division.
March	Inverse, Transpose, Adjoint cofactor-singular arrays vectors.

Asibe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

Bachelor of Computer Application

Semester-II

Subject: -Programming In C

Month	Topic
December	<p>Unit-I: 1) Introduction and importance of C language 2) Constants, Variables data types: - character set constant - keywords and identifiers variables data types declaration and assignment of variable defining symbolic constants.</p> <p>Unit-II:</p> <ul style="list-style-type: none">Operators and expressions: - arithmetic, relational and logical operations assignment, increment and expression its evaluation hierarchy of arithmetic operations evaluations, precedence and associativity mathematical functions.
January	<ul style="list-style-type: none">Decision making and branching: - If statement switch statement GOTO statement-the? Operators.Decision making and looping: WHILEDO, and FOR statements <p>Unit- III: - Arrays:</p> <ul style="list-style-type: none">One dimensional - Two dimensional and multidimensional arraysHandling of character set: - Declaration & initialization of string variables reading from and writing to screen arithmetic operations string handling functions.
February	<ul style="list-style-type: none">Structures and Unions: -Definitions initialization and assigning values to members arrays of structure and arrays within structure with in structure union size ofStructures. <p>Unit- IV: - pointers: -</p>

(Signature)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	Declaration and initialization of pointers- pointer expression- pointer and arrays- pointer and character strings pointers and functions points and structures pointer on pointers
March	<ul style="list-style-type: none">• File maintenance in "C" Defining. opening and closing a file input operation on a file random access to file command line arguments User defined functions: - Form of "C" functions calling a function nesting of functions recursion functions with arrays.

Ashe
Coordinator (ADU)
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaglmone
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-II

Subject: -Principles of Management

Month	Topic
December	Unit-I: Definition, nature and, scope of management, importance, management as an art, science and professions, different approaches to management.
January	Unit-II: Evolution of management though contribution of Taylor, Fayol, Follet, Drucker. Unit- III: - Management process
February	, planning, organizing, staffing, direction, controlling, coordination, leadership Unit- IV: - Functional management, Human resources management,
March	marketing management, financial management, material management,

(A. Babhe)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(K. Waghmare)

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

Bachelor of Computer Application

Semester-IV

Subject: Cost Accountancy

Month	Topic
December	Unit I Cost Accounting: Definition, Nature and Scope of Cost Accounting, Distinction between Cost, Financial and Management Accounting, Classification and Elements of Cost, Material, Labour.
January	Unit II Cost: Prime Cost, Factory/Works Cost, Administrative Cost, Total Cost, Cost of Sales Unit III Preparation of Cost sheet: Documents, Goods Received Note, Bin Card issue of materials average method
February	Unit IV Material: Purchasing, Purchase requisition EOQ purchase procedure receiving and recording of material,
March	Unit V Wages Compensation, methods of wage payment fix rate piece rate contract bonus halsey and Rowan plan.

Asibe
Coordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-VI

Subject: Elements of Commercial (HTML5)

Month	Topic
December	Unit I: HTML5 Introduction, form elements – Date, Date Time, Email, Number, Range, Tel, Colour, URL, Date, Time, Local, Month, Week, Time, Placeholder Attribute, Autofocus Attribute, Required Attributes, HTML Audio, Video Unit II: XML Concept of XML features of XML, Writing XML elements attributes etc., XML with CSS, programs on it., XML with DSO, programs on it., XML Namespace, XML DTD, programs on it. , XML schemas, writing simple sheet using XSLT, SAX Parser, DOM Parse, Introduction to SOAP, Examples of XML
January	Unit III: j Query- I Introduction to jQuery, Syntax Overview, Anatomy of a jQuery Script, creating first jQuery script, Traversing the DOM, Selecting Elements with jQuery, Refining & Filtering Selections, Selecting Form Elements, Working with Selections – Chaining, Getters & Setters, CSS, Styling, & Dimensions, Manipulating Elements – Getting and Setting Information about Elements, Moving Copying, and Removing Elements, Creating New Elements
February	Unit IV: jQuery-II Manipulating Attributes, Utility Methods, Events Connecting Event to Elements, Names pacing Events, Event handling, Triggering Event handlers, Event

Modern College of Computer Science & I.T.,
Aurangabad.

VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



	Delegation, jQuery Effects-hide/show, fade, slide, animate, call back, stop, Interactions – Draggable, Droppable, Resizable, Selectable, Sortable, Widgets - According, Date Picker, Menu, Tabs, Plugins-Using readymade plugins, create a basic plugin, Writing Plugins
March	Unit V: AJAX AJAX Overview, jQuery's AJAX related methods, Ajax and Forms, Ajax Events

Asibe
Co-ordinator (ADC)
Modern College of Computer Science & I.T.,
Aurangabad.

Kudregimane
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-VI

Subject: Android 9

Month	Topic
December	<p>Unit I Environment Setup: Developing for android, installing the android SDK, Installing the updates to the SDK, Android Development Tools (ADT) Plugin, developing with Eclipse, Create Android Application, Create Android Virtual Device, and Architecture: Linux kernel Libraries, Android Runtime, and Application Framework.</p> <p>Unit II Unit Application Components: Application Components Activities, Services. Broadcast Receivers, content Providers Anatomy of Android Application, The Main Activity Flo, The Manifest File,</p>
January	<p>The Strings File, The R File. The Layout File, Running the Application Types Of Android Application: Foreground Application, Background Application, Intermittent Application</p> <p>Unit III Resources Organizing & Accessing: Alternative Resources. Accessing Resources, The Dalvik Debug Monitor Service, The Android Debug Bridge</p> <p>UL Layouts: Android Layout Types, Relative Layout Attributes, Grid View Attributes. Sub- Activity, Layout Attributes, View Identification, UI Controls, Android UI Controls, Text View Attributes, AutoComplete Text View Attributes, Button Attributes, Image Button Attributes, Checkbox Attributes. Toggle Button Attributes, Radio Button Attributes, Radio Group Attributes</p>

Ashe
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

K. Jag. Kumar
VC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY



Reg. No. F-11895/"A'bad"

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

February	<p>Unit IV Intents and Filters:</p> <p>Intent Objects, Action, Android Intent Standard, Actions, Data, Category, Extras, Flags, Component Name, Types of Intents: Explicit Intents, Implicit Intents Externalizing Resources, Android Application Life Cycle.</p> <p>Fragments: Creating New Fragments, The Fragment Life-Cycle, Fragment States, Adding Fragments to Activities.</p>
March	<p>Unit V: Event Handling:</p> <p>Event Listeners & Event Handlers, Event Listeners Registration, Styles and Themes, Defining Styles, Using Styles, Style Inheritance, Android Themes, Default Styles & Themes, Custom Components, Creating a Simple Custom Components</p>

Asibe
Coordinator (ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-VI

Subject: Business Law III

Month	Topic
December	<p>Unit I Information Technology Act 2000</p> <ul style="list-style-type: none">• Cyber Crime Meaning and Nature• Terms used in Cybercrime: Hacking, Phishing, Preachers, Cyber Space, IP Spoofing Leapfrog Alack Meaning and its effects on Cyber users.• Teenage Web Vandals, Cyber Fraud, Virus on the Internet, Defamation, Harassment and E-mail Abuse, Cyber Pornography, Other IT Act Offences.• Monetary Penalties Adjudication and Appeals under IT Act 2000• Jurisdiction and Criminal Justice in India, Strategies to handle cybercrime and trends
January	<p>Unit II: IT Contracts and Standards</p> <ul style="list-style-type: none">• Contracts in the InfoTech World, Contract Formation on Internet. Terms and Conditions on Contracts.• NIST: National Institute of Standards and Technology: Objectives and working.• Copyright - Meaning, Ownership and Assignment, License of Copyright, Copyright Protection of Content on the Internet. <p>Unit III Security Tools and Technologies and Services</p> <ul style="list-style-type: none">• Firewall, Denial of Services (DoS), Digital Signature, Digital Signature Certificate, Packet sniffer, SSL, HTTPS, Pen Register.• CERT: Computer Emergency Response Team: Introduction and Objectives

Ashe
Coordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kishore
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

February	<p>Unit IV Cyber Security and Protection to Cyber Users</p> <ul style="list-style-type: none">• National Cyber Security Policy 2013-Cyber security: meaning: NCSP 2013 - meaning. Aim and Objectives, Reasons of NCSP 2013, Strategies NCSP 2013.• NSA: National Security Agency-case study
March	<p>Unit V Consumer Protection Act 1986 (with Amendments 2019)</p> <p>Essential terms in Consumer Protection Act, Consumer Complaint, Defects in Services, Restrictive and Unfair Trade Practices, Instance of Unfair Trade Practices, Reliefs Goods and under CPA, Consumer Forum, Jurisdiction and Implications in India. E-Commerce Transactions, E-Filing of Complaints, Product Liability and Penal Consequences.</p>

Ashe
Co-ordinator
(ADC)
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-VI

Subject: Project

Month	Topic
December	<p>Types of Project:</p> <p>The project may be taken on any one of the following:</p> <ol style="list-style-type: none">1. The project should be done in core specialization area of B.B.A course only2. Comprehensive case study (covering single organization /validation area problem, formulation analysis and recommendations)3. Inter-organizational study aimed at inter-organizational comparison/validation of theory/survey of management services4. Evolution of any new conceptual/theoretical framework5. Field study (empirical study)6. The project can be based on primary or secondary data or both as well
January	<p>Content of project synopsis:</p> <ol style="list-style-type: none">1. Title of the project2. Review of literature and problem statement3. Objectives of the proposed study4. Research methodology (sources of data, sampling, Tools of analysis etc.)5. Scope/Relevance of proposed study6. Proposed Questionnaire (if any) <p>References</p>

[Signature]
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

[Signature]

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



February	<p>Main Project:</p> <ol style="list-style-type: none">1. Introduction and Rationale of the topic chosen2. Objectives of the study3. Literature Review and problem formulation4. Research Methodology5. Analysis /discussion and interpretation of Data6. Conclusions/findings and recommendations/suggestions7. References/Bibliography
March	<p>Appendix</p> <ol style="list-style-type: none">a. Questionnaire, if anyb. Interview schedule, if anyc. List of the companies surveyedd. Raw data, if the candidate wants to submite. Graphs/Diagrams etc.f. Any other document relevant to the study <p>Project Report:</p> <p>Students are expected to prepare model project report</p>

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

K. Jagtap
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-VI

Subject: Software Testing

Month	Topic
December	<p>Unit-I: Introduction</p> <p>Fundamentals of Testing: What is testing? typical objectives of testing, testing and debugging, why is testing necessary, why is testing necessary?</p> <p>Testing's contribution to success: Quality assurance and Testing: Errors, Defects, and Failures, Defects, Root Causes and Effects, Seven Testing Principles, Test Process, Test Process in Context, Test Activities and Tasks, Test Work Products Traceability between the Test Basis and Test Work Products, The Psychology of Testing, Human Psychology and Testing, Tester's and Developer's Mind-set</p> <p>Unit-II: Testing Throughout the Software Development Lifecycle:</p> <p>Software Development Lifecycle Models,</p>
January	<p>Software Development and Software Testing, Software Development Lifecycle Models in Context, Test Levels, Component Testing, Integration Testing, System Testing, Acceptance Testing, Test Types, Functional Testing, Non-functional Testing, White-box Testing, Change-related Testing, Test Types and Test Levels, Maintenance Testing, Triggers for Maintenance, Impact Analysis for Maintenance</p> <p>Unit-III: Static Testing</p> <p>Static Testing Basics, Work Products that Can Be Examined by Static Testing, Benefits of Static Testing, Differences between Static and Dynamic Testing, Review Process, Work Product Review Process, Roles and responsibilities in a formal review, Review Type, Applying Review Techniques. Success Factors for Reviews</p>
	<p>Unit-IV: Test Techniques</p>

Coordinator

Modern College of Computer Science & I.T.,
Aurangabad.

IC Principal

Modern College of Computer Science & I.T.,
Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

February	Categories of Test Techniques, Choosing Test Techniques, Categories of Test Techniques and Their Characteristics, Black-box Test Techniques, Equivalence Partitioning, Boundary Value Analysis 4.2.3 Decision Table Testing, State Transition Testing, Use Case Testing, White-box Test Techniques, Statement Testing and Coverage, Decision Testing and Coverage, The Value of Statement and Decision Testing
March	Unit-V: Experience-based Test Techniques Error Guessing, Exploratory Testing, Checklist-based Testing, Test Case, what is Test Case? How to write effect test case, features of good test case, Format for Manual Test Case Writing, Case studies should be covered for Manual Test Case Writing.

Ashe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Bachelor of Computer Application

Semester-VI

Subject: Export Management

Month	Topic
December	<p>Unit I India's Foreign Trade:</p> <ul style="list-style-type: none">● India's Foreign Trade & Development● Trends in India's foreign Trade● Composition of Exports● Major problems of Export Sector <p>Unit II Export Promotion in India</p> <ul style="list-style-type: none">● Evolution of Export Promotion Policies in India● Regulatory Mechanism in Export Promotion
January	<ul style="list-style-type: none">● Export Promotion Measures in India <p>Obstacles faced in effective Export Promotion Effort</p> <p>Unit III Institutional Framework for Export Promotion in India:</p> <p>Govt. policy making & consultations Export Promotion Councils & Commodity Boards Technical & Specialised Services Assistances Govt. participation in foreign trade & organisational setup in the states. Commercial wing of Indian Embassies Abroad.</p> <p>Unit IV Export Finance in India:</p> <ul style="list-style-type: none">● Types of export finance● Features of pre-shipment and post-shipment finance

Asibe
Coordinator
(CADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwagmare

VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



February	<ul style="list-style-type: none">• Methods of payment <p>Role of commercial banks and EXIM bank in export finance</p> <p>Unit V Common Export Documents, EPZ, EOU & SEZ V</p> <p>A. Commercial Documents, Commercial Invoices Bill of lading, Airway Bill, Combined Transport Documents, Insurance Certificate</p>
March	<p>B. Statutory Documents- Documents for registration of firm Documents for shipping</p> <p>C. Export Processing Zones & Export Oriented Units, Meaning & objectives, Major sectors Need for special license, Benefits/facilities provided</p> <p>D. Special Economic Zones, Meaning & objectives, Criteria for setting up of SEZ Advantages of SEZ Units in India</p>

Ashe
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-I

Subject: - Accountancy I

Month	Topic
June	Unit-I: Double Entry Accounting System introduction concept & Advantages, Accounting Cycle, types of account, journalizing rules, subsidiary books, ledger, Trial balance
July	journalizing rules, subsidiary books, ledger, Trial balance Unit II: Cash Book- Single Column & double column
August	Unit-III: Trading, profit and loss account and balance sheet (simple exercise on sole trade, final account expected)
September	Unit- IV: Partnership Account: - Introducing, preparation of partnership final accounts. Unit- V: Depreciation, Introduction,
October	Unit- V: Depreciation, Introduction, meaning and definition, methods of depreciation, Fixed instalment method, Reducing balance method
November	Revision

[Handwritten signature]

Co-ordinator

[Handwritten signature]

T/C Principal

Modern College of Computer Science & I.T.

Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



Annual teaching planning 2023-2024

BCA

Semester-I

Subject: - Industrial Economics

Month	Topic
June	Unit-I: Definition and scope of business/ industrial economics- Micro, macro-economic-significance of economics systems
July	Unit-II: Indifference curve Analysis, properties of indifference curves, consumer equilibrium, income effect, price effect and substitution effect.
August	Unit- III: Production- meaning - laws of returns.
September	Unit- IV: Economics Development: - Concept of economic development, indicators of economic development,
October	Obstacles in the economic development of underdeveloped countries, features of underdeveloped economy with reference to India.
November	Revision

Subale
Coordinator
(ABC)

Modern College of Computer Science & I.T.,
Aurangabad.

K. S. Agnihotri
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-I

Subject: - Business Statistics

Month	Topic
June	Unit-I: Introduction, origin & growth of statistics, definitions, functions, scopes and limitations. Unit-II: Organizing survey, planning statistical the survey, scope of survey techniques of data collection Sampling and sample designs.
July	Unit III: Sampling and Sample design Unit- IV: Classification and tabulation of data.
August	Unit- V: Measures of Central Value- Mean, Median and Mode
September	Unit VI: Measures of Dispersion- Range, quartile deviation, mean deviation, standard deviation
October	Unit- VII: Correlation Analysis: - Introduction utility of the study of correlation, correlation and causation types of correlation-positive and negative correlation karl pearson's coefficient of correlation.
November	Revision

Dubale
(Asst)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



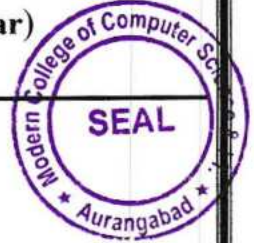
PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



Annual teaching planning 2023-2024

BCA

Semester-I

Subject: - Communication Skills

Month	Topic
June	Unit-I: Meaning, nature, scope, importance, functions and limitations of communication
July	Unit-II: Elements of communication-Principles of communication, Barriers to effective communication.
August	Unit- III: Communication Skills: - a. Oral Communication: - Effective speaking: - Principles of effective oral communication, speech preparation - guidelines for effective speech. listening skills-telephonic and group communication- Board and union meetings-interviews, their types, techniques and styles.
September	b. Written Communication: - Meaning and objective of written communication-Medias of written communication-Features of written communication. Preparation, analysis and interpretation of reports. Business letter writing application, references, preparation of tenders and quotations-drafting of sales circular letters
October	Unit- IV: Use of electric equipment in business communication-A hands on experiments on telex, fax, pager, cellular phone, computer and internet.
November	Revision

Subale
Coordinator
(APC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kusumare
I/C Principal

Modern College of Computer Science & I.T.,



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-I

Subject: - Basic of Web Technology

Month	Topic
June	Unit-I: HTML & Forms Introduction to HTML, WWW, W3C, Web publishing, common HTML, Tags physical & Logical, some basic tags like, changing background colour of page, text colour etc., Text formatting tags, tags ordered & Unordered List Tags, Inserting image, Links: text, image links, image mapping
July	Unit-II: Tables Tables, Frames, Form Introduction with text box, text area, buttons, List box, radio, checkbox, header & footer, Index form creating, mobile responsive, videos, songs.
August	Unit- III: CSS Introduction to Style sheet, types of style sheets- Inline, External, Embedded CSS, text formatting properties, CSS Border, margin properties,
September	Positioning Use of classes in CSS, colour properties, use of <div> & , padding, CSS multiple columns
October	Unit- IV: JavaScript Basic Introduction to Java Script, variable, commands, operations, syntax, objects, data types, JavaScript DOM theory.
November	Revision

S. Abale
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

K. Rajguru
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-III

Subject: Principles of Management

Month	Topic
June	Unit-I Introduction of Management: Introduction,
July	meaning and concept of management, nature, scope, characteristics and importance of management, role and functions of management, level of management, difference between management and administration, brief review of management thoughts of F.W.Taylor, Henry Fayol, Elton Mayo, Peter Drucker etc.
August	Unit-II Managerial planning and Decision-Making Planning meaning and definition, characteristics and importance of planning, planning process, benefits of ideal planning, limitations of planning, types of plans. Forecasting definition method

Dubale
Co-ordinator
(PDC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghnare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



	<p>Unit-III</p> <p>Staffing and Organization</p>
September	<p>, definition of staffing need and importance of organisation, principles of organisation types difference between accountability and responsibility, centralization of authority and decentralisation of authority</p> <p>Unit IV</p> <p>Directing and controlling,</p>
October	<p>definition and importance of it, Principles and techniques of directing need and importance of control process of control techniques of control.</p> <p>Unit V</p> <p>Recent, Trends in business Management change management, TQM, Benchmarking Six Sigma, Management Development definition need and importance</p>
November	<p>management development process methods and techniques.</p>

Sinhale
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-III

Subject: OOPS Using C++

Month	Topic
June	Unit I Introduction to C++ Basic Concepts,
July	object oriented programming ,Class, Object, Data Abstraction, benefits and application of OOP, Structure of C++program, Creating a source file, compiling and Linking, Tokens, Expressions and controls structures Introduction, Tokens, Keywords, Identifiers and Constants, Data types-Basic ,User defined and derived, Symbolic constant, Type Compatibility, Variables-Declaration and Dynamic initialization, Reference variable, Operators in C++,Scope resolution operator, Member Referencing operator ,Memory management operators precedence, Control structures-if -else, do while, for, switch Unit II Function in C++ Introduction, the main function, prototyping, call by reference, Return by reference,
	Inline Function-Making an outside function Inline, Arguments-default,

Subale
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kirishma
V/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



August	<p>constant, Math library functions.</p> <p>Unit III Classes and objects Introduction, rating for class and objects defining, members, functions inside and outside class, nesting of member functions private member, functions Arrays within a class, memory allocation of objects, static data members and static member functions, Array Of objects, objects as function agreements friend, functions returning objects constructors, types of constructor destructors.</p>
September	<p>Unit IV Inheritance Introduction, base, class and derived class examples, types of inheritance virtual, base class, abstract class, constructors in derived class.</p> <p>Unit V Polymorphism compile time, polymorphism function, overloading, operator overloading introduction overloading, unary and binary,</p>
October	<p>operator overloading using friend function, overloading insertion and extraction operators string manipulation using operator overloading runtime polymorphism,</p>
November	<p>pointers to objects pointer to Derived classes virtual functions and pure virtual functions.</p>

S. Subale
Coordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kuldeep Kumar
W.C. Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-III

Subject: Business Laws-I

Month	Topic
June	Unit I Indian contract act 1872 meaning and definition of agreement and contract features of contract act
July	types of contract essentials of valid contract offer and acceptance breach of contract Unit II Sell of goods act 1930 meaning and important definition sell of goods act agreement to sell vs, contract of sell essential of valid contract of sell, conduction and warranty sell,
August	auction and Hire purchase agreement, buyers and sellers' rights and duties. Unit III Negotiable Instrument act 1881 concept and important definition of act promissory note and cheque, characteristic of the act dishonour of negotiable instrument discharge of negotiable instrument bills of exchange.
September	Unit IV Consumer protection act 2002 meaning and important definition of act significance of consumer protection objectives of the act working of consumer protection council composition of consumer disputes redressal agencies
October	Unit V Cyber and IT act 2000 important definition IT act 2000 cyber fraud and cheating copyright
November	meaning and definition licence of the copyright digital signature digital signature certificate

(Signature)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
I/C Principal
Modern College of Computer Science & I.T.
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA Second year

Semester-III

Subject: DBMS

Month	Topic
June	Unit I Introduction Theory Data tables DBMS
July	characteristics of DBMS need of DBMS attributes entity ER diagrams relationship ODBMS two tier and three tier architecture. Unit II Transactions Theory Concept of transaction acid properties transaction and
August	system concepts states of transaction civilization backup and recovery. Unit III Concurrency Theory Concurrent transaction to phase blocking techniques concurrency control locking techniques ER diagram deadlock.
September	Unit IV Normalisation Theory of EF codd rules normal forms based on primary key 1 NF,2NF, 3NF BCNF.
October	Unit V MS access Theory and Practical primary key foreign key creating tables in MS access creating primary key foreign key and create queries to fetch data.
November	Revision

(Signature)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
I/C Principal

Modern College of Computer Science & I.T.
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-III

Subject: E-Business Essential

Month	Topic
June	Unit I: Introduction to e-business origin concept nature definition features merits demerits
July	Unit II E- Business environment information society building process for community multi option society ethics in electronic business
August	Unit III: Business and ICT meaning, history, importance of internet, internet versus online service, basic knowledge of computer network, worldwide wave web page, website
September	Unit IV: Business models and supply chain management classification of e-business models' definition of supply chain management elements of SC key issues in SCM
October	Unit V E-payments: Money and E-payments, different forms of e-payments, e-banking, RTGS, NEFT, EFT, internet banking, mobile banking
November	Google pay, Paytm etc and Revision

Dubale
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

K. S. Agnihotri
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-III

Subject: Data Structure and Algorithm

Month	Topic
June	Unit I Introduction to data structure introduction to data structure type
July	primitive secondary simple compound linear and Nonlinear data structure Unit II Linear data Structure linear data structure array linked list, Queue Stacks, operations on linear data Structure memory representation of linear data structure
August	Unit III Nonlinear data structure nonlinear data Structure pre graphs binary tree structures networks operations on nonlinear data Structure implementation of data structure in computer memory
September	Unit IV Algorithms concept features and characteristics designing of algorithms for insertion and deletion of records in Array linked list Stack, Queue, Traversal of linked list stack, Queue, binary tree
October	Unit V Graft theory and shorting graph theory terminology sequential representation of graph adjacency Matrix, Linked list presentation of grapes operations on graph Traversing graph, bubble shot,
November	selection short, merge sort insertion sort.

(Signature)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA first year

Semester-II

Subject: - Accountancy II

Month	Topic
November	Unit-I: Goodwill of partnership firm Meaning, Need, factors affecting goodwill,
December	methods of vaulting goodwill, average profit method, super profit method Unit-II: Accounts of non-trading concern - preparation of recipes and payment accounts, Income and expenditure account and balance sheet
January	Unit- III: - Company Final Accounts Treatment of provision, treatment of dividends, interim and final dividend on shares, income tax on dividends, payment of dividends, unclaimed dividends,
February	Unit- III: - Company Final Accounts treatment of preliminary expenses, capital profit, Income tax provision, advance payment, payment of tax, TDS, simple exercise expected.
March	Unit- IV: - Single entry system Concept-ascertainment of profit from records of single-entry method.


Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.


IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.


Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-II

Subject: - Industrial Organization

Month	Topic
November	Unit-I: Concept of Industrialization: - What is industrialization,
December	its determinants problems of Industrialization social responsibility of business. Unit-II: Scale of operation and size of business units (with special reference to India).
January	Economics of scales, meaning of large medium and small size business relative advantages and disadvantages Unit- III: - Concept of concentration of power, combinations, process of integration vertical horizontal lateral and diagonal and service integration types; pools, trusts carte
February	Holding companies, syndicates mergers and amalgamation multi-directorship interlocking, restructuring and rationalization.
March	Unit- IV: - Industrial policy resolutions of 1991 & WTO Corporate structure of business and essentials of corporate governance

Subale
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Shro
IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Singare
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



Annual teaching planning 2023-2024

BCA

Semester-II

Subject: - Mathematics

Month	Topic
November	Unit-I: Logarithms,
December	rules for multiplication division and exponentiation Unit-II: Permutations,
January	combinations and binomial theorem Unit- III: - Determinate different methods of calculating determinants.
February	Unit- IV: - Matrix- representation- Addition, subtraction, multiplication and division.
March	Inverse, Transpose, Adjoint cofactor-singular arrays vectors.

Wale
Co-ordinator (A.D.C.)
Modern College of Computer Science & I.T.,
Aurangabad.

Imore
IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Angme
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-II

Subject: -Programming In C

Month	Topic
November	Unit-I: 1) Introduction and importance of C language
December	2) Constants, Variables data types: - character set constant - keywords and identifiers variables data types declaration and assignment of variable defining symbolic constants. Unit-II: <ul style="list-style-type: none">Operators and expressions: - arithmetic, relational and logical operations assignment, increment and expression its evaluation hierarchy of arithmetic operations evaluations, precedence and associativity mathematical functions.
January	<ul style="list-style-type: none">Decision making and branching: - If statement switch statement GOTO statement-the? operators. Decision making and looping: WHILEDO, and FOR statements
February	Unit- III: - Arrays: <ul style="list-style-type: none">One dimensional - Two dimensional and multidimensional arraysHandling of character set: - Declaration & initialization of string variables reading from and writing to screen arithmetic operations string handling functions.<ul style="list-style-type: none">Structures and Unions: -Definitions initialization and assigning values to members arrays of structure and arrays within structure with in structure union size of structures.

Subale
Coordinator (BCA)

Modern College of Computer Science & I.T.,
Aurangabad.

Imre

IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Asingare
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



March	<p>Unit- IV: -</p> <p>pointers: -</p> <p>Declaration and initialization of pointers- pointer expression- pointer and arrays- pointer and character strings pointers and functions points and structures pointer on pointers</p> <ul style="list-style-type: none">• File maintenance in "C" Defining, opening and closing a file input operation on a file random access to file command line arguments <p>User defined functions: -</p> <p>Form of "C" functions calling a function nesting of functions recursion functions with arrays.</p>
-------	---

Qubale
(ADC)
or

Modern College of Computer Science & I.T.,
Aurangabad.

J. more
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Singare
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-II

Subject: -Principles of Management

Month	Topic
November	Unit-I: Definition, nature and,
December	scope of management, importance, management as an art, science and professions, different approaches to management. Unit-II: Evolution of management though contribution of Taylor
January	, Fayol, Follet, Drucker. Unit- III: -Management process, planning, organizing, staffing,
February	direction, controlling, coordination, leadership Unit- IV: - Functional management, Human resources management,
March	marketing management, financial management, material management, material management
November	Revision

Subale
Coordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Samare
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Singare
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-IV

Subject: Cost Accountancy

Month	Topic
November	Unit I Cost Accounting: Definition, Nature
December	, and Scope of Cost Accounting, Distinction between Cost, Financial and Management Accounting, Classification and Elements of Cost, Material, Labour. Unit II Cost: Prime Cost, Factory/Works Cost, Administrative Cost, Total Cost, Cost of Sales
January	Unit III Preparation of Cost sheet: Unit IV Material: Purchasing, Purchase requisition EOQ purchase procedure receiving and recording of material,
February	Documents, Goods Received Note, Bin Card issue of materials average method Unit V Wages Compensation, methods of wage payment fix rate piece rate contract bonus halsey and Rowan plan.
March	Unit V Wages Compensation, methods of wage payment fix rate piece rate contract bonus halsey and Rowan plan.

S. Wale
Co-ordinator
(APC)

Modern College of Computer Science & I.T.,
Aurangabad.

J. Inase
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

A. Singare
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-IV

Subject: Java Programming

Month	Topic
November	Unit I Overview of Java language Java history
December	Java features how Java differ from c and c++ JVM Java environment Java programming structure types of comment Java tokens reserve keywords identifiers literals, operators' separators variables constant data types array type casting control statement branching statement looping statement Unit II Classes objects and method introduction defining classes fields declaration methods declaration creating objects visibility control use of this keywords method parameters method overloading static members final method inheritance and its types method overriding final variable method and final class Interface package and exception handling defining and implementing interface inner classes package create package accessing package exception type of error multiple catch statement creating user defined exception final clause
January	Unit III String and stream stream classes stringbuffer classes stream classes type of streams byte stream classes character stream classes applets introduction to applet types of applet applet versus application applet classes advantages of applet life cycle my first applet applet act passing parameters to applet Unit IV: Graphics basic shapes draw line draw arc draw polygon fill polygon

S. Subale
Co-ordinator
(AD-1)

Modern College of Computer Science & I.T.,
Aurangabad.

S. Mohan
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

S. Anand
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



	colour and colour methods fonts Practical list
February	1. Program to demonstrate constant variables. 2. Program to demonstrate scope of variable. 3. Program to demonstrate branching statement 4. Program to demonstrate looking statement 5. Program to demonstrate simple classes 6. Program to demonstrate method parameters
March	Unit V 7. Program to demonstrate method overloading 8. Program to demonstrate constructor 9. Program to demonstrate to static member 10. Program to demonstrate method overriding 11. Program to demonstrate final variable method and final classes. 12. Program to demonstrate finalise method 13. Program to demonstrate array and its types 14. Program to demonstrate String classes and its method 15. Program to demonstrate String buffer and its method

S. Subale
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Z. Imore
IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

A. Singare
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



Annual teaching planning 2023-2024

BCA

Semester-IV

Subject: MIS and DSS

Month	Topic
November	Unit I Concept definition characteristics objects role and impact of mis management as a control system is also A Support to the management application of mis organisation
December	effectiveness decision making concept decision making process organisation decision making and mis and decision making. Unit II Information is a quality product it enables services such as e-business wireless technology etc. information system in business computer-based information system,
January	limitation and disadvantages of IS human as an information processor knowledge and knowledge management system business intelligence. Unit III System concept and control types of system general models of mis-need of system analysis system development life cycle development process of MIS Strategic Design of MIS business process mode of an organisation mis and BPR.
February	Unit IV DSS concept and philosophy objectives and characteristics of DSS major functions of DSS components of DSS, I,I;generates and tools limitations of DSS GDSS components of GDSS mis and benefits of DSS and online data processing
March	Unit V Knowledge system expert system application of ES benefits and limitation of years models and models benefits of ERP ERP implementation SCM

(Signature)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad

(Signature)
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad

(Signature)
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY
MODERN COLLEGE
OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY
(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCA

Semester-IV

Subject: Business Law-II

Month	Topic
November	Unit I Contract act: special contract law of indemnity guarantee contract law of bailment and pledge agency contracts.
December	Unit II Company law 2013: introduction of company act meaning and definition features of co at types of company share capital and its types incorporation formation of company memorandum and articles of association.
January	Unit III SEBI act 1992: introduction of the act meaning and defining basic characteristics of the act obligation of SEBI issue of capital disclosure listing and its role in stock market.
February	Unit IV Cyber and IT act 2000: need and significance in modern era character and user of Internet technology online contracts hacking phishing privacy terrorism privacy section 66A.
March	Unit V Micro small and medium enterprises development act 2006 MSME d act 2006 introduction defines features of the act establishment of National Board of MSME power of duties of the board classification of MSME promotional majors of the act.

Shubale
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

J. More
IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kingare
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"

Annual teaching planning 2023-2024

BCA

Semester-IV

Subject: Entrepreneurship development



Month	Topic
November	Unit I Originating Theories of Entrepreneurship: economic theory,
December	sociological theory, physiological theory, innovative theory of entrepreneurship by Joseph Schumpeter. Theory of achievement motivation by MC Clelland-the Kakinada Kakinada Hoselitz sociological theory. Unit II Types of entrepreneurship: Recent trends-Sociopreneur, edupreneu,ecopreneur and agropreneur .Women entrepreneurs, Self Help Groups.
January	Unit III Identification of business opportunity environment scanning meaning and benefits factors considered for environment scanning socio-cultural economic technical demography legal and political and international factor sources and steps involved in identification of business opportunities.
February	Unit IV Market research meaning need and importance of market research techniques in market research field survey technique test marketing Delphi technique dicks research observation methods and experiment method.
March	Unit V Innovation in entrepreneurship purposeful innovation concept need process principles of purposeful innovation incubation centres meaning services and role of incubation centres.

Q.ubale
Co-ordinator
CADES

Modern College of Computer Science & I.T.,
Aurangabad.

J. more
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

A. Inyare
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



Annual teaching planning 2023-2024

BCA

Semester-IV

Subject: Advance Networking

Month	Topic
November	Unit I Basic of computers networks computer networks, definition, goals,
December	application, structure, components, Topology-Bus, Star, Ring, Mesh, types of networks LAN, MAN, WAN, internet broadcast and networks communication. types serial parallel modes of communication: simplex half duplex full duplex server-based LANs and peer-to-peer LANs, Comparison of both, protocols and standards
January	Unit II Network Models: Design issues of the layer protocol Hierarchy ISO-OSI reference model layers in the OS I model functions of each layer terminology, SAP, connection-oriented services, connectionless services, peer entities Internet model (TCP/ IP), comparison of ISO-oh yes, I and TCP IP model, Addressing - physical addresses
February	Logical addresses, Port addresses. Unit III Transmission Media: Guided media(wired), Coaxial cable, twisted pair, fibre optics cable on guided media wireless. Network Connectivity Devices - Category of connectivity devices passive and a
March	active herbs repeaters bridges, transparent bridges loop problem paining tree source routing bridges, switches router getaways network security devices firewall packet filter firewall Proxy firewall.

Dubale
Co-ordinator
(A.D.C.)

Modern College of Computer Science & I.T.,
Aurangabad.

Shore
IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kingare
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

2020-21

F. Y. B.Sc. (Computer Science)

Semester-I

Subject: - Computer Fundamentals

Month	Topic
November	<p>Unit-I:</p> <p>1. Fundamentals of Computer System</p> <ul style="list-style-type: none">• Characteristics & features of Computers.• Components of Computers.• Organization of Computer. <p>2. Algorithm and Flowcharts</p> <ul style="list-style-type: none">• Algorithm: Definition, Characteristics, Advantages and disadvantages, Examples• Flowchart: Definition, Define symbols of flowchart, Advantages and disadvantages, Examples
December	<p>3. Computer Generation & Classification</p> <ul style="list-style-type: none">• Generation of Computers: First to Fifth• Classification of Computers: Distributed & Parallel computers <p>Unit-II:</p> <p>4. Computer Languages</p> <ul style="list-style-type: none">• Types of Programming Languages: Machine Languages, Assembly Languages, High Level Languages• Assembler, Linker, Loader, Interpreter & Compiler. <p>5. Computer Memory</p>

Shikha (ADC)

Kwaghmase
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



January	<ul style="list-style-type: none">• Memory Cell & Organization• Types of Memory (Primary and Secondary): RAM, ROM, PROM, EPROM• Secondary Storage Devices (FD, CD, HD, Pendrive, DVD, Tape Drive, DAT) 6. I/O Devices <ul style="list-style-type: none">• Input Devices: Touch screen, OMR, OBR, OCR, Light pen Scanners• Output Devices: Digitizers, Plotters, LCD, Plasma Display, Printers
February	Unit- III: 7. Processor <ul style="list-style-type: none">• Structure of Instruction, Description of Processor, Processor Features• RISC & CISC
March	8. Operating system Concepts <ul style="list-style-type: none">• Why Operating System? Functions of Operating System, Booting of OS & it's type• Types of Operating System: Batch O.S., Multiprogramming O.S., Time Sharing O.S, Personal Computers O.S., Network O.S.

Asibe
(APC)
— Co-ordinator —
Modern College of Computer Science & I.T.,
Aurangabad

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-I

Subject: - Digital Electronics

Month	Topic
November	<p>Unit-I: 1. Number Systems and Arithmetic</p> <ul style="list-style-type: none">• Number System: Decimal, Octal, Hexadecimal & Binary Number System Conversion within Binary, Octal,• Hexadecimal & Decimal Number System.• Binary Arithmetic: Binary addition, subtraction, multiplication & division• Binary subtraction using 1's complement, 2's complement method.• Hexadecimal arithmetic: Addition, subtraction, multiplication & division <p>2. Boolean Algebra and Logic Gates</p> <ul style="list-style-type: none">• Postulates of Boolean Algebra• Theorems of Boolean Algebra: Complementation, commutative, AND, OR,• Associative, Distributive, Absorption laws, De Morgan's theorems
December	<ul style="list-style-type: none">• Reducing Boolean expressions• Logic Gates: AND, OR, NOT, Ex-OR, Ex-NOR• NAND as Universal building block• Logic diagrams of Boolean expressions Boolean expressions for logic diagrams <p>Unit-II:</p> <p>3. Minimization Techniques</p>

Asibe
Co-ordinator

Kwaghmare
V/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<ul style="list-style-type: none">• Introduction, Minterms and Maxterms• K-Map, K-map for 2 variables• K-map for 3 variables• K-map for 4 variables
January	<p>4. Combinational and Arithmetic Logic Circuits</p> <ul style="list-style-type: none">• Half Adder & Full Adder• Binary parallel Adder• Half Subtractor, Full Subtractor• Adder/Subtractor in 2's complement system <ul style="list-style-type: none">• BCD to Decimal decoder• 2:4 demultiplexer• 4 line to 1-line multiplexer <p>Unit- III:</p> <p>5. Flip Flops</p> <ul style="list-style-type: none">• Introduction: RS FF• Clocked RS FF, D FF• Triggering, preset and clear• JK FF, TFF, Race around condition• Master slave FF
February	<p>6. Counters</p> <ul style="list-style-type: none">• Introduction: Asynchronous/ ripple counter• Modulus Counter, MOD-12 counter• Synchronous counter: Synchronous serial & synch parallel counter• BCD counter

Ashe
Co-ordinator
Modern College of Computer Science & I.T.
Aurangabad

Kusayhmarse
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<ul style="list-style-type: none">• Ring counter
March	<p>7. Shift Registers</p> <ul style="list-style-type: none">• Introduction, Buffer register• Serial-in serial-out Serial-in parallel-out• Parallel-in serial-out, parallel-in parallel-out

Ashe
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-I

Subject: - Microprocessor – I

Month	Topic
November	Unit-I: 1. Introduction to Microprocessor and Microcomputer <ul style="list-style-type: none">• Historical background• Microprocessor based personal computer system• Computer data formats
December	2. 8086 Hardware specification <ul style="list-style-type: none">• Microcomputer structure and operation• 8086 internal architecture,• Real Mode & Protected Mode Memory Addressing, Memory Paging.• Introduction to programming 8086: Prog.lang. Unit-II: 3. Addressing Modes <ul style="list-style-type: none">• Data addressing modes• Program memory addressing modes• Stack memory addressing modes
January	4. Data Movement Instructions (Inst. related with 8086 only) <ul style="list-style-type: none">• MOV revisited: Machine language, the op-code, MOD field, register assignment, R/M memory addressing, special addr.mode Unit-III: 5. Data Movement Instructions (..)

Asibe
Co-ordinator

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<ul style="list-style-type: none">• PUSH/POP, initializing stack.• Miscellaneous data transfer instructions: XCHG, LAHF & SAHF
February	6. Arithmetic instructions <ul style="list-style-type: none">• Addition, subtraction and comparison• Multiplication and division• BCD and ASCII arithmetic
March	<ul style="list-style-type: none">• Addition, subtraction and comparison• Multiplication and division• BCD and ASCII arithmetic

Asibe
(Asibe)

Co-ordinator
Modern College of Computer Science & I.T.,

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY
MODERN COLLEGE
OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-I

Subject: - 'C' Programming – 1

Month	Topic
November	Unit-I: 1. Introduction: a. An Overview of C, History of C language, C as a Structured Language, Features of C 2. Basic Elements & Operators <ul style="list-style-type: none">• Character set, C Token, Identifier & Keywords, Variables• Constant and its types. Integer constant, floating point constant, character constant, String constants.
December	<ul style="list-style-type: none">• Operators: Arithmetic, Relational, Logical, Unary operators: Increment & decrement Assignment and Conditional operator.• Precedence & Associativity of Operators 3. Data Types <ul style="list-style-type: none">• Data Types: int, char, float, double. Declaration & Initialization.• Type modifier: long, short, signed & unsigned
January	Unit-II: 4. C Program & I/O statements <ul style="list-style-type: none">• Structure of C Program, Compilation & Execution of C program• I/O: Introduction, Formatted Input/Output function: scanf & printf, Escape sequence characters.• Library functions: General & Maths.

Asibe
(ADC)
Co-ordinator

Kwaghmax
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

February	5. Control and Iterative Statements: <ul style="list-style-type: none">• Simple if, nested if, if-else, else if ladder• Switch-case statement• The conditional expression (?: operator)• While and do-while loop, and for loop• Break & continue statement, goto statement
March	Unit- III: 6. Arrays: <ul style="list-style-type: none">• Introduction, Declaration and initialization Accessing array elements, Memory Representation of array.• One dimension and multidimensional arrays, character array, Introduction to string.

Asibe
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kiwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

F. Y. B.Sc. (Computer Science)

Semester-I

Subject: - Communication Skill

Month	Topic
November	Unit-I: 1. Introduction to Communication Importance of Communication, Definition of Communication Elements of Communication, Communication process 2. Types of Communication Upward Communication, Downward Communication Horizontal Communication
December	3. Method of Communication: Verbal, Oral, Written Unit-II: 4. Written Communication Punctuation marks. Grammar: Parts of Speech, tenses, vocabulary building, constructing para. 'C's of good communication Language of business writing
January	5. Oral Communication Speeches and Presentation Dialogues UNIT-III (English Language Lab) 6. Listening Comprehension Listening and typing – Listening and sequencing of sentences.

Ashe
(ADC)

Co-ordinator

Modern College of Computer Science & I.T.,

Kwaghmare

IC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

February	7. Reading Comprehension and Vocabulary Filling in the blanks – Cloze Exercises – Vocabulary building- Reading and answering questions.
March	8. Speaking a. Phonetics: Intonation – Ear Training- Correct Pronunciation – Sound recognition exercises –Common Errors in English b. Conversations: Face to Face Conversation – Telephone conversation

Asibe
(ADC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-I

Subject: - Mathematical Foundation

Month	Topic
November	Unit-I: 1. Set Theory- Basic Definitions: Set, Finite set, Infinite set, Singleton Set, Empty set, Subset, Proper Subset, Universal set, Power set, Venn diagram, Operations on set: Union of sets, Intersection of Sets, complement of a set, Equality of two sets, Disjoint sets, Difference of two sets, Symmetric Difference, Cartesian Product; explanation of each using Venn-diagram and simple examples. Principle of Inclusion and Exclusion.
December	Algebraic Properties of Set: Statement and proof of Commutative Laws, Associative Laws, Distributive Laws, Idempotent Laws, Properties of Compliment, Principle of Duality. Unit-II: 2. Graph Theory: Introduction: Graph Definition & Terminologies, Application of Graph, Finite & Infinite Graphs, Incidence and Degree, Isolated Vertex, Pendant Vertex and Null Graph. Matrix Representation of Graph: Incidence & Adjacency Matrix. Path & Circuits: Isomorphism, Subgraphs, Walks, Paths and Circuits, Connected Graphs, Disconnected Graphs and Components, Euler Graphs.
	Operations on Graph: Union, Intersection & Ring Sum.

Ashe
(ADC)

Co-ordinator

of Computer Science & I.T.

Xinghmade
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY



Reg. No. F-11895/"A'bad"

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

January	Directed Graph: Definition, Types of Directed Graph, Directed Path & Connectedness. Unit- III: 3. Relation and Function Introduction: Binary Relation, Tabular Form, Graphical Form, Ternary Relation, Quaternary Relation.
February	Properties of Binary Relations: Reflexive Relation, Symmetric Relation, Antisymmetric Relation, Transitive Relation, Equivalence Relation. Function: Introduction, Function Mapping, Types of Functions: 1:1, 1:M
March	4. Boolean Algebra Finite Boolean Algebra, Boolean Expression, Boolean Function. Disjunctive Normal Form & Simplification.

Asihe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B.Sc. (Computer Science)

Semester-III

Subject: Advanced Data Structure

Month	Topic
November	Unit-I: Binary Trees Representing Binary, Trees in Memory, Traversing Binary Trees, Traversal Algorithms using Stacks, Header Nodes; Threads, Binary Search Trees Searching and Inserting in Binary Search Trees, Deleting in Binary Search Tree,
December	AVL Search Trees, Insertion in an AVL Search Tree, Deletion in an AVL Search Tree, Unit II: Graph Theory Terminology,
January	Sequential Representation of Graphs; Adjacency matrix, Path Matrix, Warshall's Algorithm, Shortest Paths, Linked Representation of a Graph, Operations on Graphs, Traversing a Graph, Posets; Topological Sorting.
February	Unit-III: Searching & Sorting: Introduction, Sorting, Insertion sort, Selection sort,
March	Merging, Merge-Sort, Radix Sort, Searching and Data Modification, Hashing

Ashe
(A.P.C.)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B.Sc. (Computer Science)

Semester-III

Subject: Unix Operating System

Month	Topic
November	Unit-I: Overview of UNIX Operating System, basic features of Unix operating System, File Structure, CPU Scheduling, Memory Management, File System Implementation of Operating System Functions in UNIX.
December	Unit II: Basic commands Is, cat, cal, date, calendar, who, printf, tty, sty, uname, passwd, echo, tput, be, script, spell and ispell,. Files and Directories, File permission, Basic Operation on Files, Changing Permission Modes, Standard files
January	Unit-III: Introduction to Shell Scripting, Shell Scripts, read, Command Line Arguments, Exit Status of a Command, The Logical Operators & & and , exit, if, and case conditions, expr, sleep and wait, while, until, for, \$, @, redirection.
February	The here document, set, trap, Sample Validation and Data Entry Scripts. Define system Administration,
March	Booting the system, Maintaining User Accounts, File System, and special files, Backup and Restoration

*Ashe
(ADC)*

Kavaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B.Sc. (Computer Science)

Semester-III

Subject: P.C. Maintenance

Month	Topic
November	Unit-I: PC Architecture: Chassis/Case, Baby, Desktop, Tower Cases. Power Supplies, power connectors, mounting points. Motherboard, form factors, expansion/bus slots, CPU, RAM, Chipset, motherboard ports and Controllers. Video System, video controllers, BIOS, resolution, video memory, Video Drives, IDE drive, SCSI controllers, CD Drive, DVD Drive, Modems,
December	Input devices and their drivers, USB architecture, USB Host Control types. Unit II: PC Assembly Opening the System, Closing the System, Tips for working inside a PC, Mounting Motherboard in cabinet, installation of cards, devices and then connecting cables. Role of CMOS Entering CMOS setup, Basic CMOS Optimization, Hidden CMOS Settings.
January	Unit-III: Software Installation Operating System installation, Windows, Unix, Linux, Device driver Installation, Creating users,
February	giving rights to user, Network setting of a PC, shearing files and devices on network. Installing Antivirus, Antivirus settings updating (Quick Heal/ Net protector)
March	Introduction to Laptop: System Features, Laptop components, Processors, Motherboards, memory, power, expansion bus, hard disk & removable storage devices

Ashe
(A.D.)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kusagmare
VC-Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

March	Operator Overloading: Overloading unary operators, Rules for operator overloading, Overloading without friend function and using friend function, Overloading binary operators such as arithmetic and relational operators, Concatenating Strings, Comparison operators.
-------	---

Shikhe
(A.D.C.)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B.Sc. (Computer Science)

Semester-III

Subject: Database Management System

Month	Topic
November	<p>Unit-I: Basic Concept</p> <ul style="list-style-type: none">• Data Definition, Types of Data, Record and File, File based System & Processing• Database System Application, Purpose of Database System• Abstraction & Data Integration• Three level Architecture proposal for a DBMS.• Component of a DBMS: Users, Facilities & Structure.• Advantageous & Disadvantageous of DBMS. <p>Data Modeling & Design</p> <ul style="list-style-type: none">• Data Association-Entities, Attributes & Association, Relationship among Entities, Representation of Association & Relationships• Data Model: Importance of Data Model, Types of Data Model: Relational, E-R, Semi-structured, Object- Oriented, Network & Hierarchical Data Model.
December	<ul style="list-style-type: none">• Advantageous & Disadvantageous of above model. <p>Unit II: Entity-Relationship Data Model</p> <ul style="list-style-type: none">• Entity, Entity Set, Types of Entities, Strong & Weak Entity, Representation• Attribute, Types of Attributes, Representation• Relationship: Binary & Ternary, Representation• Mapping Cardinality, Entity-Relationship Design Issues

Asibe
(ADL)
Co-ordinator

Kishaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

January	Relational Data Model <ul style="list-style-type: none">• Basic Structure of Relational Data Model, Database Schema• Constraints: Integrity Rule 1 & 2• Normal Form: Anomalies, Functional Dependency, Dependency Diagram, First Normal Form, Second Normal Form, Third Normal Form, Conversion from Universal to 1 NF, INF to 2 NF and 2NF to 3NF.
February	Unit-III: Relational Algebra <ul style="list-style-type: none">• Basic Operation-Union, Intersection, Difference and Cartesian Product• Advance Operation- Projection, Selection, Join (Inner and Outer) & Division• Examples based on above Operation.
March	Introduction to Oracle <ul style="list-style-type: none">• Relation Algebraic Queries.• Oracle Software: Versions of Oracles, Products of Oracle, Tools of Oracle• SQL: Logging to SQL/ iSQL, SQL plus worksheet.

Asike
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B.Sc. (Computer Science)

Semester-III

Subject: Statistical Method

Month	Topic
November	Unit-I: 1 Introduction and basic concepts of Statistics <ul style="list-style-type: none">• Definition of Statistics, Scope and importance of Statistics.• Primary and Secondary data, Types of data: qualitative, quantitative,• Discrete, continuous, cross-section, time series, failure, industrial, directional data.• Graphical presentation: Histogram, frequency polygon, frequency• Curves Diagrammatic presentation: Bar diagrams, Pie diagram, scatter diagram.• Classification of data: Discrete and continuous frequency
December	<ul style="list-style-type: none">• Distributions, inclusive and exclusive methods of classification,• Relative and cumulative frequency distributions. Unit II: 2 Measures of Central Tendency <ul style="list-style-type: none">• Concept of central tendency. For group and Ungroup data• Arithmetic mean (A.M.) simple and weighted Merits and demerits of A.M.,• Mode: Computation for frequency and non-frequency data. Computation of mode, Merits and demerits of mode. Median:
January	<ul style="list-style-type: none">• Computation for frequency and non-frequency data, computation.• Merits & Demerits of median.• Geometric mean (G.M.) computation for GM, Merits demerits and• Applications of G.M. Harmonic Mean (HM) computation for frequency, non-frequency data, merits, demerits.

Asibe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	Unit-III: 3 Measures of Dispersions Dispersion and measures of Dispersion,
February	Range (definitions and problems) Quartile Deviation (definitions and problems) Mean Deviation (definitions and problems)
March	Standard Deviation (definitions and problems) Variance, different formulae for calculating Variance.

Shilpa
(ADL)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

T. Y. B.Sc. (Computer Science)

Semester-V

Subject: Software Cost Estimation

Month	Topic
November	Unit-I: Introduction: Observation on Estimation, Planning process, Software Scope and Feasibility, Types of Resources, Project estimation.
December	Unit II: Decomposition Techniques Software sizing, Problem-Based Estimation, LOC-Based Estimation with example, FP- Based Estimation with example,
January	Process-Based Estimation with example, Designing Use Cases, Use Cases- Based Estimation with example, Estimate Reconciliation. Unit-III: Empirical Estimation Models Structure of Estimation Model,
February	COCOMO Models, Software Equation, Estimation for Object-Oriented Projects, Estimation for Agile Development
March	Estimation for Web Projects, Creating a Decision Tree, Outsourcing.

Asibe
(ADC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-V

Subject: Basic of Android Operating System

Month	Topic
November	Unit-I: Environment Setup: Setup Java Development Kit (JDK), Android SDK, Eclipse IDE, Android Development Tools (ADT) Plugin, Create Android Virtual Device, Architecture: Linux kernel, Libraries, Android Runtime, Application Framework. Application Components Application Components Activities, Services, Broadcast Receivers, Content Providers, Additional Components, Create Android Application,
December	Anatomy of Android Application, The Main Activity File, The Manifest File, The Strings File, The R File, The Layout File, Running the Application. Unit II: Resources Organizing & Accessing: Alternative Resources, Accessing Resources Intents and Filters: Intent Objects, Action, Android Intent Standard Actions, Data, Category, Extras,
January	Flags, Component Name, Types of Intents: Explicit Intents, Implicit Intents. UI Layouts: Android Layout Types, Relative Layout Attributes, Grid View Attributes, Sub-Activity, Layout Attributes, View Identification, UI Controls, Android UI Controls, Text View Attributes,
February	AutoComplete Text View Attributes, Button Attributes, Image Button Attributes, Checkbox Attributes, Toggle Button Attributes, Radio Button Attributes, Radio Group Attributes. Unit-III: Event Handling:

Ashe
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	Event Listeners & Event Handlers, Event Listeners Registration, Styles and Themes, Defining Styles,
March	Using Styles, Style Inheritance, Android Themes, Default Styles & Themes, Custom Components, Creating a Simple Custom Component.

Ashe
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-V

Subject: Core Java-II

Month	Topic
November	Unit-I: Input/output Stream: File, Directories, Filename Filter, Byte stream, Character stream, Input Stream, Output Stream, Working with Reader classes, Input Stream Reader, Buffered Reader, File Input stream, File Output Stream, Writer classes Utilities: Simple Type Wrapper: Number, Character, Boolean,
December	Enumerations: Dictionary and String Tokenizer, Date, Math Transendentals, Exponential, Rounding function, Unit II: Applets: Introduction to Applet, Types of Applet, Applet vs Application, Applet class, advantages of Applet, Applet Lifecycle, My First Applet, Applet tag, Passing Parameters to Applet. Graphics: Basic Shapes: draw Line,
January	draw Arc, fill Arc, draw Polygon, fill Polygon, Colour & Colour Methods, Fonts. Unit-III: Java Database Connectivity (JDBC): Java Database Connectivity (JDBC): Design of JDBC, JDBC configuration, Executing SQL statement,
February	Query Execution, Scrollable and updatable result sets, row sets, metadata, Transaction Processing.
March	Networking: InetAddress, Datagrams, Socket for client and Server, URL, URL Connection.

Asibe
(AOC)

Co-ordinator

Kiwaghmare
HC Principal
Modern College of Computer Science & Information Technology
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-V

Subject: Basic of Computer Graphics

Month	Topic
November	Unit-I: Basics Concept in Computer Graphics Introduction to Computer Graphics, Application of Computer Graphics, Classification of Computer Graphics, Types of Graphics Devices, Video Display Devices, Input Devices, Display File and its Structure, Display file Interpreter, Display Processor, Graphics file Format. Graphics in C: Introduction to graphics in C: initgraph(), detectgraph() and closegraph() function,
December	Drawing object in C, Filling object by color function.,drawpoly, fillpoly, floodfill, getcolor, settext, outtext, style, fonts,coloring. Unit II: 2-D Transformation
January	Translation, Rotation, Scaling, Line, Circle, Rectangle, Ellipse, Changing foreground & background colors, Homogenous Coordinates for Translation, Homogenous Coordinates for Rotation, Homogenous Coordinates for Scaling, Composogation from 2D Transformation, Other Transformation Reflection, Shear, and Inverse Transformation.
February	Unit-III: Line, Circle and Character Generation Basics concept in line Drawing, Line Drawing Algorithm, Digital Differential Analyzer, Bresenham's Line Algorithm, Antialiasing of Lines, Method of Antialiasing, Increasing Resolution, Unweighted Area Sampling, Pixel Phasing, Representation of Circle, Polynomial Method,

*Asibe
(ADC)*

Co-ordinator

K. K. K. K.
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

March	Trigonometric Method, Circle Drawing Algorithm DDA Circle Drawing Algorithm, Bresenham's Circle Drawing Algorithm, Character Generation, Stroke Method, Starbust Method, Bitmap Method.
-------	---

Asibe
(ADCT)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

T. Y. B.Sc. (Computer Science)

Semester-V

Subject: Beginners Programming with PHP

Month	Topic
November	Unit-I: Introduction to PHP: What is PHP? Why PHP? Evolution of PHP. Installation: PHP on windows and Linux, configuring: Apache & PHP, Running & Testing PHP Script, Combining PHP with HTML. PHP Language Basics: Building blocks of PHP: Variables, Data Types, Operators and Expressions and Constant. Decision within PHP: if, if... else, if. elseif. else, switch, Ternary Operator
December	Unit II: Looping within PHP: while, do...while, for, Break & Continue statement Functions in PHP: What is function, why functions, calling function, Returning Value from function, Recursive function. Arrays in PHP: What & Why Array, Creating Array,
January	Associative Array, Multidimensional Arrays, Accessing Array, Manipulating Arrays, Sorting Arrays, Merging Arrays, Unit-III: Objects in PHP: What is Class & Object, Creating a Class & Object,
February	Object properties, object methods, Overloading, inheritance, Constructor and Destructor. String in PHP: Creating and Accessing String, formatting String, Searching String, Manipulating String. Date and Time:
March	Understanding Time Stamp, Getting Date and time, Extracting values of date-time, Formatting date-time.

Ashe
(A.O.C.)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

T. Y. B.Sc. (Computer Science)

Semester-V

Subject: Data Mining

Month	Topic
November	Unit-I: Data Mining Data Mining Introduction: What is Data Mining? Definition, DBMS Vs Data Mining, DM Techniques, Issues and Challenges in DM, DM Application Areas,
December	DM Applications-Case Studies, Current Trends Affecting DM, Basic Data Mining Task. Unit II: Association Rule: What is an Association rule? Method to discover Association Rule, A Priori Algorithm, Partition Algorithm.
January	Clustering Techniques: Clustering Paradigm, Partitioning Algorithm, Similarity and Distance Measure, Hierarchical Algorithm.
February	Unit-III: Decision Tree: What is a decision tree? Tree Construction Principle, Best Split, splitting indices, Splitting Criteria
March	Web Mining: Introduction, Web Content Mining, Web Structure Mining, Web Usage Mining.

Ashe
Coordinator
Modern College of Computer Science & I.T.,
Aurangabad

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/'A'bad''

F. Y. B.Sc. (Computer Science)

Semester-II

Subject: - Data Structure

Month	Topic
April	Unit-I: 1. Introduction to Data Structure: <ul style="list-style-type: none">• Basic Terminology: Data item, Fields, Records, Files, Entity, Attributes• Data Organization and Data Structure
May	2. Arrays <ul style="list-style-type: none">• Representation of Linear Arrays• Traversing, Insertion and Deletions• Sorting & Searching Algorithms• Multidimensional Arrays: 2D & M-D Concept• Record: Record Structures, Representation in Memory
June	Unit-II: 3. Linked List <ul style="list-style-type: none">• Concept of Linked List, Representation of linked List in memory, Traversing a linked list• Searching a linked list: sorted and unsorted• Insertion & Deletion in Linked List• Header Linked List & Two-way List
July	Unit- III: 4. Stacks, Queues, Recursion <ul style="list-style-type: none">• Stack: Operation, Array Representation of Stack, linked representation of stack, Arithmetic Expression POLISH & POSTFIX,

Shilpa
(A.D.C.)

Kwajhmase
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

August	<ul style="list-style-type: none">• Application of stacks: Quicksort, Recursion.• Queue: Representation of queues & link.• Types of Queues: Deques & Priority Queues

Ashe
(APC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kadagmare

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: - Operating System

Month	Topic
April	Unit-I: 1. Process Management Concept of Process: Process State, Operation on Processes, thread. CPU Scheduling: Types of Schedulers, Criteria for scheduling, Scheduling Algorithms. Process Synchronization: Need for synchronization, Critical Section, Hardware Synchronization, Semaphores, Monitors, Problem of synchronization. Deadlocks: Concept of Deadlock, Deadlock Modelling, Methods for Handling Deadlock
May	Unit-II: 2. Storage Management Memory Management: Address Binding, Logical Vs. Physical Address space, Memory Allocation, Paging, Segmentation, Segmentation and paging of Intel Pentium.
June	Virtual Memory: Demand Paging, Page replacement Algorithms (FIFO, Optimal, LRU), Virtual Memory in windows Xp. File System Interface: Files, File Access, Directory Structure, Protection. Implementation of File System: Allocation Methods, Free space Management
July	Unit- III: 3. Device Management

Ashe
(LAD)

Co-ordinator

Modern College of Computer Science & I.T.,

Kwaghmare
VC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<p>Introduction: Dedicated Devices, Shared Device & Virtual Device</p> <p>Device Characteristics: Input and Output devices, Storage devices, Device allocations</p> <p>Concept of I/O Traffic Controller: I/O Scheduler, introduction to Virtual Devices.</p>
August	<p>4. Information Management</p> <p>Concept of File system</p> <p>Symbolic file system</p> <p>Access control verification</p> <p>Logical and physical file system</p>

Ashe
(ADC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kishore
WC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: - Micro Processor – II

Month	Topic
April	Unit-I: 1. 8086 Microprocessor: Logic instructions <ul style="list-style-type: none">• Basic logic Instructions: AND, OR, Exclusive-OR, NOT, NEG• Shift and rotate 2. Program control Instructions <ul style="list-style-type: none">• The JUMP group Instruction: Conditional & Un-Conditional.• Procedures-CALL & RET
May	<ul style="list-style-type: none">• Controlling the Flow of an Assembly Language Program• Loops-WHILE, REPEAT UNTIL Unit-II: 3. Programming the Microprocessor <ul style="list-style-type: none">• String Procedure & Macros• Modular Programming – Assembler & linkers.
June	<ul style="list-style-type: none">• Instructions-AAA, AAD, AAM, AAS, ADC, ADD, SUB, MOV, DAA, DEC, DIV, ESC, HALT, INT, INC, INTO, JNZ, JZ, JMP, LOOP, LOOPZ, MUL, MOVS, POP, PUSH, RET, ROR, SBB, WAIT, XCHG.
July	Unit- III: 4. Interrupts <ul style="list-style-type: none">• Basic Interrupt Processing, Hardware Interrupts, 8259 A Programmable interrupt Controller, Interrupt Examples. 5. DMA & DMA Control I/O
August	<ul style="list-style-type: none">• Basic DMA Operation, 8237 DMA Controller, Shared Bus Operation, Disk Memory Systems, Video Displays.

Asibe
(A.P.C.)

Co-ordinator

Modern College of Computer Science & I.T.,

Aurangabad.

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: - 'C' Programming – II

Month	Topic
April	<p>Unit-I:</p> <p>1. Functions</p> <ul style="list-style-type: none">• Introduction, types of functions. Defining functions, Arguments, Function prototype, actual parameters and formal parameters, calling function, returning function results, Call by value, Recursion. <p>2. Structure & Union</p> <ul style="list-style-type: none">• Structure: Introduction, Declaration and initializing structure, Accessing structure members, Nested structures, Arrays of structure, typedef statement.• Unions: Declaration, Difference between structure and union
May	<p>Unit-II:</p> <p>3. Pointers:</p> <ul style="list-style-type: none">• Introduction, Memory organization. Declaration and initialization of pointers. The pointer operator and & De-referencing, Pointer expression and pointer arithmetic, Pointer to pointer. <p>4. Storage Class & Library Functions:</p> <ul style="list-style-type: none">• Storage classes, Scope, visibility and lifetime of variable, block and file scope, auto, extern, static and register storage classes.• String handling functions: strcpy(), strcmp(), strcat(), strlen(),strupr(), Strlwr(), gets(), puts()

Ashe
(AOC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY



Reg. No. F-11895/"A'bad"

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

	<ul style="list-style-type: none">Data conversion functions from stdlib.h: atoi(), atol(), atof(), itoa(), Itoa(), random(), calloc(), malloc(), exit(), abs(), toupper(), tolower()
June	<p>5. Pre-processor Directives:</p> <ul style="list-style-type: none">File inclusion and conditional compiler directives, Macro substitution, #define, #if, #ifdef, #else, #elif, #endif, <p>6. Miscellaneous Features:</p> <ul style="list-style-type: none">Bitwise Operators: Introduction, Masking, Internal representation of data, Bit fields, Enumerated data types, Type casting.
July	<p>Unit- III:</p> <p>7. File Handling</p> <ul style="list-style-type: none">File handling: Introduction, Opening & closing a file, Input/Output operations on files, text and binary files, getc(), putc() function. File copy program, fprintf() and fscanf(). Fread() and fwrite() function
August	Writing and reading records from binary file, Appending, modifying and deleting a record from file, Random access functions fseek(), rewind(), flushall(), remove(), rename().

Ashe
(ADC)

Co-ordinator
Modern College of Computer Sci & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: - Communication Skill-II

Month	Topic
April	Unit-I: 1. Communication with Media <ul style="list-style-type: none">Written media of Communication: Letters, Notices, Minutes, Manual, Leaflet, Complaints & Suggestion, Job Application.Visual Media of communication: slide presentation, Pictures & Photographs, Posters & Advertisement.Non-Verbal Media of Communication
May	2. Written Communication: Reports <ul style="list-style-type: none">Types of Report, characteristics of Good Report, Essential Requisites of Good Report-Writing, Planning the Report, Outlining Issues for Analysis, Writing the Reports. Unit-II: 3. Group Communication <ul style="list-style-type: none">Problem of Group Communication- Meeting-types of meeting, Advantages & Disadvantages of Meeting-Preparation for Meeting-conduct of a Meeting – Responsibility of participants.
June	4. Interview <ul style="list-style-type: none">Purpose, Types of interviews-promotion, appraisal, exit, telephone.Employment or selection Interview: Candidate's preparation, Question commonly asked in interview, role of interviewer, Interviewer's preparation.

Ashe
(A.D.C.)

Co-ordinator

K. Waghmare
H.C. Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

Reg. No. F-11895/"A'bad"



	Unit- III: 5. Listening Comprehension <ul style="list-style-type: none">• Cassettes: "Tiger's Eye" Series. (vol. 1 & 2), "Twist in the Tail"• The Listening drill is to be given and question should be framed.
July	6. Reading Comprehension and Vocabulary <ul style="list-style-type: none">• Reading with proper pronunciation and ideal reading is to be recorded.
August	7. Speaking: <ul style="list-style-type: none">• CIEFL Spoken English exercises part one and two.• Drilling: Proper Pronunciation of word and sentences

Shilpa
(ADC)

— **Co-ordinator**
Modern College of Computer Science & I.T.,
Aurangabad.

K. Waghmare
— **VC Principal**
Modern College of Computer Science & I.T.
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: - Numerical Computation Methods

Month	Topic
April	Unit-I: 1. Introduction <ul style="list-style-type: none">• Mathematical Modeling, Characteristics, Error in Calculation• Significant Error, Absolute, Percentage Relative Error• Chopping off and Rounding off Error.• Truncation Error, Propagation Error. 2. Matrices and Determinants. <ul style="list-style-type: none">• Definitions, Matrix Operations• Determinant of Square Matrix, Cofactor• Adjoint of Matrix, Rank of Matrix
May	3. Numerical Solutions of Transcendental Equations <ul style="list-style-type: none">• Concept of Iterative Methods, Search Method for Initial Guess.• Bisection Method• False Position Method• Newton-Raphson Method Unit-II: 4. Elimination Methods for Solving Simultaneous Equations <ul style="list-style-type: none">• Introduction and Matrix Notation of set of Equations• Gauss Elimination Method• Gauss Seidal Method

Ashe
(A.T.C.)
Co-ordinator

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<ul style="list-style-type: none">• Matrix Inversion Method
June	5. Interpolation <ul style="list-style-type: none">• Introduction and Polynomial Interpolation• Newton-Gregory Forward Difference Interpolation Formula• Newton-Gregory Backward Difference Interpolation Formula
July	Unit- III: 6. Interpolation – II <ul style="list-style-type: none">• Newton's divided Difference Interpolation• Lagrange's Interpolation
August	7. Least Square Curve Fitting <ul style="list-style-type: none">• Best Fit and Criteria for Best Fit and Least Square Fit.• Linear Regression.

Ashe
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B.Sc. (Computer Science)

Semester-IV

Subject: Software Engineering

Month	Topic
April	Unit-I: Software and Software Engineering What is Software, Characteristics of software, categories of Software, attributes of Web Apps, software Engineering, Software Process. Essence Software Engineering Practice, General Principles. Software Myths. Software Process and Process Models Software process Model Process Flow.
May	Process Models, Waterfall model, Incremental Process Model. Evolutionary Process Models, Concurrent Models. Specialized Process Models. The United Process, Personal and Team Process Models. Product and Process Unit-II Agile Introduction to Agility. Agility and the Cost of Change, Agile Process, Agility Principles, Human Factors
June	. Extreme Programming (XP). XP Values. XP Process, Industrial, Critics of XP Other Agile Process Models Adaptive Software Development (ASD), Scrum. Dynamic Systems Development Method (DSDM). Crystal, Feature Driven Development (FDD), Lean Software Development (LSD), Agile Modelling (AM), Agile Unified Process (AUP)
July	Unit- III: - Principles That Guide Practice Principles That Guide Process, Principles That Guide Practice. Communication Principles planning Principles,
August	Modelling Principles. Construction Principles Deployment Principles

[Signature]
Coordinator
Modern College of Computer Science & I.T.,
Aurangabad.

[Signature]
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B.Sc. (Computer Science)

Semester-IV

Subject: Fedora

Month	Topic
April	Unit-I: Introduction to Fedora <ul style="list-style-type: none">• Basic concepts of Operating System, Kernel, Shell & File System structure• Basic concepts of Linux• What is Linux, Linux's Roots in Unix, Linux Features, Advantages of Linux.• What is Fedora, Features of Fedora• Installing Fedora• Differences between CentOS, Red Hat Enterprise Linux & Fedora• Basic commands of Linux• Advanced Linux Commands
May	Introduction to Graphical Environment <ul style="list-style-type: none">• Logging to Fedora: Desktop GNOME & KDE• Differences between GNOME & KDE• Features of GNOME & KDE• Use and customize the GNOME interface• Perform command tasks using the GNOME GUI• Launch applications from command line & GNOME interface• Customize X Window System Unit-II Software Package Administration <ul style="list-style-type: none">• Installing and deleting software packages

Ashe
(ADC)
Coordinator

Kwaghmare
VC Principal
Modern College of Computer Science & Information Technology, Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<ul style="list-style-type: none">• Querying and updating software packages
June	<p>User and Group Administration</p> <ul style="list-style-type: none">• Creating and deleting users from the systems• Modifying users' profile• Creating and deleting groups Important system files related to user administration <p>Unit- III: - Advanced File Permissions</p> <ul style="list-style-type: none">• Assigning advanced files permissions i.e. chmod, chown, chgrp & Sticky bit <p>Creating, modifying and deleting ACL's</p>
July	<p>Disk Partitioning and Mounting File System</p> <ul style="list-style-type: none">• Using fdisk, disk druid utilities for disk partitioning• Using mkfs, commands to create file systems
August	<ul style="list-style-type: none">• Mounting various file systems• Auto mounting of file system

Shibe
(ADC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B.Sc. (Computer Science)

Semester-IV

Subject: Basic of Networking

Month	Topic
April	Unit-I: Introduction Communication System, Components of communication system, Compute network Advantages and applications of computer n/w. point-to-point and multipoint line configuration, LAN, MAN and WAN. Analog and Digital signals, Data Transmission: Parallel and Serial, Synchronous and Asynchronous transmission, Transmission Mode: Simplex, half-duplex and full-duplex.
May	Network Topologies Mesh, Star, Tree, Bus and Ring and Hybrid Topology (Advantages and disadvantages of each) Unit-II: Transmission media Guided and unguided media, Twisted-pair, UTP and STP cable, coaxial cable, Optical Fiber cable, Radio waves,
June	Microwaves, Satellite Communication (Transmission characteristics and advantages of each type) Modulation & Multiplexing Concept of modulation and demodulation, Digital-to-analog conversion, Amplitude Shift Keying (ASK)/AM,
July	Frequency Shift Keying (FSK)/FM, Phase Shift keying (PSK)/PM. Unit- III: THE MOBILE TELEPHONE SYSTEM: First Generation(1G), Second Generation(2G), Third Generation(3G),
August	Internet over cable, Spectrum Allocation, cable Modem, ADSL Versus Cable.

Ashe
Coordinator
Modern College of Computer Science & I.T.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B.Sc. (Computer Science)

Semester-IV

Subject: Core Java

Month	Topic
April	Unit-I: Object oriented paradigm Basic concepts of Object-oriented programming: class & object, data abstraction and encapsulation, inheritance, polymorphism, dynamic binding, message communication. Benefits and applications of OOP. History and features of Java. Java Vs. C++, Java and Internet, Java and www. Java environment. Structure of java program, symbolic constants. Data types.
May	Arrays, Classes and Objects Declaration and initialization, one and multidimensional arrays Defining a class, adding variables and methods, creating objects, static fields and static methods. Method overloading, Constructors: types and multiple constructors in class. Command line arguments.
June	Unit-II: Inheritance Super and sub class, defining a subclass. Single inheritance, multilevel inheritance and hierarchical inheritance. Subclass constructors. Super keyword, Visibility controls, Method overriding, Dynamic method dispatch, Abstract methods and class. Interfaces, String and Vector Class Defining interfaces, implementing interfaces, extending interfaces,
July	accessing interface variables. String class and its methods, Vectors Unit- III: - Packages

Shilpa
Coordinator
Modern College of Computer Science & I.T.,
Aurangabad

Kavaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	Introduction, Java API packages, naming conventions, creating and accessing user defined package, using a package, adding a class to a package,
August	Importing classes from package. Exception handling and Multithreading Exceptions, syntax of exception handling code, multiple catch statements, throw: throwing own exceptions, throws and finally Introduction to multithreading, creating threads by extending the Thread class and by implementing Runnable interface, implementing the run () method, Life cycle of a thread, Thread methods and thread priority.

Asibe
(ADD)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

S. Y. B.Sc. (Computer Science)

Semester-IV

Subject: Advance Database Management System

Month	Topic
April	Unit-I: Structured Query Language <ul style="list-style-type: none">• DDL Statements to Create and Manage Tables using Create & Alter• Manipulating Data using Insert, Update & Delete Statement• Retrieving Data Using SQL. Select, Restricting and Sorting Data, Using Single-Row functions, Conversion Functions and Conditional Expressions• Aggregated Data Using Group Function, displaying data from Multiple tables, Sub queries, Set Operators
May	Unit-II: Data Storage <ul style="list-style-type: none">• Overview of Physical Storage Media• Magnetic Disk• RAID• Tertiary Storage• Storage Access
June	Database System Architecture <ul style="list-style-type: none">• Centralized and Client-Server Architecture• Server System Architecture• Parallel System
July	Unit- III: Transaction Processing <ul style="list-style-type: none">• Transaction Concept• Transaction State• Implementation of Atomicity and durability

Asibe
CAOC
Co-ordinator

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<ul style="list-style-type: none">• Concurrent Execution
August	Concurrency Control Techniques <ul style="list-style-type: none">• Lock-Based Protocol• Timestamp-Based Protocol Deadlock Handling

Shibe
(A.D.C)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kisaghmare

VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY
MODERN COLLEGE
OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B.Sc. (Computer Science)

Semester-IV

Subject: Web Fundamental

Month	Topic
April	Unit-I: Introducing HTML5 <ul style="list-style-type: none">• Understanding HTML, XHTML, and HTML5, introducing semantic markup, Syntax, Attributes, working with elements, Creating an HTML document• Embedding content, Embedding HTML by using inline frames, working with hyperlinks, adding images to your HTML document, Embedding plug-in content Advances of HTML5 <ul style="list-style-type: none">• HTML5 Layout container• Format using & <div> element• Working with Tables: creating regular and irregular tables, heading, columns and rows, captions, header, footer.
May	Unit-II: Introducing JavaScript <ul style="list-style-type: none">• Basic of JavaScript• JavaScript Variables, Operators Its Precedence, Special Values, Predefined• Built-In functions, Functions Declaration & Call• String Functions• Conditions and looping structure,• Inline JavaScript & External JavaScript
June	Advances in JavaScript <ul style="list-style-type: none">• Object in JavaScript, Concept of array, how to use it in JavaScript, types of an array, array methods

Shilpa (AOC)

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



	<ul style="list-style-type: none">• DOM Concept in JavaScript, DOM Objects, DOM Search Methods• Event handling in JavaScript: Capturing & Bubbling, Subscribing Unsubscribing and Cancelling Event, Windows Event, Keyboard and Mouse Events. <p>Unit-III: Cascading Style Sheet</p> <ul style="list-style-type: none">• Introduction to CSS3
July	<ul style="list-style-type: none">• Defining and Applying a Style, Inline, Embedded and External Style Sheet.• Selectors: element, id and class selector, grouping selector, attribute,
August	<ul style="list-style-type: none">• Specificity and cascading• CSS properties: Color, box Model, border, padding, margin, float, clear

Shikha
(ABC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad
Co-ordinator

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-VI

Subject: Software Quality & Testing

Month	Topic
April	Unit-I: Quality Concepts Software and Quality, Garvin's Quality Dimensions, McCall's Quality Factors, ISO 9126 Quality Factors, Risk, Quality and Security, SE Methods, Project Management Techniques, Quality Control and Assurance Quality Assurance: Elements of Software Quality Assurance, SQA Task Goals and Matrices, Formal Approach to SQA,
May	Six Sigma for SE, ISO 9000 Quality Standards, SQA Plan. Unit-II: Software Testing Strategies Verification and Validation, Picture of Software Testing Strategies, Criteria for complication of testing, Strategies issue, Strategies for Conventional Software and Web Apps, Validation Testing, System Testing, Debugging.
June	Unit- III: Testing Conventional Applications Testing Fundamentals, Internal and External view, White-Box Testing, Basic path Testing, Control Structure Testing, Black-box Testing, Testing Client-server Architecture
July	Testing Web Applications: Dimensions of Quality, Errors within a Web App, Testing Strategy and planning, Testing process, Content Testing, Database Testing
August	, User Interface Testing, Navigation Testing, Configuration Testing, Load Testing, Stress Testing.

Ashe
(ADC)
Coordinator

K. S. Jadhav
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-VI

Subject: Android Application Development

Month	Topic
April	<p>Unit-I: Android SDK Features</p> <p>Access to Hardware including Camera, GPS, and Accelerometer, Native Google Maps, Geocoding, and Location-Based Services, Background Services, SQLite Database for Data Storage and Retrieval, Shared Data and Inter application Communication, P2P Services with Google Talk, Extensive Media Support and 2D/3D Graphics, Optimized Memory and Process Management, The Dalvik Virtual Machine, Advanced Android Libraries.</p> <p>Android Development Tools</p> <p>Types of Android Applications, Hardware-Imposed Design Considerations, Users, Environment, The Android Emulator, Dalvik Debug Monitor Service (DDMS), The Android Debug Bridge (ADB).</p>
May	<p>Unit-II</p> <p>Applications and Activities:</p> <p>Application Manifest, Manifest Editor, Android Application Life Cycle, Understanding Application Priority and Process States, Externalizing Resources, Fundamental Android</p> <p>UI Design:</p> <p>The Android Widget Toolbox, Layouts, Compound Controls, Custom Widgets and Controls, Android Menu System, Activity Menu, Intents, Broadcast Receivers, Adapters, and the Internet: Intents to Launch Activities, Intent Filters to Service</p>

Ashe
(A.D.C.)
Co-ordinator
Modern College of Computer Science & I.T.
Aurangabad

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	Implicit Intents, Intent Filters for Plugins and Extensibility, Intents to Broadcast Events, Android-Supplied Adapters, Internet Resource.
June	Data Storage, Retrieval, and Sharing Creating and Saving Preferences, Retrieving Shared Preferences, Saving the Activity State, File Management Tools, Databases in Android: SQLite, Cursors and Content Values, Content Providers. Maps, Geocoding, and Location-Based Services: Location Providers, Geocoder, Map-Based Activities. Unit- III: Advanced Development in Android: controlling Services, Threads, Customizing Toasts, Toasts in Worker Threads,
July	Notification Manager, Triggering Notifications. Peer-to-Peer Communication: Android Instant Messaging, Sending & Listening SMS. Accessing Android Hardware: Media APIs, Controlling Camera Settings, Sensor Manager, Accelerometer and Compass,
August	Android Telephony, Bluetooth, Managing Network and Wi-Fi Connections. Advanced Android Development: Paranoid Android, AIDL to Support IPC for Services, Internet Services, Rich User Interfaces.

G. S. He
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

K. Waghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-VI

Subject: Theory of Computation

Month	Topic
April	Unit-I: Introduction: Sets, relations, functions, graphs, trees, mathematical induction. Regular expressions: FA and regular expression, pumping lemma for regular sets,
May	applications of pumping lemma, closure properties of regular sets, regular sets and grammar, types of grammar (type 0, type 1, type 2, type 3)
June	Unit-II Finite automata: definition, transition systems, acceptability of strings, NFA, DFA,
July	equivalence of DFA and NFA, mealy moore model, minimization of automaton, Applications Unit- III: Formal Languages,
August	Chomsky classification of languages, languages, their relation and automaton.

Asibe
(A.D.C.)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kuraghmare
WC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-VI

Subject: Advanced Computer Graphics

Month	Topic
April	Unit-I: 3-D Transformation Translation, Scaling Rotation, Shearing, Reflection, Multiple Transformation Projection, Perspective Projection, Parallel Projection,
May	Types of Parallel & Perspective Projection, Vanishing Points. Diffuse Illumination, Specular Reflection. Unit-II: Curves and Fractals Curve Generation, Representation of Parametric & Non-Parametric Curves,
June	Spline Representation Parametric Representation of Circle & Ellipse, Bezier curves, B-Spline curves Fractals, classification of fractals, Topological Dimension, fractal Dimension, Hilbert's curves, Koch curve.
July	Unit- III: Colour Model and Animation Properties of Light, CIE Chromaticity Diagram, Colour Primary Systems, Colour Matching Experiments, Colour Models: RGB, CMY and HSV
August	Introduction of Animation, Animation Using Colour Table, Animation of Wireframe Models.

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY
MODERN COLLEGE
OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-VI

Subject: Advanced Programming with PHP

Month	Topic
April	Unit-I: Handling HTML Forms in PHP: Creating HTML Form, Capture Data Handling: Empty form data, Multi-Value fields, Validating Form Data, Difference between GET and POST, Global and Environment Variables, Generating Web-form in PHP, Create Multi-step Form, Hidden fields, Redirecting the user.
May	Unit-II Cookies and user sessions in PHP: State and Stateless Webpage, deleting a Cookies: Anatomy of cookies, setting a cookie with PHP, Cookies, Creating Session Cookies, Query String: Working with Query String, Creating Query String. Session: Using PHP Session to Store Data:
June	Creating a Session, Reading & Writing Session Data, destroying a Session, Create a User Login System Unit- III: Introducing Database and SQL: Basics of MySQL, connecting to the Database Server, Creating Database, Creating Table. Retrieving data: Limit the number of results returned, Order and group results,
July	Query multiple tables at once, use various MySQL functions and other features to build more flexible queries Manipulating data from SQL with PHP: Inserting new records into tables using INSERT statements,
August	changing field values within records with UPDATE statements, deleting records using DELETE statements.

Ashe
(A.D.C)

11.2
CO-ordinator

Kusagharase
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-VI

Subject: Ethics & Cyber Law

Month	Topic
April	Unit-I: Basic Concepts of Technology and Law, Understanding the Technology of Internet, Scope of Cyber Laws, Cyber Jurisprudence. Law of Digital Contracts the Essence of Digital Contracts.
May	Unit-II The System of Digital Signatures. The Role and Function of Certifying Authorities. The Science of Cryptography,
June	E-Governance, Cyber Crimes and Cyber Laws. Introduction to Intellectual Property. Unit- III: Information Technology Act 2000 Cyber Law Issues in E-Business Management.
July	Major issues in Cyber Evidence Management, Cyber Law Compliancy Audit, The Ethics of Computer Security.
August	Relevant Rules Notifications, Information Technology (Amendment) Act, 2008.

Asibe
Coordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



2021-22

F. Y. B. Sc. (Computer Science)

Semester-I

Subject: - Computer Fundamentals

Month	Topic
October	Unit-I: 1. Fundamentals of Computer System <ul style="list-style-type: none">• Characteristics & features of Computers.• Components of Computers.• Organization of Computer. 2. Algorithm and Flowcharts <ul style="list-style-type: none">• Algorithm: Definition, Characteristics, Advantages and disadvantages, Examples• Flowchart: Definition, Define symbols of flowchart, Advantages and disadvantages, Examples
November	3. Computer Generation & Classification <ul style="list-style-type: none">• Generation of Computers: First to Fifth• Classification of Computers: Distributed & Parallel computers Unit-II: 4. Computer Languages <ul style="list-style-type: none">• Types of Programming Languages: Machine Languages, Assembly Languages, High Level Languages• Assembler, Linker, Loader, Interpreter & Compiler.
December	5. Computer Memory <ul style="list-style-type: none">• Memory Cell & Organization

Ashe (AOC)
Coordinator

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.
Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<ul style="list-style-type: none">Types of Memory (Primary and Secondary): RAM, ROM, PROM, EPROMSecondary Storage Devices (FD, CD, HD, Pen drive, DVD, Tape Drive, DAT) <p>6. I/O Devices</p> <ul style="list-style-type: none">Input Devices: Touch screen, OMR, OBR, OCR, Light pen ScannersOutput Devices: Digitizers, Plotters, LCD, Plasma Display, Printers
January	<p>Unit- III:</p> <p>7. Processor</p> <ul style="list-style-type: none">Structure of Instruction, Description of Processor, Processor FeaturesRISC & CISC <p>8. Operating system Concepts</p> <ul style="list-style-type: none">Why Operating System? Functions of Operating System, Booting of OS & it's typeTypes of Operating System: Batch O.S., Multiprogramming O.S., Time Sharing O.S, Personal Computers O.S., Network O.S.

Asike
(ADC)
Co-ordinator
Modern College of Computer Science & Information Technology
Aurangabad

Kwaghmare
VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B. Sc. (Computer Science)

Semester-I

Subject: - Digital Electronics

Month	Topic
October	<p>Unit-I: 1. Number Systems and Arithmetic</p> <ul style="list-style-type: none">• Number System: Decimal, Octal, Hexadecimal & Binary Number System Conversion within Binary, Octal,• Hexadecimal & Decimal Number System.• Binary Arithmetic: Binary addition, subtraction, multiplication & division• Binary subtraction using 1's complement, 2's complement method.• Hexadecimal arithmetic: Addition, subtraction, multiplication & division <p>2. Boolean Algebra and Logic Gates</p> <ul style="list-style-type: none">• Postulates of Boolean Algebra• Theorems of Boolean Algebra: Complementation, commutative, AND, OR,• Associative, Distributive, Absorption laws, De Morgan's theorems
November	<ul style="list-style-type: none">• Reducing Boolean expressions• Logic Gates: AND, OR, NOT, Ex-OR, Ex-NOR• NAND as Universal building block• Logic diagrams of Boolean expressions Boolean expressions for logic diagrams <p>Unit-II:</p> <p>3. Minimization Techniques</p>

Ashe
(A.P.C.)
Co-ordinator

Kulaykumar
iC Principal

Modern College of Computer Science & IT
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<ul style="list-style-type: none">• Introduction, Minterms and Maxterms• K-Map, K-map for 2 variables• K-map for 3 variables• K-map for 4 variables
December	<p>4. Combinational and Arithmetic Logic Circuits</p> <ul style="list-style-type: none">• Half Adder & Full Adder• Binary parallel Adder• Half Subtractor, Full Subtractor• Adder/Subtractor in 2's complement system <ul style="list-style-type: none">• BCD to Decimal decoder• 2:4 demultiplexer• 4 line to 1-line multiplexer <p>Unit- III:</p> <p>5. Flip Flops</p> <ul style="list-style-type: none">• Introduction: RS FF• Clocked RS FF, D FF• Triggering, preset and clear• JK FF, TFF, Race around condition• Master slave FF
January	<p>6. Counters</p> <ul style="list-style-type: none">• Introduction: Asynchronous/ ripple counter• Modulus Counter, MOD-12 counter• Synchronous counter: Synchronous serial & synch parallel counter• BCD counter

Asiche
(ADC)

Co-ordinator

K. Waghmare

Principal



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



- Ring counter

7. Shift Registers

- Introduction, Buffer register
- Serial-in serial-out Serial-in parallel-out
- Parallel-in serial-out, parallel-in parallel-out

Asike
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B. Sc. (Computer Science)

Semester-I

Subject: - Microprocessor – I

Month	Topic
October	Unit-I: 1. Introduction to Microprocessor and Microcomputer <ul style="list-style-type: none">• Historical background• Microprocessor based personal computer system• Computer data formats
November	2. 8086 Hardware specification <ul style="list-style-type: none">• Microcomputer structure and operation• 8086 internal architecture,• Real Mode & Protected Mode Memory Addressing, Memory Paging.• Introduction to programming 8086: Prog.lang. Unit-II: 3. Addressing Modes <ul style="list-style-type: none">• Data addressing modes• Program memory addressing modes• Stack memory addressing modes
December	4. Data Movement Instructions (Inst. related with 8086 only) <ul style="list-style-type: none">• MOV revisited: Machine language, the op-code, MOD field, register assignment, R/M memory addressing, special addr.mode Unit-III: 5. Data Movement Instructions (..)

glshe
(ADCS)

Co-ordinator
of Computer Science & I.T.

Kwaghmare
MC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<ul style="list-style-type: none">• PUSH/POP, initializing stack.• Miscellaneous data transfer instructions: XCHG, LAHF & SAHF
January	<p>6. Arithmetic instructions</p> <ul style="list-style-type: none">• Addition, subtraction and comparison• Multiplication and division• BCD and ASCII arithmetic• Addition, subtraction and comparison• Multiplication and division• BCD and ASCII arithmetic

Ashe
(APDC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

VC Principal
Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B. Sc. (Computer Science)

Semester-I

Subject: - 'C' Programming – 1

Month	Topic
October	Unit-I: 1. Introduction: a. An Overview of C, History of C language, C as a Structured Language, Features of C 2. Basic Elements & Operators <ul style="list-style-type: none">• Character set, C Token, Identifier & Keywords, Variables• Constant and its types. Integer constant, floating point constant, character constant, String constants.
November	<ul style="list-style-type: none">• Operators: Arithmetic, Relational, Logical, Unary operators: Increment & decrement Assignment and Conditional operator.• Precedence & Associativity of Operators 3. Data Types <ul style="list-style-type: none">• Data Types: int, char, float, double. Declaration & Initialization.• Type modifier: long, short, signed & unsigned
December	Unit-II: 4. C Program & I/O statements <ul style="list-style-type: none">• Structure of C Program, Compilation & Execution of C program• I/O: Introduction, Formatted Input/output function: scanf & printf, Escape sequence characters.• Library functions: General & Math's.

Ashe
(CADC)

Coordinator
Computer Science & I.T.

Kwaghmare

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<p>5. Control and Iterative Statements:</p> <ul style="list-style-type: none">• Simple if, nested if, if-else, else if ladder• Switch-case statement
January	<ul style="list-style-type: none">• The conditional expression (? operator)• While and do-while loop, and for loop• Break & continue statement, goto statement <p>Unit- III:</p> <p>6. Arrays:</p> <ul style="list-style-type: none">• Introduction, Declaration and initialization Accessing array elements, Memory Representation of array.• One dimension and multidimensional arrays, character array, Introduction to string.

Asibe
(A.P.C)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

V/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B. Sc. (Computer Science)

Semester-I

Subject: - Communication Skill-

Month	Topic
October	Unit-I: 1. Introduction to Communication Importance of Communication, Definition of Communication Elements of Communication, Communication process 2. Types of Communication Upward Communication, Downward Communication Horizontal Communication
November	3. Method of Communication: Verbal, Oral, Written Unit-II: 4. Written Communication Punctuation marks. Grammar: Parts of Speech, tenses, vocabulary building, constructing para. 'C's of good communication Language of business writing
December	5. Oral Communication Speeches and Presentation Dialogues UNIT-III (English Language Lab) 6. Listening Comprehension Listening and typing – Listening and sequencing of sentences.

Ashe
(ADC)

Co-ordinator
of Computer Science & I.T.

K. K. Ghore

HC Principal

Modern College of Computer Science & I.T.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

January	<p>7. Reading Comprehension and Vocabulary Filling in the blanks – Cloze Exercises – Vocabulary building- Reading and answering questions.</p> <p>8. Speaking</p> <p>a. Phonetics: Intonation – Ear Training- Correct Pronunciation – Sound recognition exercises –Common Errors in English</p> <p>b. Conversations: Face to Face Conversation – Telephone conversation –</p>
---------	---

Asibe
(ADC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwagmore

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B. Sc. (Computer Science)

Semester-I

Subject: - Mathematical Foundation

Month	Topic
October	<p>Unit-I:</p> <p>1. Set Theory-</p> <p>Basic Definitions: Set, Finite set, Infinite set, Singleton Set, Empty set, Subset, Proper Subset, Universal set, Power set, Venn diagram,</p> <p>Operations on set: Union of sets, Intersection of Sets, complement of a set, Equality of two sets, Disjoint sets, Difference of two sets, Symmetric Difference, Cartesian Product; explanation of each using Venn-diagram and simple examples. Principle of Inclusion and Exclusion.</p>
November	<p>Algebraic Properties of Set: Statement and proof of Commutative Laws, Associative Laws, Distributive Laws, Idempotent Laws, Properties of Compliment, Principle of Duality.</p> <p>Unit-II:</p> <p>2. Graph Theory:</p> <p>Introduction: Graph Definition & Terminologies, Application of Graph, Finite & Infinite Graphs, Incidence and Degree, Isolated Vertex, Pendant Vertex and Null Graph.</p> <p>Matrix Representation of Graph: Incidence & Adjacency Matrix.</p> <p>Path & Circuits: Isomorphism, Subgraphs, Walks, Paths and Circuits, Connected Graphs, Disconnected Graphs and Components, Euler Graphs.</p>
	<p>Operations on Graph: Union, Intersection & Ring Sum.</p>

Ashe
(ADC)

Kooaghmare

Computer Science & I.T.

IC Principal
College of Computer Science & I.T.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY



Reg. No. F-11895/"A'bad"

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

December	<p>Directed Graph: Definition, Types of Directed Graph, Directed Path & Connectedness.</p> <p>Unit- III:</p> <p>3. Relation and Function</p> <p>Introduction: Binary Relation, Tabular Form, Graphical Form, Ternary Relation, Quaternary Relation.</p> <p>Properties of Binary Relations: Reflexive Relation, Symmetric Relation, Antisymmetric Relation, Transitive Relation, Equivalence Relation.</p>
January	<p>Function: Introduction, Function Mapping, Types of Functions: 1:1, 1:M</p> <p>4. Boolean Algebra</p> <p>Finite Boolean Algebra, Boolean Expression, Boolean Function. Disjunctive Normal Form & Simplification.</p>

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad

Kuraghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B. Sc. (Computer Science)

Semester-III

Subject: Advanced Data Structure

Month	Topic
October	Unit-I: Binary Trees Representing Binary, Trees in Memory, Traversing Binary Trees, Traversal Algorithms using Stacks, Header Nodes; Threads, Binary Search Trees Searching and Inserting in Binary Search Trees, Deleting in Binary Search Tree,
November	AVL Search Trees, Insertion in an AVL Search Tree, Deletion in an AVL Search Tree, Unit II: Graph Theory Terminology,
December	Sequential Representation of Graphs; Adjacency matrix, Path Matrix, Warshall's Algorithm, Shortest Paths, Linked Representation of a Graph, Operations on Graphs, Traversing a Graph, Posets; Topological Sorting.
January	Unit-III: Searching & Sorting: Introduction, Sorting, Insertion sort, Selection sort, Merging, Merge-Sort, Radix Sort, Searching and Data Modification, Hashing

Ashu
CO-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwagmare
IIC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B. Sc. (Computer Science)

Semester-III

Subject: Unix Operating System

Month	Topic
October	Unit-I: Overview of UNIX Operating System, basic features of Unix operating System, File Structure, CPU Scheduling, Memory Management, File System Implementation of Operating System Functions in UNIX.
November	Unit II: Basic commands ls, cat, cal, date, calendar, who, printf, tty, sty, uname, passwd, echo, tput, be, script, spell and ispell,. Files and Directories, File permission, Basic Operation on Files, Changing Permission Modes, Standard files
December	Unit-III: Introduction to Shell Scripting, Shell Scripts, read, Command Line Arguments, Exit Status of a Command, The Logical Operators & & and , exit, if, and case conditions, expr, sleep and wait, while, until, for, \$, @, redirection.
January	The here document, set, trap, Sample Validation and Data Entry Scripts. Define system Administration, Booting the system, Maintaining User Accounts, File System, and special files, Backup and Restoration

Ashe
(ADC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.



Kwaghmare

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B. Sc. (Computer Science)

Semester-III

Subject: P.C. Maintenance

Month	Topic
October	Unit-I: PC Architecture: Chassis/Case, Baby, Desktop, Tower Cases. Power Supplies, power connectors, mounting points. Motherboard, form factors, expansion/bus slots, CPU, RAM, Chipset, motherboard ports and Controllers. Video System, video controllers, BIOS, resolution, video memory, Video Drives, IDE drive, SCSI controllers, CD Drive, DVD Drive, Modems,
November	Input devices and their drivers, USB architecture, USB Host Control types. Unit II: PC Assembly Opening the System, Closing the System, Tips for working inside a PC, Mounting Motherboard in cabinet, installation of cards, devices and then connecting cables. Role of CMOS Entering CMOS setup, Basic CMOS Optimization, Hidden CMOS Settings.
December	Unit-III: Software Installation Operating System installation, Windows, Unix, Linux, Device driver Installation, creating users, giving rights to user, Network setting of a PC, shearing files and devices on network. Installing Antivirus, Antivirus settings updating (Quick Heal/ Net protector)
January	Introduction to Laptop: System Features, Laptop components, Processors, Motherboards, memory, power, expansion bus, hard disk & removable storage devices

Ashe
(ADC)

Co-ordinator
Computer Science & I.T.,
Aurangabad

Kwaghtmore

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B. Sc. (Computer Science)

Semester-III

Subject: Programming in C++

Month	Topic
October	Unit-I: Introduction of OOPS Procedural Vs Object Oriented Programming, Basic concepts of Object-Oriented Programming, Class, Object, Data Abstraction, Encapsulation, Inheritance, Polymorphism, Dynamic Binding, Message Passing. Benefits and applications of OOP, History and overview of C++, C++ program structure. Reference variables, Scope resolution operator,
November	Member de- referencing operators, new and delete, cin and cout, The endl and setw manipulator. Functions in C++: Function prototype, call by reference (using reference variable), Return by reference, Inline function, Default arguments, Const arguments. Unit II: Function overloading: Different numbers and different kinds of arguments,
December	Objects and Classes: Specifying a class, private and public, Defining member functions, Nesting of member function, Object as data types, Memory allocation for objects, static data members and member functions. Array of objects, Objects as function argument, returning objects, Friend function and its characteristics. Unit-III: Constructors and Destructors: Introduction, default and parameterized constructors,

Ashe
(APC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
H.C. Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

January	Multiple constructors in a class, Copy Constructor, Destructors Operator Overloading: Overloading unary operators, Rules for operator overloading, Overloading without friend function and using friend function, Overloading binary operators such as arithmetic and relational operators, Concatenating Strings, Comparison operators.
---------	--

Ashe
CADD

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B. Sc. (Computer Science)

Semester-III

Subject: Database Management System

Month	Topic
October	<p>Unit-I: Basic Concept</p> <ul style="list-style-type: none">• Data Definition, Types of Data, Record and File, File based System & Processing• Database System Application, Purpose of Database System• Abstraction & Data Integration• Three level Architecture proposal for a DBMS.• Component of a DBMS: Users, Facilities & Structure.• Advantageous & Disadvantageous of DBMS. <p>Data Modelling & Design</p> <ul style="list-style-type: none">• Data Association-Entities, Attributes & Association, Relationship among Entities, Representation of Association & Relationships• Data Model: Importance of Data Model, Types of Data Model: Relational, E-R, Semi-structured, Object- Oriented, Network & Hierarchical Data Model.
November	<ul style="list-style-type: none">• Advantageous & Disadvantageous of above model. <p>Unit II: Entity-Relationship Data Model</p> <ul style="list-style-type: none">• Entity, Entity Set, Types of Entities, Strong & Weak Entity, Representation• Attribute, Types of Attributes, Representation• Relationship: Binary & Ternary, Representation <p>Mapping Cardinality, Entity-Relationship Design Issues</p>

Ashe
Co-ordinator

Kulaghere
I/C Principal
Modern College of Computer Science & I.T.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



December	<p>Relational Data Model</p> <ul style="list-style-type: none">• Basic Structure of Relational Data Model, Database Schema• Constraints: Integrity Rule 1 & 2• Normal Form: Anomalies, Functional Dependency, Dependency Diagram, First Normal Form, Second Normal Form, Third Normal Form, Conversion from Universal to 1 NF, INF to 2 NF and 2NF to 3NF. <p>Unit-III: Relational Algebra</p> <ul style="list-style-type: none">• Basic Operation-Union, Intersection, Difference and Cartesian Product• Advance Operation- Projection, Selection, Join (Inner and Outer) & Division
January	<ul style="list-style-type: none">• Examples based on above Operation. <p>Introduction to Oracle</p> <ul style="list-style-type: none">• Relation Algebraic Queries.• Oracle Software: Versions of Oracles, Products of Oracle, Tools of Oracle <p>SQL: Logging to SQL/ iSQL, SQL plus worksheet.</p>

Asibe
(ABC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IIC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B. Sc. (Computer Science)

Semester-III

Subject: Statistical Method

Month	Topic
October	Unit-I: 1 Introduction and basic concepts of Statistics <ul style="list-style-type: none">• Definition of Statistics, Scope and importance of Statistics.• Primary and Secondary data, Types of data: qualitative, quantitative,• Discrete, continuous, cross-section, time series, failure, industrial, directional data.• Graphical presentation: Histogram, frequency polygon, frequency• Curves Diagrammatic presentation: Bar diagrams, Pie diagram, scatter diagram.• Classification of data: Discrete and continuous frequency
November	<ul style="list-style-type: none">• Distributions, inclusive and exclusive methods of classification,• Relative and cumulative frequency distributions. Unit II: 2 Measures of Central Tendency <ul style="list-style-type: none">• Concept of central tendency. For group and Ungroup data• Arithmetic mean (A.M.) simple and weighted Merits and demerits of A.M.,• Mode: Computation for frequency and non-frequency data. Computation of mode, Merits and demerits of mode. Median:
December	<ul style="list-style-type: none">• Computation for frequency and non-frequency data, computation.• Merits & Demerits of median.• Geometric mean (G.M.) computation for GM, Merits demerits and• Applications of G.M. Harmonic Mean (HM) computation for frequency, non-frequency data, merits, demerits.

Ashe (ADC)

Kwaghmare

Modern Coll. H/O Principal



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY



Reg. No. F-11895/"A'bad"

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

	Unit-III: 3 Measures of Dispersions Dispersion and measures of Dispersion,
January	Range (definitions and problems) Quartile Deviation (definitions and problems) Mean Deviation (definitions and problems) Standard Deviation (definitions and problems) Variance, different formulae for calculating Variance.

Asibe
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B. Sc. (Computer Science)

Semester-II

Subject: - Data Structure

Month	Topic
March	Unit-I: 1. Introduction to Data Structure: <ul style="list-style-type: none">• Basic Terminology: Data item, Fields, Records, Files, Entity, Attributes• Data Organization and Data Structure 2. Arrays <ul style="list-style-type: none">• Representation of Linear Arrays• Traversing, Insertion and Deletions
April	<ul style="list-style-type: none">• Sorting & Searching Algorithms• Multidimensional Arrays: 2D & M-D Concept• Record: Record Structures, Representation in Memory Unit-II: 3. Linked List Concept of Linked List Representation of linked List in memory Traversing a linked list
May	<ul style="list-style-type: none">• Searching a linked list: sorted and unsorted• Insertion & Deletion in Linked List• Header Linked List & Two-way List Unit- III: 4. Stacks, Queues, Recursion

Asabe
(Apc)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad

Kwaghmerre

Modern College of Computer Science & I.T.,
Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<ul style="list-style-type: none">Stack: Operation, Array Representation of Stack, linked representation of stack, Arithmetic Expression POLISH & POSTFIX,
June	<ul style="list-style-type: none">Application of stacks: Quicksort, Recursion.Queue: Representation of queues & link.Types of Queues: Deques & Priority Queues

Ashe
(ADC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B. Sc. (Computer Science)

Semester-II

Subject: - Operating System

Month	Topic
March	Unit-I: 1. Process Management Concept of Process: Process State, Operation on Processes, thread. CPU Scheduling: Types of Schedulers, Criteria for scheduling, Scheduling Algorithms. Process Synchronization: Need for synchronization, Critical Section, Hardware Synchronization, Semaphores, Monitors, Problem of synchronization. Deadlocks: Concept of Deadlock, Deadlock Modelling, Methods for Handling Deadlock
April	Unit-II: 2. Storage Management Memory Management: Address Binding, Logical Vs. Physical Address space, Memory Allocation, Paging, Segmentation, Segmentation and paging of Intel Pentium. Virtual Memory: Demand Paging, Page replacement Algorithms (FIFO, Optimal, LRU), Virtual Memory in windows Xp. File System Interface: Files, File Access, Directory Structure, Protection. Implementation of File System: Allocation Methods, Free space Management
May	Unit- III: 3. Device Management Introduction: Dedicated Devices, Shared Device & Virtual Device

Ashe
Co-ordinator
College of Computer Science & I.T.,
Aurangabad

Kwaghmore
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY



Reg. No. F-11895/"A'bad"

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

	<p>Device Characteristics: Input and Output devices, Storage devices, Device allocations</p> <p>Concept of I/O Traffic Controller: I/O Scheduler, introduction to Virtual Devices.</p>
June	<p>4. Information Management</p> <p>Concept of File system</p> <p>Symbolic file system</p> <p>Access control verification</p> <p>Logical and physical file system</p>

Ashe
(APC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY



Reg. No. F-11895/"A'bad"

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

F. Y. B. Sc. (Computer Science)

Semester-II

Subject: - Micro Processor – II

Month	Topic
March	Unit-I: 1. 8086 Microprocessor: Logic instructions <ul style="list-style-type: none">• Basic logic Instructions: AND, OR, Exclusive-OR, NOT, NEG• Shift and rotate 2. Program control Instructions <ul style="list-style-type: none">• The JUMP group Instruction: Conditional & Un-Conditional.• Procedures-CALL & RET
April	<ul style="list-style-type: none">• Controlling the Flow of an Assembly Language Program• Loops-WHILE, REPEAT UNTIL Unit-II: 3. Programming the Microprocessor <ul style="list-style-type: none">• String Procedure & Macros• Modular Programming – Assembler & linkers.
May	<ul style="list-style-type: none">• Instructions-AAA, AAD, AAM, AAS, ADC, ADD, SUB, MOV, DAA, DEC, DIV, ESC, HALT, INT, INC, INTO, JNZ, JZ, JMP, LOOP, LOOPZ, MUL, MOVS, POP, PUSH, RET, ROR, SBB, WAIT, XCHG. Unit- III: 4. Interrupts <ul style="list-style-type: none">• Basic Interrupt Processing, Hardware Interrupts, 8259 A Programmable interrupt Controller, Interrupt Examples.
June	5. DMA & DMA Control I/O <ul style="list-style-type: none">• Basic DMA Operation, 8237 DMA Controller, Shared Bus Operation, Disk Memory Systems, Video Displays.

Ashe
(Asst. Co-ordinator)
Co-ordinator
College of Computer Science & I.T.,
Aurangabad.

Kwaghmerre
H.C. Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B. Sc. (Computer Science)

Semester-II

Subject: - 'C' Programming – II

Month	Topic
March	Unit-I: 1. Functions <ul style="list-style-type: none">• Introduction, types of functions. Defining functions, Arguments, Function prototype, actual parameters and formal parameters, calling function, returning function results, Call by value, Recursion. 2. Structure & Union <ul style="list-style-type: none">• Structure: Introduction, Declaration and initializing structure, Accessing structure members, Nested structures, Arrays of structure, typedef statement.• Unions: Declaration, Difference between structure and union
April	Unit-II: 3. Pointers: <ul style="list-style-type: none">• Introduction, Memory organization. Declaration and initialization of pointers. The pointer operator and & De-referencing, Pointer expression and pointer arithmetic, Pointer to pointer. 4. Storage Class & Library Functions: <ul style="list-style-type: none">• Storage classes, Scope, visibility and lifetime of variable, block and file scope, auto, extern, static and register storage classes.• String handling functions: strcpy(), strcmp(), strcat(), strlen(),strupr(), Strlwr(), gets(), puts()

Ashe
(ADC)

Co-ordinator
of Computer Science & I.T.,
Aurangabad

Koaghtmare

VC Principal

Modern College of Computer Science & I.T.,
Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY



Reg. No. F-11895/"A'bad"

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

	<ul style="list-style-type: none">Data conversion functions from stdlib.h: atoi(), atol(), atof(), itoa(), ltoa(), random(), calloc(), malloc(), exit(), abs(), toupper(), tolower()
May	<p>5. Pre-processor Directives:</p> <ul style="list-style-type: none">File inclusion and conditional compiler directives, Macro substitution, #define, #if, #ifdef, #else, #elif, #endif, <p>6. Miscellaneous Features:</p> <ul style="list-style-type: none">Bitwise Operators: Introduction, Masking, Internal representation of data, Bit fields, Enumerated data types, Type casting.
June	<p>Unit- III:</p> <p>7. File Handling</p> <ul style="list-style-type: none">File handling: Introduction, Opening & closing a file, Input/output operations on files, text and binary files, getc(), putc() function. File copy program, fprintf() and fscanf(). fread() and fwrite() function. Writing and reading records from binary file, Appending, modifying and deleting a record from file, Random access functions fseek(), rewind(), flushall(), remove(), rename().

Ashe
(ADC)

CO-ordinator
Modern College
Computer Science & I.T.
Aurangabad

Kwaghmare

Principal
Modern College of Computer Science & I.T.
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B. Sc. (Computer Science)

Semester-II

Subject: - Communication Skill-II

Month	Topic
March	Unit-I: 1. Communication with Media <ul style="list-style-type: none">Written media of Communication: Letters, Notices, Minutes, Manual, Leaflet, Complaints & Suggestion, Job Application.Visual Media of communication: slide presentation, Pictures & Photographs, Posters & Advertisement.Non-Verbal Media of Communication
April	2. Written Communication: Reports <ul style="list-style-type: none">Types of Report, characteristics of Good Report, Essential Requisites of Good Report-Writing, Planning the Report, Outlining Issues for Analysis, Writing the Reports. Unit-II: 3. Group Communication <ul style="list-style-type: none">Problem of Group Communication- Meeting-types of meeting, Advantages & Disadvantages of Meeting-Preparation for Meeting-conduct of a Meeting – Responsibility of participants.
May	4. Interview <ul style="list-style-type: none">Purpose, Types of interviews-promotion, appraisal, exit, telephone.Employment or selection Interview: Candidate's preparation, Question commonly asked in interview, role of interviewer, Interviewer's preparation.

Alshe
(AOC)

Co-ordinator
Computer Science & I.T.

Kwaghmare

I/C Principal



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



	<p>Unit- III:</p> <p>5. Listening Comprehension</p> <ul style="list-style-type: none">• Cassettes: "Tiger's Eye" Series. (vol. 1 & 2), "Twist in the Tail"• The Listening drill is to be given and question should be framed.
June	<p>6. Reading Comprehension and Vocabulary</p> <ul style="list-style-type: none">• Reading with proper pronunciation and ideal reading is to be recorded. <p>7. Speaking:</p> <ul style="list-style-type: none">• CIEFL Spoken English exercises part one and two.• Drilling: Proper Pronunciation of word and sentences

*Asibe
(ADC)*

Kwaghmare

Mod. College of Computer Science & Information Technology, Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B. Sc. (Computer Science)

Semester-II

Subject: - Numerical Computation Methods

Month	Topic
March	Unit-I: 1. Introduction <ul style="list-style-type: none">• Mathematical Modeling, Characteristics, Error in Calculation• Significant Error, Absolute, Percentage Relative Error• Chopping off and Rounding off Error.• Truncation Error, Propagation Error. 2. Matrices and Determinants. <ul style="list-style-type: none">• Definitions, Matrix Operations• Determinant of Square Matrix, Cofactor• Adjoint of Matrix, Rank of Matrix
April	3. Numerical Solutions of Transcendental Equations <ul style="list-style-type: none">• Concept of Iterative Methods, Search Method for Initial Guess.• Bisection Method• False Position Method• Newton-Raphson Method Unit-II: 4. Elimination Methods for Solving Simultaneous Equations <ul style="list-style-type: none">• Introduction and Matrix Notation of set of Equations• Gauss Elimination Method• Gauss Seidal Method

Asibe
CA/DCS

K. K. Kulkarni
H.C. Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<ul style="list-style-type: none">• Matrix Inversion Method
May	<p>5. Interpolation</p> <ul style="list-style-type: none">• Introduction and Polynomial Interpolation• Newton-Gregory Forward Difference Interpolation Formula• Newton-Gregory Backward Difference Interpolation Formula <p>Unit- III:</p> <p>6. Interpolation – II</p> <ul style="list-style-type: none">• Newton's divided Difference Interpolation
June	<ul style="list-style-type: none">• Lagrange's Interpolation <p>7. Least Square Curve Fitting</p> <ul style="list-style-type: none">• Best Fit and Criteria for Best Fit and Least Square Fit.• Linear Regression.

Ashe
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B. Sc. (Computer Science)

Semester-IV

Subject: Software Engineering

Month	Topic
March	Unit-I: Software and Software Engineering What is Software, Characteristics of software, categories of Software, attributes of Web Apps, software Engineering, Software Process. Essence Software Engineering Practice, General Principles. Software Myths. Software Process and Process Models Software process Model Process Flow.
April	Process Models, Waterfall model, Incremental Process Model. Evolutionary Process Models, Concurrent Models. Specialized Process Models. The United Process, Personal and Team Process Models. Product and Process Unit-II Agile Introduction to Agility. Agility and the Cost of Change, Agile Process, Agility Principles, Human Factors
May	. Extreme Programming (XP). XP Values. XP Process, Industrial, Critics of XP Other Agile Process Models Adaptive Software Development (ASD), Scrum. Dynamic Systems Development Method (DSDM). Crystal, Feature Driven Development (FDD), Lean Software Development (LSD), Agile Modelling (AM), Agile Unified Process (AUP)
June	Unit- III: - Principles That Guide Practice Principles That Guide Process, Principles That Guide Practice. Communication Principles planning Principles, Modelling Principles. Construction Principles Deployment Principles

Alke
(ADC)

Co-ordinator
of Computer Science & I.T.,
Aurangabad.

Kishanmore
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B. Sc. (Computer Science)

Semester-IV

Subject: Fedora

Month	Topic
March	Unit-I: Introduction to Fedora <ul style="list-style-type: none">• Basic concepts of Operating System, Kernel, Shell & File System structure• Basic concepts of Linux• What is Linux, Linux's Roots in Unix, Linux Features, Advantages of Linux.• What is Fedora, Features of Fedora• Installing Fedora• Differences between CentOS, Red Hat Enterprise Linux & Fedora• Basic commands of Linux• Advanced Linux Commands
April	Introduction to Graphical Environment <ul style="list-style-type: none">• Logging to Fedora: Desktop GNOME & KDE• Differences between GNOME & KDE• Features of GNOME & KDE• Use and customize the GNOME interface• Perform command tasks using the GNOME GUI• Launch applications from command line & GNOME interface• Customize X Window System Unit-II Software Package Administration <ul style="list-style-type: none">• Installing and deleting software packages

Ashe (A.D.C.)

Kulaghmare
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/'A'bad"

	<ul style="list-style-type: none">• Querying and updating software packages
May	<p>User and Group Administration</p> <ul style="list-style-type: none">• Creating and deleting users from the systems• Modifying users' profile• Creating and deleting groups Important system files related to user administration <p>Unit- III: - Advanced File Permissions</p> <ul style="list-style-type: none">• Assigning advanced files permissions i.e. chmod, chown, chgrp & Sticky bit <p>Creating, modifying and deleting ACL's</p>
June	<p>Disk Partitioning and Mounting File System</p> <ul style="list-style-type: none">• Using fdisk, disk druid utilities for disk partitioning• Using mkfs, commands to create file systems• Mounting various file systems• Auto mounting of file system

Ashe
(ADC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kaaghmare
i/c Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



S. Y. B. Sc. (Computer Science)

Semester-IV

Subject: Basic of Networking

Month	Topic
March	Unit-I: Introduction Communication System, Components of communication system, Compute network Advantages and applications of computer n/w. point-to-point and multipoint line configuration, LAN, MAN and WAN. Analog and Digital signals, Data Transmission: Parallel and Serial, Synchronous and Asynchronous transmission, Transmission Mode: Simplex, half-duplex and full-duplex. Network Topologies Mesh, Star, Tree, Bus and Ring and Hybrid Topology (Advantages and disadvantages of each)
April	Unit-II: Transmission media Guided and unguided media, Twisted-pair, UTP and STP cable, coaxial cable, Optical Fiber cable, Radio waves, Microwaves, Satellite Communication (Transmission characteristics and advantages of each type)
May	Modulation & Multiplexing Concept of modulation and demodulation, Digital-to-analog conversion, Amplitude Shift Keying (ASK)/AM, Frequency Shift Keying (FSK)/FM, Phase Shift keying (PSK)/PM.
June	Unit- III: THE MOBILE TELEPHONE SYSTEM: First Generation(1G), Second Generation(2G), Third Generation(3G), Internet over cable, Spectrum Allocation, cable Modem, ADSL Versus Cable.

*Ashe
CADC*

Kwaghmare

HC Principal
Modern College of Computer Science & I.T.

Co-ordinator



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

S. Y. B.Sc. (Computer Science)

Semester-IV

Subject: Core Java

Month	Topic
March	Unit-I: Object oriented paradigm Basic concepts of Object-oriented programming: class & object, data abstraction and encapsulation, inheritance, polymorphism, dynamic binding, message communication. Benefits and applications of OOP. History and features of Java. Java Vs. C++, Java and Internet, Java and www. Java environment. Structure of java program, symbolic constants. Data types. Arrays, Classes and Objects Declaration and initialization, one and multidimensional arrays Defining a class, adding variables and methods
April	creating objects, static fields and static methods. Method overloading, Constructors: types and multiple constructors in class. Command line arguments. Unit-II: Inheritance Super and sub class, defining a subclass. Single inheritance, multilevel inheritance and hierarchical inheritance. Subclass constructors. Super keyword, Visibility controls, Method overriding, Dynamic method dispatch, Abstract methods and class.
May	Interfaces, String and Vector Class Defining interfaces, implementing interfaces, extending interfaces, accessing interface variables. String class and its methods, Vectors Unit- III: - Packages

Ashe
(ADC)

Co-ordinator
Department of Computer Science & I.T.,

Kaaghmare

H.C. Principal
Modern College of Computer Science & I.T.,

Aurangabad



FARMLIA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	Introduction, Java API packages, naming conventions, creating and accessing user defined package, using a package, adding a class to a package,
June	Importing classes from package. Exception handling and Multithreading Exceptions, syntax of exception handling code, multiple catch statements, throw: throwing own exceptions, throws and finally Introduction to multithreading, creating threads by extending the Thread class and by implementing Runnable interface, implementing the run () method, Life cycle of a thread, Thread methods and thread priority.

Asibe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



2022-23

F. Y. B.Sc. (Computer Science)

Semester-I

Subject: Computer Fundamentals

Month	Topic
July	<p>UNIT-1</p> <p>1. Fundamentals of Computer System</p> <ul style="list-style-type: none">• Characteristics & features of Computers.• Components of Computers.• Organization of Computer. <p>2. Computer Generation & Classification</p> <p>Generation of Computers: First to Fifth</p> <p>Classification of Computers: Distributed & Parallel computers</p> <p>UNIT-II</p> <p>3. Computer Memory</p> <ul style="list-style-type: none">• Memory Cell & Organization
August	<ul style="list-style-type: none">• Types of Memory (Primary and Secondary): RAM, ROM, PROM EPROM,• Advantages and disadvantages of each.• Secondary Storage Devices (FD, CD, HD, Pen drive, DVD, Tape Drive, DAT) <p>4. I/O Devices</p> <ul style="list-style-type: none">• Input Devices: Touch screen, OMR, OBR, OCR, Light pen, Scanners• Output Devices: Digitizers, Plotters, LCD, Plasma Display Printers <p>UNIT-III</p> <p>5. Processor</p> <p>Structure of Instruction, Description of Processor. Processor Features</p>

S. Subale
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad

K. W. Ag. H. more

VC Principal

Modern College of Computer Science & I.T.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

September	<ul style="list-style-type: none">• RISC & CISC <p>UNIT-IV</p> <p>6. Internet, World Wide Web:</p> <ul style="list-style-type: none">• Introduction to Internet, Internet Access, Internet Basics, Protocols-TCP/TIP, HETP, FTP,• Addressing, World Wide Web (WWW), Web Pages & HTML, Web browsers. Searching for
October	<ul style="list-style-type: none">• Information-search engines. Internet chat. Applications of Internet. Advantages and Disadvantages of Internet. <p>UNIT-V</p> <p>Test and Tutorial</p>

B. Subale
(A.P.C.)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kuraghmare
MC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Annual teaching planning

2022-2023

F. Y. B.Sc. (Computer Science)

Semester-I

Subject: Digital Electronics

Month	Topic
July	<p>UNIT-1:</p> <p>1. Number Systems and Arithmetic</p> <ul style="list-style-type: none">• Number System: Decimal, Octal, Hexadecimal & Binary Number System Conversion within Binary, Octal,• Hexadecimal & Decimal Number System,• Binary Arithmetic: Binary addition, subtraction, multiplication & division• Binary subtraction using 1's complement, 2's complement method.• OR, Associative, Distributive, Absorption laws, De Morgan's theorems.• Reducing Boolean expressions.• Logic Gates: AND, OR, NOT, Ex-OR, Ex-NOR• NAND as Universal building block• Logic diagrams of Boolean expressions Boolean expressions for logic diagrams• Hexadecimal arithmetic: Addition, subtraction, multiplication & division <p>2. Boolean Algebra and Logic Gates</p> <ul style="list-style-type: none">• Postulates of Boolean Algebra Theorems of Boolean Algebra: Complementation, commutative, SND,

(Signature)
Coordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)

VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/'A'bad"

August	<p>Unit II:</p> <p>3. Minimization Techniques</p> <ul style="list-style-type: none">• Introduction, Minterms and Maxterms• K-Map, K-map for 2 variables• K-map for 3 variables• K-map for 4 variables <p>. Combinational and Arithmetic Logic Circuits</p> <ul style="list-style-type: none">• Half Adder & Full Adder• Binary parallel Adder <p>4. Half Subtractor, Full Subtractor</p> <ul style="list-style-type: none">• Adder/Subtractor in 2's complement system• BCD to Decimal decoder• 2: 4 demultiplexer <p>4 line to 1-line multiplexer</p>
September	<p>Unit-III:</p> <p>5. Flip Flops</p> <ul style="list-style-type: none">• Introduction: RS FF• Clocked RS FF, DFF Triggering, preset and clear• JK FF, TFF, Race around condition• Master slave FF <p>6. Counters</p> <ul style="list-style-type: none">• Introduction: Asynchronous/ ripple counter• Modulus Counter, MOD-12 counter• Synchronous counter: Synchronous serial & synch parallel counter• BCD counter

Asibe (ADD)

Koaghmare



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



	<ul style="list-style-type: none">• Ring counter
October	<p>Unit- IV: Test and Tutorial</p> <p>7.Shift Registers</p> <ul style="list-style-type: none">• Introduction, Buffer registerSerial-in serial -out Serial-in parallel-out.• Parallel-in serial-out, parallel-in parallel-out


Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.


I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-I

Subject: Operating System-I

Month	Topic
July	Unit-I: Unit 1: Introduction to Operating System: Introduction to Software: Definition, Classification of software, Operating system as the main component of system software, Program and Process. Operating System Fundamental: O.S. as a resource manager, Structure of O.S., Types of O.S.- Single user and multiuser O.S., Basic functions of O.S., Characteristics of modern O.S. Evolution of O.S.: Early systems, Simple batch systems, Multiprogramming batch systems, Time sharing system, Operating system for Personal Computers, workstations and Hand-held devices, Parallel systems, Distributed systems, Real time systems, Advantages and Disadvantages of each system.
August	Unit II: Process Management: Concept of Process: Process States, Process Control Block, Operations on Processes, Threads. CPU Scheduling: Types of schedulers, Criteria for scheduling, Non-Pre-emptive Scheduling Algorithms. First-come First-served Scheduling and Shortest Job First Scheduling. Pre-emptive Scheduling Algorithms- Priority Scheduling, Round Robin. Unit-III: Unit III: Inter Process Communication and Synchronization:
September	Concurrent and dependent process, need for synchronization, introduction of Critical Section and Semaphores, method of inter process communication, process synchronization, Synchronization problem.

Asibe
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
H.C. Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	Unit- IV: Deadlocks: Concept of Deadlock, Deadlock Modelling, Methods for Handling Deadlock Memory management.
October	Unit- V: Test and Tutorial

Ashe
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-I

Subject: Programming in C

Month	Topic
July	UNIT-1 1. Introduction: <ul style="list-style-type: none">An Overview of C, History of C language, C as a Structured Language. Features of C. 2. Basic Elements & Operators <ul style="list-style-type: none">Character set, C Token, Identifier & Keywords, VariablesConstant and its types. Integer constant, floating point constant, Character constant, string constants.Operators: Arithmetic, Relational, Logical, Unary operators: Increment & decrement Assignment and Conditional operator. Precedence & Associativity of Operators
August	3. Data Types <ul style="list-style-type: none">Data Types: int, char, float, double, Declaration & InitializationType modifier: long, short, signed & unsigned Unit II: 4. C Program & I/O statements <ul style="list-style-type: none">Structure of C Program, Compilation & Execution of C programI/O: Introduction, Formatted Input/output function: scan & print. Escape sequence characters. Library functions: General & Maths
	Unit-III:

Ashe (TDC)
Go-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



September	<p>5. Control and Iterative Statements:</p> <ul style="list-style-type: none">• Simple if, nested if, if-else, else if ladder• Switch-case statement• The conditional expression (? operator)• While and do-while loop, and for loop <p>Break & continue statement, got statement</p> <p>Unit- IV:</p> <p>6. Arrays:</p> <ul style="list-style-type: none">• Introduction, Declaration and initialization Accessing array elements, Memory representation of array.
October	<ul style="list-style-type: none">• One dimension and multidimensional arrays, character array, Introduction to string <p>Unit- V:</p> <p>Test and Tutorial</p>

Asibe
Coordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

UC Principal
Modern College of Computer Science & I.T.
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

F. Y. B.Sc. (Computer Science)

Semester-I

Subject: Mathematical Foundation

Month	Topic
July	Unit-I: Mathematical Logic: Propositional Calculus: Statements and Notations, Connectives, Well Formed Formulas, Truth Tables, Tautologies, Equivalence of Formulas, Duality Law, Normal Forms Set Theory: Types of Set: Finite, Infinite, Singleton, Empty, Subset, Proper Subset, Universal Set, Power Set, Venn Diagram,
August	Operations on Set: Union of Sets, Intersection of Sets, Complement of Set, Cartesian Product, Difference and Symmetric Difference of Set. Introduction to Matrices: Types of Matrices, Matrix, Operations, Adjoint and Inverse of a Matrix, Rank of a Matrix and Special Matrices. Unit II Combination: Review of Permutation and Combination, Mathematical Induction Pigeon hole principle, Principle of Inclusion and Exclusion, generating function, Recurrence relations.
September	Unit-III: Basics of Graph Theory and Tree: Introduction to Graph, Application of Graph, Finite and Infinite Graph, Incidence and Degree, Null Graph, Isolated and Pendent Vertex, Isomorphism, Subgraph, Walks, Path and Circuit, Union and Intersection Operation, Graph, Planner graph, Trees, Pendant. Vertices on Tree, Binary Tree, Spanning Tree. Unit- IV: Relation:

Nabe
Co-ordinator
(A.D.)

Modern College of Computer Science & I.T.,
Aurangabad.

Kaaghmare



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	Basic definitions of Relation and types of Relations,
October	Graph of Relations, Properties of Binary Relations, Matrix Representation of Relations, Operations on Relations, Partition and Covering, Transitive Closure, Equivalence, Compatibility and Partial Ordering Relations. Unit- V: Test and Tutorial

Asibe
(A.D.C.)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-I

Subject: Programming Methodology

Month	Topic
July	Unit-I: Introduction to Programming Environment Introduction to Programming, Definition of program and programmer, features of good programming language, Bugs and Debugging. Programming Techniques Programming approaches: Types of programming methodologies, Procedural Programming, Functional Programming Structural Programming,
August	Modular Designing, Logical Programming Top Down Designing, Bottom Up Designing, Object Oriented Programming Unit II: Programming Languages History of languages, Classification of computer language: Types of Programming Languages- Machine Languages. Assembly Languages, High Level Languages, low level language, Structure Language, Object oriented Language
September	, Modular techniques, Modular Programming advantages, identifying the modules, step-by-step solution, control structures, decision control structures, selection control structures, loop control structures, 4GL, Assembler, Linker, Loader, Interpreter & Compiler, TASM, Debug Unit-III: Algorithm Definition, Characteristics, Advantages and disadvantages, Pseudo code or Structured English, Algorithm, basic features and properties of algorithm.

Asibe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



October	<p>Unit- IV: Flow-Chart</p> <p>Definition, Principles of flowcharting, Flowcharting symbols, Data flow diagram, pseudo code. Converting algorithms to flowcharts, problem solving through algorithm and flowchart. Advantages and disadvantages.</p> <p>Unit- V: Test and Tutorial</p>
---------	--

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-I

Subject: English Communication Skill

Month	Topic
July	<p>Unit-I: Basics of Communication Skill:</p> <p>Communication Skills: Introduction, Definition, Nature and Scope of Communication, and Importance and Purpose of Communication, "C's of good communication, Process of Communication. Barriers to communication: Physiological Barriers, Physical Barriers, Cultural Barriers, Language Barriers, Gender Barriers, Interpersonal Barriers, Psychological Barriers, Emotional barriers</p> <p>Communication Network in Organization: Personal Communication, Internal Operational Communication, External Operational Communication, Horizontal (Lateral) Communication, Vertical (Downward) Communication, Vertical (Upward) Communication. English Grammar:</p> <p>Parts of Speech: Nouns, Pronouns, Verbs, Adverbs, Adjectives, Conjunctives, Prepositions, Interjections. Using the Dictionary: Primary Auxiliaries, Modal Auxiliaries, Subject and Object (Direct/Indirect), Yes or No Questions, Wh-word Questions, Question Tags Grammar: Type of Verbs, Subject Verb Agreement,</p>
August	<p>Tense (present and past) and Aspect, several possibilities for denoting future Time, vocabulary building, constructing. Paragraphs</p> <p>Unit II: Elements of Communication & Listening Skills:</p> <p>Elements of Communication: Introduction, Face to Face Communication Tone of voice, Body Language (Non-Verbal Communication), Verbal Communication, Physical Communication, Listening Skills-1: Introduction, Listening to Conversation (Formal and Informal), Active Listening, Benefits of Listening Skill,</p>

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kingmare
IIC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	Barriers to Listening, Listening to Announcements (Railway stations/Bus stations Airports Sports Announcements/ Commentaries etc.) Listening Skills-II: Academic Listening (Listening to Lectures). Listening to Talks and Presentations, Note Taking Tips
September	Unit-III: Oral Communication Skills: Importance of Spoken English, Status of Spoken English in India, International Phonetic Alphabet (IPA) Symbols, Spelling and Pronunciation, Requesting and responding to requests, Congratulating people on their success, expressing condolences, Apologizing and forgiving. Giving instructions, Seeking and giving permission, Expressing Opinions (likes and dislikes), Demanding Explanations, asking for and giving advice and suggestions. Reading Skills: Purpose, Process, Methodologies, Skimming and Scanning, Levels of Reading, Reading Comprehension Unit- IV: Effective Writing Skills: Elements of Effective Writing, Sentences, Phrases and Clauses, Types of Sentences, Main Forms of Written Communication,
October	Paragraph Writing (Linkage and Cohesion), Letter Writing (Formal and Informal), Essay Writing. Notices, Summarizing, Precise Writing, Note-Making. Amount of Discussion Required Understanding and Applying Vocabulary: Words Often Confused-Pairs of words, One Word Substitutes, Synonyms and Antonyms, Word Formation: Prefixes, Bases and Suffixes (Derivational & Inflectional). UNIT-V Test and Tutorial

Shilpa
Coordinator
(A.D.C.)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY



Reg. No. F-11895/"A'bad"

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

T. Y. B.Sc. (Computer Science)

Semester-V

Subject: Software Cost Estimation

Month	Topic
July	Unit-I: Introduction: Observation on Estimation, Planning process, Software Scope and Feasibility, Types of Resources, Project estimation.
August	Unit II: Decomposition Techniques Software sizing, Problem-Based Estimation, LOC-Based Estimation with example, FP- Based Estimation with example,
September	Process-Based Estimation with example, Designing Use Cases, Use Cases- Based Estimation with example, Estimate Reconciliation. Unit-III: Empirical Estimation Models Structure of Estimation Model,
October	COCOMO Models, Software Equation, Estimation for Object-Oriented Projects, Estimation for Agile Development, Estimation for Web Projects, Creating a Decision Tree, Outsourcing.

Asibe
Coordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kulaghar
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B. Sc. (Computer Science)

Semester-V

Subject: Basic of Android Operating System

Month	Topic
July	Unit-I: Environment Setup: Setup Java Development Kit (JDK), Android SDK, Eclipse IDE, Android Development Tools (ADT) Plugin, Create Android Virtual Device, Architecture: Linux kernel, Libraries, Android Runtime, Application Framework. Application Components Application Components Activities, Services, Broadcast Receivers, Content Providers, Additional Components, Create Android Application,
August	Anatomy of Android Application, The Main Activity File, The Manifest File, The Strings File, The R File, The Layout File, Running the Application. Unit II: Resources Organizing & Accessing: Alternative Resources, Accessing Resources Intents and Filters: Intent Objects, Action, Android Intent Standard Actions, Data, Category, Extras,
September	Flags, Component Name, Types of Intents: Explicit Intents, Implicit Intents. UI Layouts: Android Layout Types, Relative Layout Attributes, Grid View Attributes, Sub-Activity, Layout Attributes, View Identification, UI Controls, Android UI Controls, Text View Attributes, AutoComplete Text View Attributes, Button Attributes, Image Button Attributes, Checkbox Attributes, Toggle Button Attributes, Radio Button Attributes, Radio Group Attributes.
October	Unit-III: Event Handling:

Abha
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
HC Principal
Modern College of Computer Science & I.T.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

Reg. No. F-11895/"A'bad"



Event Listeners & Event Handlers, Event Listeners Registration, Styles and Themes, Defining Styles, Using Styles, Style Inheritance, Android Themes, Default Styles & Themes, Custom Components, Creating a Simple Custom Component.
--

Asibe
Co-ordinator
(ADD)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-V

Subject: Core Java-II

Month	Topic
July	Unit-I: Input/output Stream: File, Directories, Filename Filter, Byte stream, Character stream, Input Stream, Output Stream, Working with Reader classes, Input Stream Reader, Buffered Reader, File Input stream, File Output Stream, Writer classes Utilities: Simple Type Wrapper: Number, Character, Boolean,
August	Enumerations: Dictionary and String Tokenizer, Date, Math Transendentals, Exponential, Rounding function, Unit II: Applets: Introduction to Applet, Types of Applet, Applet vs Application, Applet class, advantages of Applet, Applet Lifecycle, My First Applet, Applet tag, Passing Parameters to Applet. Graphics: Basic Shapes: draw Line,
September	draw Arc, fill Arc, draw Polygon, fill Polygon, Color & Color Methods, Fonts. Unit-III: Java Database Connectivity (JDBC): Java Database Connectivity (JDBC): Design of JDBC, JDBC configuration, Executing SQL statement,
October	Query Execution, Scrollable and updatable resultsets, row sets, metadata, Transaction Processing. Networking: InetAddress, Datagrams, Socket for client and Server, URL, URL Connection.

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmore
H/C Principal
Modern College of Computer Science & I.T.
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-V

Subject: Basic of Computer Graphics

Month	Topic
July	Unit-I: Basics Concept in Computer Graphics Introduction to Computer Graphics, Application of Computer Graphics, Classification of Computer Graphics, Types of Graphics Devices, Video Display Devices, Input Devices, Display File and its Structure, Display file Interpreter, Display Processor, Graphics file Format. Graphics in C: Introduction to graphics in C: initgraph(), detectgraph() and closegraph() function,
August	Drawing object in C, Filling object by color function.,drawpoly, fillpoly, floodfill, getcolor, settext, outtext, style, fonts,coloring. Unit II: 2-D Transformation Translation, Rotation, Scaling, Line, Circle, Rectangle, Ellipse, Changing foreground & background colours, Homogenous Coordinates for Translation,
September	Homogenous Coordinates for Rotation, Homogenous Coordinates for Scaling, Composogation from 2D Transformation, Other Transformation Reflection, Shear, and Inverse Transformation. Unit-III: Line, Circle and Character Generation Basics concept in line Drawing, Line Drawing Algorithm, Digital Differential Analyzer, Bresenham's Line Algorithm, Antialiasing of Lines, Method of Antialiasing, Increasing Resolution,
October	Unweighted Area Sampling, Pixel Phasing, Representation of Circle, Polynomial Method, Trigonometric Method, Circle Drawing Algorithm DDA Circle Drawing Algorithm, Bresenham's Circle Drawing Algorithm, Character Generation, Stroke Method, Starbust Method, Bitmap Method.

Ashe
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwagmare
VC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B. Sc. (Computer Science)

Semester-V

Subject: Beginners Programming with PHP

Month	Topic
July	Unit-I: Introduction to PHP: What is PHP? Why PHP? Evolution of PHP. Installation: PHP on windows and Linux, configuring: Apache & PHP, Running & Testing PHP Script, Combining PHP with HTML. PHP Language Basics: Building blocks of PHP: Variables, Data Types, Operators and Expressions and Constant. Decision within PHP: if, if... else, if. elseif. else, switch, Ternary Operator
August	Unit II: Looping within PHP: while, do...while, for, Break & Continue statement Functions in PHP: What is function, why functions, calling function, Returning Value from function, Recursive function. Arrays in PHP: What & Why Array, Creating Array,
September	Associative Array, Multidimensional Arrays, Accessing Array, Manipulating Arrays, Sorting Arrays, Merging Arrays, Unit-III: Objects in PHP: What is Class; Object, Creating a Class & Object, Object properties, object methods, Overloading, inheritance,
October	Constructor and Destructor. String in PHP: Creating and Accessing String, formatting String, Searching String, Manipulating String. Date and Time: Understanding Time Stamp, Getting Date and time, Extracting values of date-time, Formatting date-time.

Ashe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-V

Subject: Data Mining

Month	Topic
July	Unit-I: Data Mining Data Mining Introduction: What is Data Mining? Definition, DBMS Vs Data Mining, DM Techniques, Issues and Challenges in DM, DM Application Areas,
August	DM Applications-Case Studies, Current Trends Affecting DM, Basic Data Mining Task. Unit II: Association Rule: What is an Association rule? Method to discover Association Rule, A Priori Algorithm, Partition Algorithm. Clustering Techniques: Clustering Paradigm,
September	Partitioning Algorithm, Similarity and Distance Measure, Hierarchical Algorithm. Unit-III: Decision Tree: What is a decision tree? Tree Construction Principle,
October	Best Split, splitting indices, Splitting Criteria Web Mining: Introduction, Web Content Mining, Web Structure Mining, Web Usage Mining.

Asibe
Coordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmre
I/C Principal

Modern College of Computer Science & I.T.,
Aur.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: Data Structures

Month	Topic
December	Unit-I: Data Structures & Algorithm Analysis: Data Structures: Introduction to linear and non-linear data structures. Algorithm Analysis, Growth rates, Estimating the growth rate, Big O notation. Unit-II: Arrays: Need for Arrays, Linear Arrays, representation of linear arrays (row-major order, column-major order),
January	Traversing, insertion, modification, deletion in linear array, merging linear arrays. 2-dimensional arrays introduction, representation of 2-dimensional array, sparse matrices Unit- III: Searching & Sorting: Need for Searching and sorting,
February	Linear search, binary search, bubble sort, selection sort. Insertion sort Unit- IV: Stack & Queue Introduction, Operations on stack, stack implementation using arrays. Applications of Stack (Expression representation and evaluation), Expression notations (prefix, infix, postfix), Conversion of expression (prefix to infix, infix to postfix).
March	Queue: Introduction, Types of queues (Circular Queue, Dequeue), Queue Implementation using arrays, Operations on Queue (Traversing, Insertion, Deletion, and modification), Application of Queue (priority queue), Unit-V: Test & Tutorial

[Signature]
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

[Signature]
H/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: 8086 Microprocessor

Month	Topic
December	Unit-I: Introduction to Microprocessor and Microcomputer: Microprocessor based personal computer system, Block diagram of microprocessor-based computer system. Modem computer memory map, I/O Space the Microprocessor, buses.
January	Computer Data formats, ASCII Unicode, BCD. Unit-II: Microprocessor processor and its architecture: 8086 internal architecture. Real Mode & Protected Mode Memory Addressing. Memory Paging. Pinout and Pin function of 8086 microprocessor.
February	Unit- III: Addressing Modes: Data addressing modes. Program memory addressing modes. Stack memory addressing modes. Unit- IV: MOV revisited: Machine language. The op-code, PUSH, POP, stack initialization.
March	Miscellaneous data transfer instructions: XCHG, LAHF & SAHF. Arithmetic instructions: Addition, subtraction and comparison. Multiplication and division BCD and ASCII arithmetic. Unit-V: Test and Tutorial

Ashe
(ADL)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

I/C Principal
Modern College of Computer Science & I.T.

Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: Operating System II

Month	Topic
December	Unit-I: Memory Management: Address Binding, Logical Vs. Physical address space, Memory Allocation Strategies- Fixed and Variable Partitions, Paging. Segmentation, Virtual Memory.
January	Unit II: Disk Management: Concept of File, File Operation, Directory Structure, File Allocation Methods- Contiguous and Non- Contiguous allocation method, Secondary Storage Structure: Disk fundamental, Disk Scheduling management. FCFS Scheduling, SSTF Scheduling, SCAN Scheduling, Disk
February	Unit III: Device Management: Introduction: Dedicated devices, Shared devices and Virtual devices, Pipes, Buffer, I/O System Components: I/O Devices, I/O Hardware, Interrupts, Application I/O Interface. Unit- IV: Security Policy Mechanism: Protection: Need of Protection in O.S.,
March	Goals of Protection, Domain of Protection. Authentication- Password, Encrypted Password and Encryption. Introduction to Android Operating System: Introduction to Android Operating System, Android Development Framework, Android Application Architecture. Unit-V: Test & Tutorials

Asibe
Co-ordinator
(ADCI)
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: Advance Programming in C

Month	Topic
December	Unit-I: Functions: Introduction, Types of functions, defining functions, Arguments, Function prototype, actual parameters and formal parameters, calling function, Returning function results. Parameter Passing Mechanism: Call by Value & Call by Reference, Recursion. Unit-II: Structure, Union & Pointers: Structure: Introduction, Declaration and initializing structure, Accessing structure members, Nested structures,
January	Arrays of structure, typedef statement and Enumerated data types. Unions: Declaration, Difference between structure and union. Pointers: Introduction, The Address (&) and Indirection (*) Operators, Declaration and initialization of pointers. Pointer expression and pointer arithmetic, Pointer to pointer. Dynamic Memory Allocation in C using malloc (), calloc(), free() and realloc() Unit- III: Storage classes, Pre-processors & String handling Functions: Storage classes, Scope, visibility and lifetime of variable, block and file scope,
February	auto, extern, static and register storage classes. String handling functions; strcpy(), strcmp(). Strcat(), strlen(),strupr(), striwr(), gets(), puts(), Preprocessor Directives: File inclusion. And conditional compiler directives, Macro substitution, #define, #if, #ifdef, #else, #elif, #endif Unit- IV: File Handling:

Asibe
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmore

HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	File handling: Introduction, Opening & closing a file, Input/output operations on files,
March	text and binary files, gete(), pute() function. Fprintf() and fscanf() function. Fread() and fwrite() function. Writing and reading records from text file and binary file, Appending, modifying and deleting a record from file, Random access functions fseek(), rewind(), flushall(). Remove (), rename () functions. Unit-V: Test & Tutorials.

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: The Numerical Methods M-2

Month	Topic
December	Unit-I: Introduction: Mathematical Modelling. Characteristics, Error in Calculation, Significant Error. Absolute, Percentage Relative Error, chopping off and Rounding off Error, Truncation Error. Propagation Error. Divisibility Theory in the Integer: <ul style="list-style-type: none">• Early Number Theory.
January	<ul style="list-style-type: none">• The division Algorithm.• Common divisor. The Euclidean Algorithm Unit-II: Numerical Solutions of Transcendental Equations:
February	Unit- III: <ul style="list-style-type: none">• Introduction and Polynomial Interpolation• Newton-Gregory Forward Difference Interpolation Formula
March	<ul style="list-style-type: none">• Newton-Gregory Backward Difference Interpolation Formula Unit- IV: Newton's divided Difference Interpolation, Lagrange's Interpolation Unit-V: Test and Tutorial

Ashe
Coordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
LIC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: Database Management System

Month	Topic
December	Unit-I: Introduction to Databases, Types of Data, Record and Files, File based System. What is database system, application and purpose of database system, Three-Level of data abstraction, instance and schema, data independence, database users, structure of a DBMS, Advantages and disadvantages of DBMS. Unit-II: Entity, attributes and data association relation between entities,
January	The importance of data models, The evolution of data models. Type of Data Model, Advantages and disadvantages of each model. Unit- III: Database Design, Design Phases, Normal Forms 1NF, 2NF, 3NF and BCNF. ER-Model entity set. Relationship set, attributes, constraints, ER-Diagram basic structure, mapping cardinality, Roles, weak entity set. Symbols used in ER-notations. ERD Issues, 12 Codd's rules,
February	Unit- IV: SQL: SQL Languages DDL, DML, DCL, TCL, DDL Statements to Create and Manage Tables using Create & Alter, Manipulating Data using Insert, Update & Delete Statement., Retrieving Data Using SQL Select, Restricting and Sorting Data, Using Single Row functions,
March	Conversion Functions and Conditional Expressions, Aggregated Data Using Group Function, displaying data from Multiple tables, Sub queries, Set Operators Unit-V: Test and Tutorial

Ashe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad

Kwaghmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



F. Y. B.Sc. (Computer Science)

Semester-II

Subject: English Communication Skill (Soft Skill Development)

Month	Topic
December	Unit-I: Soft Skills: An Introduction Definition and Significance of Soft Skills; Process, Importance and Measurement of Soft Skill Development. Self-Discovery: Discovering the Self, Setting Goals; Beliefs, Values, Attitude, Virtue. Positivity and Motivation: Developing Positive Thinking and Attitude; Driving out Negativity: Meaning and Theories of Motivation, Enhancing Motivation Levels Unit-II: Public Speaking: Skills, Methods, Strategies and Essential tips for effective public speaking. Group Discussion: Importance, Planning, Elements, Skills assessed;
January	Effectively disagreeing. Initiating, Summarizing and Attaining the Objective, Do's and Don'ts of Group Discussion. Non-Verbal Communication: Importance and Elements; Body Language. Unit- III: Role Play: Introduction, Basics of Role Playing, Role Play Script (Teacher-Student Script, Short Drama Script, Any Short Plays and etc.), Interview Skills: Interviewer and Interviewee in-depth perspectives. Before, During and After the Interview. Tips for Success, Do's and Don'ts of Interview,
February	Presentation Skills: Types, Content, Audience Analysis, Essential Tips Before, During and After, Overcoming Nervousness, Planning and Structuring your Presentation, Techniques of Delivery. Unit- IV:

Asibe
Co-ordinator

Modern College of Computer Science & I.T.,

Aurangabad

Kwaghmare

IC Principal

Modern College of Computer Science & I.T.,



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

	<p>Etiquette and Manners: Social and Business. Stress Management: Stress, Sources of Stress, Ways to Cope with Stress, Time Management: Concept, Essentials, Tips. Leadership and Assertiveness Skills: A Good Leader, Leaders and Managers,</p>
March	<p>Leadership Theories: Types of Leaders, Leadership Behaviour, Assertiveness Skills. Decision Making and Negotiation: Introduction to Decision Making, Steps for Decision Making. Decision Making Techniques, Negotiation Fundamentals, Negotiation Styles, Major Negotiation Concepts, Emotional Intelligence: Meaning, History, Features, Components, Intrapersonal and Management Excellence; Strategies to enhance Emotional Intelligence.</p> <p>Unit-V: Test and Tutorial</p>

Ashe
(Ashe)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad

Kaaghmare
WC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-VI

Subject: Software Quality & Testing

Month	Topic
December	Unit-I: Quality Concepts Software and Quality, Garvin's Quality Dimensions, McCall's Quality Factors, ISO 9126 Quality Factors, Risk, Quality and Security, SE Methods, Project Management Techniques, Quality Control and Assurance Quality Assurance: Elements of Software Quality Assurance, SQA Task Goals and Matrices, Formal Approach to SQA,
January	Six Sigma for SE, ISO 9000 Quality Standards, SQA Plan. Unit-II: Software Testing Strategies Verification and Validation, Picture of Software Testing Strategies, Criteria for complication of testing, Strategies issue, Strategies for Conventional Software and Web Apps, Validation Testing, System Testing, Debugging.
February	Unit- III: Testing Conventional Applications Testing Fundamentals, Internal and External view, White-Box Testing, Basic path Testing, Control Structure Testing, Black-box Testing, Testing Client-server Architecture
March	Testing Web Applications: Dimensions of Quality, Errors within a Web App, Testing Strategy and planning, Testing process, Content Testing, Database Testing, User Interface Testing, Navigation Testing, Configuration Testing, Load Testing, Stress Testing.

Asibe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad

Kwag Inense
HC Principal

Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY
MODERN COLLEGE
OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY
(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-VI

Subject: Android Application Development

Month	Topic
December	<p>Unit-I: Android SDK Features</p> <p>Access to Hardware including Camera, GPS, and Accelerometer, Native Google Maps, Geocoding, and Location-Based Services, Background Services, SQLite Database for Data Storage and Retrieval, Shared Data and Inter application Communication, P2P Services with Google Talk, Extensive Media Support and 2D/3D Graphics, Optimized Memory and Process Management, The Dalvik Virtual Machine, Advanced Android Libraries.</p> <p>Android Development Tools</p> <p>Types of Android Applications, Hardware-Imposed Design Considerations, Users, Environment, The Android Emulator, Dalvik Debug Monitor Service (DDMS), The Android Debug Bridge (ADB).</p>
January	<p>Unit-II</p> <p>Applications and Activities:</p> <p>Application Manifest, Manifest Editor, Android Application Life Cycle, Understanding Application Priority and Process States, Externalizing Resources, Fundamental Android</p> <p>UI Design:</p> <p>The Android Widget Toolbox, Layouts, Compound Controls, Custom Widgets and Controls, Android Menu System, Activity Menu, Intents, Broadcast Receivers, Adapters, and the Internet: Intents to Launch Activities, Intent Filters to Service</p>

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kaaghmare
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY



Reg. No. F-11895/"A'bad"

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

	Implicit Intents, Intent Filters for Plugins and Extensibility, Intents to Broadcast Events, Android-Supplied Adapters, Internet Resource.
February	Data Storage, Retrieval, and Sharing Creating and Saving Preferences, Retrieving Shared Preferences, Saving the Activity State, File Management Tools, Databases in Android: SQLite, Cursors and Content Values, Content Providers. Maps, Geocoding, and Location-Based Services: Location Providers, Geocoder, Map-Based Activities. Unit- III: Advanced Development in Android: controlling Services, Threads, Customizing Toasts, Toasts in Worker Threads,
March	Notification Manager, Triggering Notifications. Peer-to-Peer Communication: Android Instant Messaging, Sending & Listening SMS. Accessing Android Hardware: Media APIs, Controlling Camera Settings, Sensor Manager, Accelerometer and Compass, Android Telephony, Bluetooth, Managing Network and Wi-Fi Connections. Advanced Android Development: Paranoid Android, AIDL to Support IPC for Services, Internet Services, Rich User Interfaces.

Ashe
(ADC)

Coordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



Reg. No. F-11895/"A'bad"

T. Y. B.Sc. (Computer Science)

Semester-VI

Subject: Theory of Computation

Month	Topic
December	Unit-I: Introduction: Sets, relations, functions, graphs, trees, mathematical induction. Regular expressions: FA and regular expression, pumping lemma for regular sets,
January	applications of pumping lemma, closure properties of regular sets, regular sets and grammar, types of grammar (type 0, type 1, type 2, type 3) Unit-II Finite automata: definition, transition systems,
February	acceptability of strings, NFA, DFA, equivalence of DFA and NFA, mela moore model, minimization of automaton, Applications
March	Unit- III: Formal Languages, Chomsky classification of languages, languages, their relation and automaton.

Ashe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

VC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)



T. Y. B.Sc. (Computer Science)

Semester-VI

Subject: Advanced Programming with PHP

Month	Topic
December	Unit-I: Handling HTML Forms in PHP: Creating HTML Form, Capture Data Handling: Empty form data, Multi-Value fields, Validating Form Data, Difference between GET and POST, Global and Environment Variables, Generating Web-form in PHP, Create Multi-step Form, Hidden fields, Redirecting the user. Unit-II Cookies and user sessions in PHP: State and Stateless Webpage,
January	Deleting a Cookies: Anatomy of cookies, setting a cookie with PHP, Cookies, Creating Session Cookies, Query String: Working with Query String, Creating Query String. Session: Using PHP Session to Store Data: Creating a Session, Reading & Writing Session Data, destroying a Session, Create a User Login System
February	Unit- III: Introducing Database and SQL: Basics of MySQL, connecting to the Database Server, Creating Database, Creating Table. Retrieving data: Limit the number of results returned, Order and group results, Query multiple tables at once, use various MySQL functions and other features to build more flexible queries
March	Manipulating data from SQL with PHP: Inserting new records into tables using INSERT statements, changing field values within records with UPDATE statements, deleting records using DELETE statements.

(Signature)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Aurangabad)

Reg. No. F-11895/"A'bad"



T. Y. B.Sc. (Computer Science)

Semester-VI

Subject: Ethics & Cyber Law

Month	Topic
December	Unit-I: Basic Concepts of Technology and Law, Understanding the Technology of Internet, Scope of Cyber Laws, Cyber Jurisprudence. Law of Digital Contracts the Essence of Digital Contracts.
January	Unit-II The System of Digital Signatures. The Role and Function of Certifying Authorities. The Science of Cryptography,
February	E-Governance, Cyber Crimes and Cyber Laws. Introduction to Intellectual Property. Unit- III: Information Technology Act 2000 Cyber Law Issues in E-Business Management. Major issues in Cyber Evidence Management,
March	Cyber Law Compliancy Audit, The Ethics of Computer Security. Relevant Rules Notifications, Information Technology (Amendment) Act, 2008.

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
(ADC)

Kooghmare
WC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-I

Subject: Computer Fundamentals

Month	Topic
June	UNIT-1 1. Fundamentals of Computer System <ul style="list-style-type: none">• Characteristics & features of Computers.• Components of Computers.
	<ul style="list-style-type: none">• Organization of Computer. 2. Computer Generation & Classification Generation of Computers: First to Fifth Classification of Computers: Distributed & Parallel computers
July	UNIT-II 3. Computer Memory <ul style="list-style-type: none">• Memory Cell & Organization• Types of Memory (Primary And Secondary): RAM, ROM, PROM, EPROM,• Advantages and disadvantages of each.
August	<ul style="list-style-type: none">• Secondary Storage Devices (FD, CD, HD, Pen drive, DVD, Tape Drive, DAT) 4. I/O Devices <ul style="list-style-type: none">• Input Devices: Touch screen, OMR, OBR, OCR, Light pen, Scanners• Output Devices: Digitizers, Plotters, LCD, Plasma Display Printers
	UNIT-III

Ashe
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad

K. B. Ghosh
WC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



	5. Processor <ul style="list-style-type: none">• Structure of Instruction, Description of Processor. Processor Features• RISC & CISC
September	UNIT-IV 6. Internet, World Wide Web: <ul style="list-style-type: none">• Introduction to Internet, Internet Access, Internet Basics, Protocols-TCP/IP, HETP, FTP,• Addressing, World Wide Web (WWW), Web Pages & HTML, Web browsers. Searching for•
October	<ul style="list-style-type: none">• Information-search engines. Internet chat. Applications of Internet. Advantages and Disadvantages of Internet. UNIT-V <ul style="list-style-type: none">• Test and Tutorial
November	Revision

Ashe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kiraghmare
IIC Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

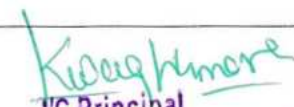
BCS

Semester-I

Subject: Digital Electronics

Month	Topic
June	<p>UNIT-1:</p> <p>1. Number Systems and Arithmetic</p> <ul style="list-style-type: none">• Number System: Decimal, Octal, Hexadecimal & Binary Number System Conversion within Binary, Octal,• Hexadecimal & Decimal Number System,• Binary Arithmetic: Binary addition, subtraction, multiplication & division• Binary subtraction using 1's complement, 2's complement method.• OR, Associative, Distributive, Absorption laws, De morgan's theorems.• Reducing Boolean expressions.• Logic Gates: AND, OR, NOT, Ex-OR, Ex-NOR• NAND as Universal building block• Logic diagrams of Boolean expressions Boolean expressions for logic diagrams
July	<ul style="list-style-type: none">• Hexadecimal arithmetic: Addition, subtraction, multiplication & division <p>2. Boolean Algebra and LogicGates</p> <ul style="list-style-type: none">• Postulates of Boolean Algebra <p>Theorems of Boolean Algebra: Complementation, commutative, SND,</p> <p>Unit II:</p> <p>3. Minimization Techniques</p> <ul style="list-style-type: none">• Introduction, Minterms and Maxterms


Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.


HOD Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



	<ul style="list-style-type: none">• K-Map, K-map for 2 variables• K-map for 3 variables•
August	<ul style="list-style-type: none">• K-map for 4 variables <p>4. Combinational and Arithmetic Logic Circuits</p> <ul style="list-style-type: none">• Half Adder & Full Adder• Binary parallel Adder• Half Subtractor, Full Subtractor• Adder/Subtractor in 2's complement system• BCD to Decimal decoder• 2: 4 demultiplexer <p>4 line to 1 line multiplexer</p> <p>Unit-III:</p> <p>5. Flip Flops</p> <ul style="list-style-type: none">• Introduction: RS FF• Clocked RS FF, DFF Triggering, preset and clear
September	<ul style="list-style-type: none">• JK FF, TFF, Race around condition• Master slave FF <p>6. Counters</p> <ul style="list-style-type: none">• Introduction: Asynchronous/ ripple counter• Modulus Counter, MOD-12 counter• Synchronous counter: Synchronous serial & synch parallel counter• BCD counter• Ring counter

Ashe
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

K. Jagtap
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



Unit- IV: Test and Tutorial	
	7.Shift Registers
October	<ul style="list-style-type: none">• Introduction, Buffer register• Serial-in serial -out Serial-in parallel-out.
November	<ul style="list-style-type: none">• Parallel-in serial-out, parallel-in parallel-out

Ashe
(ADC)
Coordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-I

Subject: Operating System-I

Month	Topic
June	Unit-I: Unit 1: Introduction to Operating System: Introduction to Software: Definition, Classification of software, Operating system as the main component of system software, Program and Process. Operating System Fundamental: O.S. as a resource manager, Structure of O.S., Types of O.S.- Single user and multiuser O.S.,
July	Basic functions of O.S., Characteristics of modern O.S. Evolution of O.S.: Early systems, Simple batch systems, Multiprogramming batch systems, Time sharing system, Operating system for Personal Computers, workstations and Hand held devices, Parallel systems, Distributed systems, Real time systems, Advantages and Disadvantages of each system. Unit II: Process Management: Concept of Process: Process States, Process Control Block, Operations on Processes, Threads.
August	CPU Scheduling: Types of schedulers, Criteria for scheduling, Non-Pre-emptive Scheduling Algorithms. First-come First-served Scheduling and Shortest Job First Scheduling. Pre-emptive Scheduling Algorithms- Priority Scheduling, Round Robin. Unit-III: Unit III: Inter Process Communication and Synchronization:

Asibe
(ADC)
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



September	Concurrent and dependent process, need for synchronization, introduction of Critical Section and Semaphores, method of inter process communication, process synchronization, Synchronization problem.
October	Unit- IV: Deadlocks: Concept of Deadlock, Deadlock Modeling, Methods for Handling Deadlock Memory management.
November	Unit- V: Test and Tutorial

Ashe
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmenre

I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-I

Subject: Programming in C

Month	Topic
June	UNIT-1 1. Introduction: <ul style="list-style-type: none">An Overview of C, History of C language, C as a Structured Language. Features of C. 2. Basic Elements & Operators <ul style="list-style-type: none">Character set, C Token, Identifier & Keywords, VariablesConstant and its types. Integer constant, floating point constant, Character constant, string constants.
July	<ul style="list-style-type: none">Operators: Arithmetic, Relational, Logical, Unary operators: Increment & decrement Assignment and Conditional operator. Precedence & Associativity of Operators 3. Data Types <ul style="list-style-type: none">Data Types: int, char, float, double, Declaration & InitializationType modifier: long, short, signed & unsigned
August	Unit II: 4. C Program & I/O statements <ul style="list-style-type: none">Structure of C Program, Compilation & Execution of C programI/O: Introduction, Formatted Input/output function: scanf & printf. Escape sequence characters. Library functions: General & Maths

Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

HC Principal

Modern College of Computer Science & I.T.,
Aurangabad



PARMITA EDUCATION SOCIETY

MODERN COLLEGE


OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY


(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



September	Unit-III: 5. Control and Iterative Statements: <ul style="list-style-type: none">• Simple if, nested if, if-else, else if ladder• Switch-case statement• The conditional expression (?: operator)• While and do-while loop, and for loop Break & continue statement, goto statement
October	Unit- IV: 6. Arrays: <ul style="list-style-type: none">• Introduction, Declaration and initialization Accessing array elements, Memory representation of array.• One dimension and multidimensional arrays, character array, Introduction to string
November	Unit- V: Test and Tutorial


Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.


IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



	Binary Relations, Matrix Representation of Relations, Operations on Relations, Partition and Covering, Transitive Closure, Equivalence,
November	Compatibility and Partial Ordering Relations. Unit- V: Test and Tutorial

Shubale
(ADC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kulagmane

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



September	Characteristics, Advantages and disadvantages, Pseudo code or Structured English, Algorithm, basic features and properties of algorithm. Unit- IV: Flow-Chart Definition, Principles of flowcharting, Flowcharting symbols, Data flow diagram, pseudo code. Converting algorithms to flowcharts,
October	problem solving through algorithm and flowchart. Advantages and disadvantages. Unit- V: Test and Tutorial
November	Revision

S. Wale
(A.D.C.)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

K. S. Aglunore

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-I

Subject: English Communication Skill

Month	Topic
June	Unit-I: Basics of Communication Skill: Communication Skills: Introduction, Definition, Nature and Scope of Communication, and Importance and Purpose of Communication, "C's of good communication, Process of Communication. Barriers to communication: Physiological Barriers, Physical Barriers, Cultural Barriers, Language Barriers, Gender Barriers, Interpersonal Barriers, Psychological Barriers, Emotional barriers Communication Network in Organization: Personal Communication, Internal Operational Communication, External Operational Communication, Horizontal (Lateral) Communication, Vertical (Downward) Communication, Vertical (Upward) Communication.
July	English Grammar: Parts of Speech: Nouns, Pronouns, Verbs, Adverbs, Adjectives, Conjunctives, Prepositions, Interjections. Using the Dictionary: Primary Auxiliaries, Modal Auxiliaries, Subject and Object (Direct/Indirect), Yes or No Questions, Wh-word Questions, Question Tags Grammar: Type of Verbs, Subject Verb Agreement, Tense (present and past) and Aspect, several possibilities for denoting future Time, vocabulary building, constructing. Paragraphs
August	Unit II: Elements of Communication & Listening Skills: Elements of Communication: Introduction, Face to Face Communication Tone of voice, Body Language (Non-Verbal Communication), Verbal Communication, Physical Communication, Listening Skills-1: Introduction, Listening to Conversation (Formal and

Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



	Informal), Active Listening, Benefits of Listening Skill, Barriers to Listening, Listening to Announcements (Railway stations/Bus stations Airports Sports Announcements/ Commentaries etc.) Listening Skills-II: Academic Listening (Listening to Lectures).
September	Listening to Talks and Presentations, Note Taking Tips Unit-III: Oral Communication Skills: Importance of Spoken English, Status of Spoken English in India, International Phonetic Alphabet (IPA) Symbols, Spelling and Pronunciation, Requesting and responding to requests, Congratulating people on their success, Expressing condolences, Apologizing and forgiving. Giving instructions, Seeking and giving permission, Expressing Opinions (likes and dislikes), Demanding Explanations, Asking for and giving advice and suggestions. Reading Skills: Purpose, Process, Methodologies, Skimming and Scanning,
October	Levels of Reading, Reading Comprehension Unit- IV: Effective Writing Skills: Elements of Effective Writing, Sentences, Phrases and Clauses, Types of Sentences, Main Forms of Written Communication, Paragraph Writing (Linkage and Cohesion), Letter Writing (Formal and Informal), Essay Writing. Notices, Summarizing, Precise Writing, Note-Making. Amount of Discussion Required Understanding and Applying Vocabulary: Words Often Confused-Pairs of words, One Word Substitutes, Synonyms and Antonyms,
November	Word Formation: Prefixes, Bases and Suffixes (Derivational & Inflectional). UNIT-V Test and Tutorial

(Signature)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-III

Subject: Object Oriented Programming Using C++

Month	Topic
June	Unit-I: Introduction to C++ Input output in C++, Data Types C++, and drive data types. The void data type, Type Modifiers,
July	Type casting, and Constant in C++, Operators in C++. Precedence of Operators, and Strings. Unit II: Structures and Functions in C++ Parts of Function, User-defined Functions, Value- Returning Functions, void Functions,
August	Value Parameters, Function overloading, Virtual Functions, Structure in C++. Unit-III: Unit Introduction to Oops using C++ Object Oriented Technology, Advantages of OOP. Class, Build- in Operations on Classes, Assignment Operator and Classes,
September	Class Scope, Reference parameters and Class Objects (Variables), Member functions, Accessor and Mutator Functions, Constructors, default Constructor, Destructors. Unit- IV: Overloading, Templates and Inheritance Operator Overloading, Function Overloading,
October	Function Templates, Class Templates Single and Multiple Inheritance, visual Base class, Abstract Class, Pointer and Inheritance, Overloading Member Function. Friend Function.
November	Unit- V: Test and Tutorials

B. Bhole
(A.D.C.S.)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

K. W. K. K. K.
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-III

Subject: Relational Database Management System

Month	Topic
June	Unit-I: Relational Model: CODD's Rule- Relational Data Model-
July	Key Integrity Relational Algebra Operations -Advantages and limitations-Relational Calculus-Domain Relational Calculus QBE Unit II: Structure of Relational Database Introduction to Relational Database Design Objectives Tools-
August	Redundancy and Data Anomaly Functional Dependency Normalization INF 2NF-3NF-BCNF Transaction Processing Database Security Unit-III: SQL: Commands Data types DDL.
September	Selection, Projection, Join and Set Operations- Aggregate Functions -DML-Modification- Truncation –Constraints- Subquery. Unit- IV: PL/SQL: Structure Elements-
October	Operators Precedence- Control Structure- Iterative Control –Cursors- Procedure- Function Packages-Exceptional Handling-Triggers.
November	Unit- V: Test and Tutorials

Surbale
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-III

Subject: Linux Operating Systems

Month	Topic
June	Unit-I: Unit -I: History and Development of Linux A Brief History of Linux, Basic features Acquiring and Using Linux, Linux, Examining kernel,
July	Linux file system. Of Linux components Linux System, System, Benefits Benefits of of Linux, Distributions, Installation notes, Linux Lander, Linux , Linux D Of Linux OS Unit II: System Access & User Accounts System Access and User Accounts -Logging In and out Using the Linux System,
August	Creating Additional User Accounts, Creating & Managing Groups, and Managing Users Linux Commands. Unit-III: File System & File Permissions Introduction to The File System and Working with Linux Permissions, File System Navigation,
September	Managing The File System Understanding Permissions, Changing File And Directory Permissions, Changing Default Permissions And Ownership Unit- IV: Using Editors Using the Vi Editor, Studying Other Editors,
October	Redirection, and Introduction to Programming in C Using Linux (gcc). Unit- V: Test and Tutorials
November	Revision

Dabale
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kulkarni

IC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-III

Subject: Advance Data Structure

Month	Topic
June	Unit-I: Linked List Drawbacks of Arrays, Introduction to Linked lists, Types of Linked Lists, Representation of Linked L List in Memory,
July	Operations on Singly Linked Lists (Travening, Insertion, Deletion and and modification). Doubly Linked List, Representation of Doubly Linked List in Memory, Operations on doubly Linked Lists (Traversing. Insertion, Deletion and modification). Unit II: Trees Introduction and key terminology,
August	Binary Trees Binary Tree Creation and Traversal Using Arrays, Binary Tree Creation and Traversal Using Pointers, Expression Trees, traversing binary tree recursively and non-recunively (pre-order, in order, post order traversal). Application of trees (binary search tree).
September	Unit-III: Graphs Introduction and key terminology, graph representation in memory (static and dynamic), traversing a graph (breath first search, depth first search), spanning tree. Kruskal's Algorithm, Prim's Algorithm
October	Unit- IV: Advance Trees Heaps, Min/Max Heap, Binomial Heap, Fibonacci Heap, Heap Sort, 8 Tree, B+ Tree
November	Unit- V: Test and Tutorials

(Signature)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad

(Signature)
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-III

Subject: Computational Statistics Using R

Month	Topic
June	<p>Unit-I: Introduction to Statistics and R Language</p> <p>1. Importance of Statistics in Various Fields: Definition and purpose of statistics. Applications of statistics in different fields, such as: Business and economics (eg, market research, financial analysis), Healthcare (e.g., clinical trials, epidemiology), Social Science (e.g., psychology, sociology, political science), Natural sciences (eg, physics, chemistry, biology), Engineering (e.g., quality control, reliability engineering)</p> <p>2. Introduction to R Programming Language and R-Studio: Overview of R and its advantages: Installing R and R-Studio, Navigating the R-Studio, interface (console, script editor, environment, plots, and help). R packages and CRAN repository, Basic R Syntax, Data Types, and Operations, R syntax and expressions. Data types, numeric, character, logical, factor, and date/time, Data structures, vector, matrix, list, and data frame, Basic R operations: arithmetic, relational, and logical, Control structures: if-else, for loops, and while loops, Functions built-in and user defined</p>
July	<p>3. Measures of Central Tendency (Mean, Median, Mode): Definition and properties of mean, median, and mode. Calculation of mean, median, and mode using R functions: mean, median, and mode, Measures of Dispersion (Range, Variance, Standard Deviation): Definition and properties of range, variance, and standard deviation, Calculations of range, variance, and standard deviation using R functions: range, var, and sd</p> <p>4. Introduction to Data Visualization-Importance of data visualization, Types of data visualization (e.g., bar chart, pie chart, line chart, scatter plot, histogram, box plot), Basic</p>

B. B. B.
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare
JIC Principal



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



principles of good data visualization

Unit II: Probability and Data Distributions

1. Basics of Probability Theory: Definition of probability and its properties, Sample space, events, and outcomes, Basic rules of probability, addition rule, multiplication rule, and conditional probability, Independent und dependent events, Bayes' theorem

2. Discrete Probability Distributions: Introduction to discrete probability distributions, Probability mass function (PMF), Expected value and variance of discrete random variables, Normal distribution: definition, properties, and applications, R functions: dbinom, pbinom, qbinom, rbinom, Poisson distribution definition, properties, and applications, R functions: dpois, ppois, qpois, rpois

3. Continuous Probability Distribution: Introduction to continuous probability distributions, Probability density function (PDF) and cumulative distribution function (CDF),

Expected value and variance of continuous random variables. Normal distribution: definition, properties, and applications, R functions: dnorm, pnorm, qnorm, rnorm, Exponential distribution: definition, properties, and applications, R functions: dexp, pexp, qexp, rexp

4. Working with Probability Distributions in R: Generating random samples from discrete and continuous distributions, estimating distribution parameters from data, Computing probabilities and percentiles using R functions, Visualizing probability distributions: histograms, density plots, and empirical CDFs, Fitting probability distributions to data using R packages like fitdistrplus

August

Unit-III: Basic Inferential Statistics:

1. Sampling and Sampling Distributions: Definition and importance of sampling, Types of sampling methods (eg. Simple random sampling, stratified sampling, cluster sampling), Sampling distribution and its properties, Central Limit Theorem Theorem and its implications, Standard error of the mean and its calculation using R: sd and length functions.

S. W. K. LAD
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



	<p>2. Confidence Intervals: Definition and purpose of confidence intervals, Interpretation of confidence intervals, Calculation of confidence intervals for population mean (using t distribution), R functions, t-test, qt, and manual calculation, Calculation of confidence intervals for population proportion, R functions: prop test and manual calculation.</p>
September	<p>3. Hypothesis Testing: t-test and chi-square test: Definition and purpose of hypothesis testing, Null hypothesis and alternative hypothesis, Type I and Type II errors, significance level, and power, One-sample t-test, two-sample t-test, and paired t-test, R functions: t-test, Chi-square test for goodness-of-fit and independence, R functions: Chi-square test.</p> <p>4 Introduction to Linear Regression: Definition and purpose of linear regression, Simple linear regression model, assumptions and parameters, Estimation of parameters using the least squares method, Interpretation of the regression coefficients and the coefficient of determination (R squared), R functions for linear regression: lm, summary, confint, predict, and plot</p> <p>Unit- IV: Data Analysis and Visualization using R</p> <p>1. Data Visualization Techniques in R: Histograms: visualizing the distribution of a continuous variable, R functions: hist, Boxplots: displaying the five-number summary of a continuous variable, R functions: boxplot, Scatter plots: visualizing the relationship between two continuous variables, R functions, plot. Bar charts: representing the frequency or proportion of categorical variables, R functions, barplot, table</p>
October	<p>2. Analysing Real-World Datasets and Case Studies</p> <ul style="list-style-type: none">• Choosing appropriate datasets for practice and analysis (e.g., from sources like Kaggle, UCI Machine Learning Repository, or government websites)• Steps for analysing real-world datasets <p>1. Data exploration and pre-processing: handling missing values, outliers, and data transformation</p> <p>2. Descriptive statistics: calculating measures of central tendency, dispersion, and visualizing</p>

Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Handwritten signature: K. S. Kulkarni

ICT Principal
Modern College of Computer Science & I.T.,
Aurangabad.



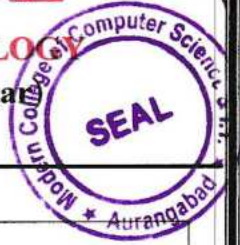
Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



	the data 3. Inferential statistics: applying hypothesis testing and regression analysis to answer research questions
November	4. Interpretation and communication of results Encourage students to work on real-world case studies related to their interests or field of study Unit- V: Test und Tutorials

S. Inbale
(ADC)

Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kwaghmare

HC Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-III

Subject: Web Fundamentals

Month	Topic
June	<p>Unit-I: Introduction</p> <ol style="list-style-type: none">1. Web Browsers: Introduction to web browsers, types of web browsers, how they work.2. Web Servers: Introduction to web servers, types of web servers, how they work.3. Client-side vs Server-side: Understanding the difference between client-side and server-side processing4. Web Standards: Introduction to web standards, W3C, HTML, validation, CSS validation5. HTML Syntax and Basic Tags: study the basic syntax of an HTML document, including the doctype declaration, opening and closing tags, and nesting of elements. We will also explore fundamental HTML tags like <head>, <body>, <h1>, <h2>, <p>, <a>, and .6. Structure of an HTML Document: delve into the standard structure of an HTML document, including the <!DOCTYPE> declaration, the <html> element, and the <head> and <body> sections, how to use comments and the proper organization of elements within the document.
July	<ol style="list-style-type: none">7. HTML Elements and Attributes: learn about the different types of HTML elements, including block-level and inline elements. cover how to use attributes to provide additional information about an element, such as the 'src' attribute for images or the 'href' attribute for links.8. Semantic HTML: explore the importance of using semantic elements in HTML5, such as <article>, <section>, <header>, <nav>, and <footer>, and how these elements enhance the accessibility and search engine optimization of web pages.

(Signature)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
H.C. Principal

Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



9. **HTML5:** study the new features and improvements introduced in HTML5, including multimedia elements like `< video>` and, `< audio>`, new form input types and attributes, and JavaScript APIs for advanced functionality.
10. **Lists:** learn how to create ordered and unordered lists using the `` and ``
11. **Links and Navigation:** study how to create different types of links using the `<a>` element, including internal, external, and anchor links, as well as email and telephone links

Unit II: CSS Fundamentals

1. **Introduction to CSS:** Understanding the purpose of CSS, Syntax and structure of CSS rules, Applying CSS: inline, internal, and external stylesheets, Linking a CSS file to an HTML document using the `<link>` element

August

2. **Basic Selectors:** Element, class, and ID selectors, Universal and attribute selectors, Grouping and chaining selectors, Understanding selector specificity
3. **Advanced Selectors and Combinators:** Descendant, child, and sibling combinators, Pseudo-classes: `:hover`, `:active`, `:visited`, `:first-child`, `:last-child`, and `:nth-child`, Pseudo-elements: `::before`, `::after`, and `::first-letter`, Attribute selectors with various matching patterns
4. **Box Model: Basics:** Understanding the CSS box model (content, padding, border, margin), Setting width and height of Elements, Managing overflow and scrollbars
5. **Box Model Padding, Margin, and Border:** Setting padding, margin, and border properties Using shorthand notation for padding, margin, and border Box-sizing property and its values (content-box, border-box)
6. **Layout and Positioning: Display Property:** Understanding the display property (block, inline, inline-block) Using the display property to create layouts Controlling element visibility with `display: none` and `visibility: hidden`
7. **Layout and Positioning: Floats and Positioning:** Creating multi-column layouts with

Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad

K. Waghmare
H.C. Principal
Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



	<p>float, Clearing float with the clear property, Static, relative, absolute, and fixed positioning</p>
September	<p>8. Layout and Positioning: Flexbox: Introduction to the CSS Flexbox layout system Defining a flex container and flex items, Controlling the direction, alignment, and order of flex items Handling flexible sizes and growing/shrinking of items</p> <p>9. Layout and Positioning: CSS Grid: Introduction to the CSS Grid layout system Defining a grid container and grid items.Setting up grid columns, rows, and gaps Positioning grid items and controlling their size</p> <p>10. Review and Best Practices: Review of key concepts covered in the course Organizing and structuring, CSS code CSS naming conventions and methodologies (e.g., BEM) Tips for writing maintainable and efficient CSS</p> <p>Unit-III: Advanced HTML and CSS Techniques: 1. Advanced HTML: Tables, forms, multimedia, accessibility, SEO,</p> <p>2. Responsive Web Design: Understanding responsive design principles, media queries, fluid grids, responsive images.</p>
October	<p>3. CSS3: Advanced CSS3 techniques, transitions, animations, transforms, and gradients.</p> <p>Unit- IV: JavaScript Fundamentals: 1. Introduction to JavaScript: Basic concepts, syntax, and usage.</p> <p>2. Control Structures and Functions: Variables, data types, operators, control structures, functions, and arrays.</p> <p>3. DOM Manipulation: Accessing and manipulating the Document Object Model (DOM) using JavaScript</p> <p>4. Events and Event Handling: Handling user events, event propagation, and delegation.</p>
November	<p>Unit- V: Test and Tutorials</p>

S. Subale
(ADC)

Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

K. Jagannath
I/C Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-III

Subject: Office Automation

Month	Topic
June	Unit I: Introduction to Office Automation 1. Definition and scope of office automation 2. Benefits of office automation
July	3. Overview of office automation tools and applications 4. History of office automation 5. Trends in office automation Unit-II: Word Processing and Document Management 1. Creating and formatting basic documents. 2. Advanced formatting techniques (e.g. styles, templates, themes) 3. Working with tables and columns
August	4. Managing document content and structure 5. Reviewing and revising documents 6. Document sharing and collaboration 7. Automating document creation (eg. Mail merge, macros) Unit-III: Spread sheet and Database Management 1. Creating and managing basic spreadsheets 2. Advanced formatting techniques (e.g. conditional formatting, data validation)
September	3. Data analysis and visualization (eg. Charts, pivot tables) 4. Database management and design (e.g. creating tables, relationships, queries)

Gubale
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

K. Ashmare
I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



	<p>5. Importing and exporting data</p> <p>6. Automating tasks (e.g. macros, scripts)</p> <p>Unit -IV: Communication and Collaboration Tools; Security and Privacy in Office Automation</p> <p>1. Email and instant messaging basics</p>
October	<p>2. Advanced email features (e.g. filters, rules, signatures)</p> <p>3. Online meetings and web conferencing basics</p> <p>4. Advanced collaboration tools (e.g. shared calendars, task lists, project management)</p> <p>5. Security threats and risks in office automation</p> <p>6. Data protection and encryption basics</p>
November	<p>7. Best practices for secure communication and collaboration</p> <p>Unit V: Test and Tutorials</p>

(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

I/C Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



Annual teaching planning 2023-2024

BCS

Semester-II

Subject: Data Structures

Month	Topic
November	Unit-I: Data Structures & Algorithm Analysis: Data Structures: Introduction to linear and non-linear data structures. Algorithm Analysis, Growth rates, Estimating the growth rate, Big O notation.
December	Unit-II: Arrays: Need for Arrays, Linear Arrays, representation of linear arrays (row-major order, column-major order), Traversing, insertion, modification, deletion in linear array, merging linear arrays. 2-dimensional arrays introduction, representation of 2-dimensional array, sparse matrices
January	Unit- III: Searching & Sorting: Need for Searching and sorting, Linear search, binary search, bubble sort, selection sort. Insertion sort
February	Unit- IV: Stack & Queue Introduction, Operations on stack, stack implementation using arrays. Applications of Stack (Expression representation and evaluation), Expression notations (prefix, infix, postfix), Conversion of expression (prefix to infix, infix to postfix). Queue: Introduction, Types of queues (Circular Queue, Dequeue), Queue Implementation using arrays, Operations on Queue (Traversing, Insertion. Deletion, and modification), Application of Queue (priority queue),
March	Unit-V: Test & Tutorial

S. Subale
(ADCS)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

J. more
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

A. Singare
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-II

Subject: 8086 Microprocessor

Month	Topic
November	Unit-I: Introduction to Microprocessor and Microcomputer: Microprocessor based personal computer system, Block diagram of microprocessor based computer system. Modern computer memory map, I/O Space The Microprocessor, buses.
December	Computer Data formats, ASCII Unicode, BCD. Unit-II: Microprocessor processor and its architecture: 8086 internal architecture. Real Mode & Protected Mode Memory Addressing. Memory Paging.
January	Pinout and Pin function of 8086 microprocessor. Unit- III: Addressing Modes: Data addressing modes. Program memory addressing modes.
February	Stack memory addressing modes. Unit- IV: MOV revisited: Machine language. The op-code, PUSH, POP, stack initialization. Miscellaneous data transfer instructions: XCHG, LAHF & SAHF. Arithmetic instructions: Addition, subtraction and comparison. Multiplication and division
March	. BCD and ASCII arithmetic. Unit-V: Test and Tutorial

S. Sabale
Co-ordinator
(AOC)

Modern College of Computer Science & I.T.,
Aurangabad.

J. Inare
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

A. Ingare
HOD

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-II

Subject: Operating System II

Month	Topic
November	Unit-I: Memory Management: Address Binding, Logical Vs. Physical address space, Memory Allocation Strategies- Fixed and Variable Partitions, Paging. Segmentation,
December	Virtual Memory. Unit II: Disk Management: Concept of File, File Operation, Directory Structure, File Allocation Methods- Contiguous and Non- Contiguous allocation method, Secondary Storage Structure: Disk fundamental, Disk Scheduling management.
January	FCFS Scheduling, SSTF Scheduling, SCAN Scheduling, Disk Unit III: Device Management: Introduction: Dedicated devices, Shared devices and Virtual devices, Pipes, Buffer, I/O System Components: I/O Devices, I/O Hardware, Interrupts,
February	Application I/O Interface. Unit- IV: Security Policy Mechanism: Protection: Need of Protection in O.S., Goals of Protection, Domain of Protection. Authentication- Password, Encrypted Password and Encryption. Introduction to Android Operating System: Introduction to Android Operating System,
March	Android Development Framework, Android Application Architecture. Unit-V: Test & Tutorials

S. Subale
Co-ordinator
(A.D.C.)

Modern College of Computer Science & I.T.,
Aurangabad.

J. More
IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

A. Singare
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-II

Subject: Advance Programming in C

Month	Topic
November	Unit-I: Functions: Introduction, Types of functions, defining functions, Arguments, Function prototype, actual parameters and formal parameters, calling function, Returning function results.
December	Parameter Passing Mechanism: Call by Value & Call by Reference, Recursion. Unit-II: Structure, Union & Pointers: Structure: Introduction, Declaration and initializing structure, Accessing structure members, Nested structures, Arrays of structure, typedef statement and Enumerated data types. Unions: Declaration, Difference between structure and union. Pointers: Introduction,
January	The Address (&) and Indirection (*) Operators, Declaration and initialization of pointers. Pointer expression and pointer arithmetic, Pointer to pointer. Dynamic Memory Allocation in C using malloc(), calloc(), free() and realloc() Unit- III: Storage classes, Preprocessors & String handling Functions: Storage classes, Scope, visibility and lifetime of variable, block and file scope, auto, extern, static and register storage classes.
February	String handling functions; strcpy(), strcmp(). Strcat(), strlen(),strupr(), striwr(), gets(), puts(), Preprocessor Directives: File inclusion. And conditional compiler directives, Macro substitution, #define, #if, #ifdef, #else, #elif, #endif Unit- IV: File Handling: File handling: Introduction, Opening & closing a file, Input/output operations on files, text and binary files, gete(), pute() function. Fprintf() and fscanf() function. Fread() and fwrite()

(Signature)
Coordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
IQAC Co-ordinator

Modern College of Computer Science & I.T.,

(Signature)
Principal



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



	function.
March	Writing and reading records from text file and binary file, Appending, modifying and deleting a record from file, Random access functions fseek(), rewind(), flushall(). Remove (), rename() functions. Unit-V: Test & Tutorials.

S. Inbale
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Z. Inore

IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad

A. Kingare

Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-II

Subject: The Numerical Methods M-2

Month	Topic
November	Unit-I: Introduction: Mathematical Modeling. Characteristics, Error in Calculation, Significant Error. Absolute, Percentage Relative Error, Chopping off and Rounding off Error, Truncation Error. Propagation Error. Divisibility Theory in the Integer: <ul style="list-style-type: none">• Early Number Theory.
December	<ul style="list-style-type: none">• The division Algorithm.• Common divisor. The Euclidean Algorithm Unit-II: Numerical Solutions of Transcendental Equations: <ul style="list-style-type: none">• Introduction and Matrix Notation of set of Equations.
January	<ul style="list-style-type: none">• Gauss Elimination Method• Gauss Seidal Method• Matrix Inversion Method Unit- III: <ul style="list-style-type: none">• Introduction and Polynomial Interpolation
February	<ul style="list-style-type: none">• Newton-Gregory Forward Difference Interpolation Formula• Newton-Gregory Backward Difference Interpolation Formula Unit- IV: Newton's divided Difference Interpolation
March	Lagrange's Interpolation Unit-V: Test and Tutorial

Co-ordinator

Modern College of Computer Science & I.T.,

Aurangabad

IQAC Co-ordinator

Modern College of Computer Science & I.T.,

Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-II

Subject: Database Management System

Month	Topic
November	Unit-I: Introduction to Databases, Types of Data, Record and Files, File based System. What is database system, application and purpose of database system, Three-Level of data abstraction, instance and schema, data independence, database users, structure of a DBMS, Advantages and disadvantages of DBMS.
December	Unit-II: Entity, attributes and data association relation between entities, The importance of data models, The evolution of data models. Type of Data Model, Advantages and disadvantages of each model.
January	Unit- III: Database Design, Design Phases, Normal Forms INF2NF, 3NF and BCNF. ER-Model entity set. Relationship set, attributes, constraints, ER-Diagram basic structure, mapping cardinality, Roles, weak entity set. Symbols used in ER-notations. ERD Issues, 12 Codd's rules,
February	Unit- IV: SQL: SQI Languages DDL, DML, DCL, TCL, DDL Statements to Create and Manage Tables using Create & Alter, Manipulating Data using Insert, Update & Delete Statement., Retrieving Data Using SQL Select, Restricting and Sorting Data, Using Single Row functions, Conversion Functions and Conditional Expressions,
March	Aggregated Data Using Group Function, Displaying data from Multiple tables, Sub queries, Set Operators Unit-V: Test and Tutorial

Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad

IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad

Principal

Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-II

Subject: English Communication Skill (Soft Skill Development)

Month	Topic
November	Unit-I: Soft Skills: An Introduction Definition and Significance of Soft Skills; Process, Importance and Measurement of Soft Skill Development. Self-Discovery: Discovering the Self, Setting Goals; Beliefs, Values, Attitude, Virtue. Positivity and Motivation:
December	Developing Positive Thinking and Attitude; Driving out Negativity: Meaning and Theories of Motivation, Enhancing Motivation Levels Unit-II: Public Speaking: Skills, Methods, Strategies and Essential tips for effective public speaking. Group Discussion: Importance, Planning, Elements, Skills assessed; Effectively disagreeing.
January	Initiating, Summarizing and Attaining the Objective, Do's and Don'ts of Group Discussion. Non-Verbal Communication: Importance and Elements; Body Language. Unit-III: Role Play: Introduction, Basics of Role Playing, Role Play Script (Teacher-Student Script, Short Drama Script, Any Short Plays and etc.), Interview Skills: Interviewer and Interviewee in-depth perspectives. Before, During and After the Interview. Tips for Success, Do's and Don'ts of Interview,
February	Presentation Skills: Types, Content, Audience Analysis, Essential Tips Before, During and After, Overcoming Nervousness, Planning and Structuring your Presentation, Techniques of Delivery. Unit-IV:

(Signature)
Co-ordinator

(Signature)
IQAC Co-ordinator

(Signature)
Principal

Modern College of Computer Science & I.T., Aurangabad.

Modern College of Computer Science & I.T., Aurangabad.

Modern College of Computer Science & I.T., Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



	<p>Etiquette and Manners: Social and Business. Stress Management: Stress, Sources of Stress, Ways to Cope with Stress, Time Management: Concept, Essentials, Tips. Leadership and Assertiveness Skills: A Good Leader, Leaders and Managers, Leadership Theories: Types of Leaders, Leadership Behaviour, Assertiveness Skills.</p>
March	<p>Decision Making and Negotiation: Introduction to Decision Making, Steps for Decision Making. Decision Making Techniques, Negotiation Fundamentals, Negotiation Styles, Major Negotiation Concepts, Emotional Intelligence: Meaning, History, Features, Components, Intrapersonal and Management Excellence; Strategies to enhance Emotional Intelligence.</p> <p>Unit-V: Test and Tutorial</p>

Shubale
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Zmore
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Kingare
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-IV

Subject: Core Java

Month	Topic
November	Unit-I: Introduction to Java Introduction of Java, History of Java, and How Java is different from C++, JDK Tools, Class File, Java Byte code, JVM identifiers, Data types, Operators. Control Statements, loop, arrays, Inheritance in Java, Multilevel hierarchy, method overriding, Abstract classes, Final classes
December	Unit-II: Package and Exception in Java Defining, Implementing and Applying Packages, Importing Packages, Types of packages, User define package, Exception handling in Java, try, catch, throw, throws and finally, Uncaught Exceptions, Multiple catch, Java's Built-in Exception
January	Unit- III:- Constructor, Wrapper, String and StringBuffer Class in Java Constructors, Various Types of Constructor, Role of Constructors in inheritance, Introduction to Wrapper Classes, String Operations in java, Immutability, Creating and Initializing Strings using methods of String and StringBuffer Class,
February	Unit- IV:- Interface and Threads in Java Interface: Defining Interfaces, Abstract Methods in Interfaces, Implementing Interfaces, Extending Interfaces, Interface References, Default Methods in Interfaces, Static Methods in Interfaces, Constants in Interfaces Thread: Thread life cycle, Creating and implementing thread, multi-threaded programming. Thread priorities, synchronization of thread, resuming and stopping Threads
March	Unit- V:- Test and Tutorials

Unbale
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Smore
IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Kingare
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-IV

Subject: Computer Graphics

Month	Topic
November	Unit-I: Introduction to Computer Graphics: Overview of Computer Graphics, Computer Graphics Application and Software, Description of some graphics devices, Input Devices for Operator Interaction, Active and Passive Graphics Devices, Display Technologies, Storage Tube Graphics Displays, Calligraphic Refresh Graphics Displays, Raster Refresh (Raster-Scan) Graphics Displays, Cathode Ray Tube Basics, Color CRT Raster Scan Basics, Video Basics, The Video Controller, Random-Scan Display Processor, LCD displays.
December	Unit-II: Scan conversion: Scan conversion: Digital Differential Analyzer (DDA) algorithm, Bresenham's Line drawing algorithm. Bresenham's method of Circle drawing, Midpoint Circle Algorithm, Midpoint Ellipse Algorithm, Mid-point criteria, Problems of Aliasing, end-point ordering and clipping lines, Scan Converting Circles,
January	Unit- III:- 2-D Geometrical transforms: Two-Dimensional Transformations: Transformations and Matrices, Transformation Conventions, 20 Transformations, Homogeneous Coordinates and Matrix Representation of 20 Transformations, Translations and Homogeneous Coordinates, Rotation, Reflection, Scaling, Combined Transformation

© mbale
CADEC
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Imene
IQAC Co-ordinator

Modern College of Computer Science & I.T.,

Aurangabad.

Abingare
Principal

Principal

Modern College of Computer Science & I.T.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



February	Unit- IV:- 3-D Three-Dimensional Transformations Three-Dimensional Transformations: Three-Dimensional Scaling, Three-Dimensional Shearing, Three Dimensional Rotation, Three-Dimensional Reflection, Three-Dimensional Translation, Multiple Transformation, Introduction to animation: Design of animation sequence, general computer animation functions, raster animation
March	Unit-V: Test and Tutorials

Subale
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Zmore
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Singare
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



Annual teaching planning 2023-2024

BCS

Semester-IV

Subject: Basics of Android OS

Month	Topic
November	<p>Unit-I: Environment setup: Setup Java Development Kit (JDK), Android SDK, Android Development Tools (ADT), plugin, Create Android Virtual Device.</p> <p>Architecture: Linux Kernel, Libraries, Android Runtime, Application Framework, Applications</p> <p>Application Components: Activities, Services, Broadcast Receivers, Content Providers, Additional Components, Create Android, Application, Anatomy of Android Application, The Main Activity File, The Manifest File, The Strings File. The IR File, The Layout File, Running the Application.</p>
December	<p>Unit-II: Resources Organizing & Accessing: Alternative Resources, Accessing Resources</p> <p>UI Layouts Android Layout Types: Relative Layout Attributes, Grid View Attributes, Sub-Activity, Layout Attributes, View Identification,</p> <p>Android UI Controls: TextView Attributes, EditText Attributes, AutoComplete Text View Attributes, Button Attributes, ImageButton Attributes, CheckBox Attributes, ToggleButton Attributes, RadioButton Attributes, RadioGroup Attributes.</p>
January	<p>Unit- III:-</p> <p>Intents and Filters: Intent Objects, Action, Android Intent Standard Actions, Data, Category, Extras, Flags, Component Name, Types of Intents: Explicit Intents, Implicit Intents.</p> <p>Fragments: Fragment Life Cycle, Creating new Fragments, Fragment States, Adding Fragments to activities.</p>

Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

[Signature]

[Signature]

Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



February	Unit- IV:- Event Handling: Event Listeners, Event Handlers, Event Listeners Registration, Styles and Themes, Defining Styles, Using Styles, Style Inheritance, Android Themes, Default Styles, Themes, Custom Components, Creating a Simple Custom Components
March	Unit-V: Test and Tutorials

Subale
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Imrose
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Abingare

Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-IV

Subject: Computer Networks

Month	Topic
November	Unit-I: Introduction to Computer Networks Overview of computer networks and their applications, Network topologies and architectures, Layered network architecture and the OSI reference model, Network protocols and services
December	Unit-II: Physical Layer and Data Link Layer Overview of the physical layer and its functions, Transmission media and their characteristics, Data encoding and modulation techniques, Error detection and correction, Data link layer and its functions. Framing, flow control, and error control in data link layer protocols,
January	Unit- III:- Network Layer and Transport Layer Overview of the network layer and its functions, Routing algorithms and protocols, IPv4 and IPV6 addressing and routing. Transport layer and its functions, Reliable data transfer and flow control, TCP and UDP protocols.
February	Unit- IV:- Application Layer and Security Overview of the application layer and its functions, Client-server and peer-to-peer architectures, Common application layer protocols (HTTP, FTP, SMTP, DNS), Network security threats and vulnerabilities. Cryptography and encryption techniques, Security protocols (SSL/TLS, IPSec, VPN)
March	Unit-V: Test and Tutorials

B. Subale
Co-ordinator
(PDC)

Modern College of Computer Science & I.T.,
Aurangabad.

J. More
IQAC Co-ordinator

Modern College of Computer Science & I.T.,

A. Singare
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-IV

Subject: Data Analytics

Month	Topic
November	<p>Unit-I: Understanding Data Analytics and Excel, Data import & Pre-processing:</p> <p>1: Introduction to Data Analytics and Excel Basics</p> <ul style="list-style-type: none">• Understanding the importance of data analytics.• Introduction to Excel as a data analytics tool Familiarization with the Excel interface <p>2: Data Types, Formats, and Basic Excel Functions</p> <ul style="list-style-type: none">• Learning about data types and formats in Excel.• Introduction to Excel functions and formulas• Practice with basic functions and formulas <p>3: Data Import-Techniques</p> <ul style="list-style-type: none">• Importing data from various sources• Introduction to Excel's data import tools• Hands-on practice with importing data <p>4: Data Cleaning and Transformation</p> <ul style="list-style-type: none">• Understanding the need for data cleaning• Techniques for data transformation and normalization• Hands-on practice with data cleaning and transformation

(S) whole (ADCS)

Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Zmore

WAC Co-ordinator

Asingare

Principal



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



5: Handling Missing Values in Excel

- Identifying and understanding missing values
- Methods for handling missing values in Excel
- Hands-on practice with missing value management

6: Data Formatting in Excel

- Introduction to data formatting in Excel
- Customizing cell formats for better data presentation
- Hands-on practice with data formatting

7: Conditional Formatting in Excel

- Understanding conditional formatting
- Applying conditional formatting rules to improve data visualization
- Hands-on practice with conditional formatting

8: Advanced Excel Functions and Formulas

- Introduction to advanced Excel functions and formulas
- Hands-on practice with advanced functions and formulas

December

9: Data Analytics Techniques in Excel

- Understanding various data analytics techniques
- Applying Excel functions and tools for data analysis
- Hands-on practice with data analytics techniques in Excel

10: Unit 1: Project and Review

Gubale
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Imore
IQAC Co-ordinator

Asingare
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



- Applying the learned concepts to a real-world data analytics project
- Review of key concepts and techniques
- Presentation and discussion of final projects

Unit-II: Descriptive Statistics and Data Visualization, Data Analysis Techniques:

1: Basic Statistical Functions

- Introduction to descriptive statistics
- Using basic statistical functions in Excel COUNT, SUM, AVERAGE, MEDIAN, MODE, MIN, MAX, STDEV
- Hands-on practice with basic statistical functions

2: Frequency Distributions and Histograms

- Understanding frequency distributions and their importance
- Creating frequency distributions and histograms in Excel
- Hands-on practice with frequency distributions and histograms

3: Pivot Tables and Pivot Charts

- Introduction to PivotTables and Pivot Charts
- Creating and customizing PivotTables and Pivot Charts for data summarization
- Hands-on practice with PivotTables and PivotCharts

4: Basic Excel Charts for Data Visualization

- Introduction to basic Excel chart types: column, bar, line, pie, and area charts
- Creating and customizing basic Excel charts

Subale
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

J. More
IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Singare
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



	<ul style="list-style-type: none"> Hands-on practice with basic chart types <p>5: Advanced Chart Types and Customization</p> <ul style="list-style-type: none"> Exploring advanced Excel chart types: scatter, bubble, radar, waterfall, and treemap charts Customizing chart elements and formatting for effective data visualization Hands-on practice with advanced chart types <p>6: Sorting and Filtering Data</p> <ul style="list-style-type: none"> Introduction to sorting and filtering data in Excel. Using sorting and filtering tools for data organization and analysis Hands-on practice with sorting and filtering
January	<p>7: Data Validation and Data Auditing</p> <ul style="list-style-type: none"> Understanding data validation and its importance Implementing data validation rules in Excel Introduction no data auditing tools and techniques Hands-on practice with data validation and auditing <p>8 : Advanced Excel Functions for Data Analysis</p> <ul style="list-style-type: none"> Introduction to advanced Excel functions: VLOOKUPO, HLOOKUPO, INDEXO, MATCHO, COUNTIFO , SUMIFO Hands-on practice with advanced functions for data analysis Hands-on practice with advanced functions for data analysis <p>1. What If Analysis: Goal Seek</p> <ul style="list-style-type: none"> Understanding Goal Seek and its applications

(Signature)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)

Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



- Using Goal Seek to find input values that achieve a specific goal
- Hands-on practice with Goal Seek

10: What-If Analysis: Data Tables and Scenario Manager

- Introduction to Data Tables and Scenario Manager for what if analysis
- Creating one-variable and two-variable data tables.
- Using Scenario Manager to analyze different scenarios and their impact
- Hands-on practice with Data Tables and Scenario Manager

11: Project and Review

- Applying the learned concepts to a real-world data analytics project
- Review of key concepts and techniques
- Presentation and discussion of final projects

Unit- III:- Working with Time Series Data & Regression Analysis:

1: Introduction to Time Series Data

- Understanding time series data and its importance
- Working with time series data in Excel: date and time functions
- Hands-on practice with time series data manipulation

2: Trend Analysis and Forecasting

- Identifying trends and patterns in time series data Introduction to time series forecasting
- Forecasting techniques in Excel: linear and polynomial trendlines
- Hands-on practice with trend analysis and forecasting

3. Smoothing Techniques: Moving Averages

- Introduction to moving averages as a smoothing technique
- Calculating simple, weighted, and exponential moving averages in Excel
- Hands on practice with moving averages for trend analysis

4: Smoothing Techniques: Exponential Smoothing

- Understanding exponential smoothing and its applications Implementing exponential smoothing in Excel using the "Forecast Sheet" feature

Q. Ubale
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Z. J. J. J.

IQAC Co-ordinator

Xingene
Principal

Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



	<ul style="list-style-type: none">• Hands-on practice with exponential smoothing for forecasting <p>5: Simple Linear Regression</p> <ul style="list-style-type: none">• Introduction to simple linear regression analysis• Using Excel's Data Analysis ToolPak to perform single linear regression Interpreting regression output and understanding coefficients estimates• Hands-on practice with simple linear regression <p>6: Multiple Linear Regression</p> <ul style="list-style-type: none">• Introduction to multiple linear regression analysis• Performing multiple linear regression using Excel's Data Analysis ToolPak• Interpreting multiple regression output and understanding coefficient estimates• Hands-on practice with multiple linear regression
February	<p>7. Model Diagnostics and Validation</p> <ul style="list-style-type: none">• Assessing the quality of regression models: R-squared, adjusted R-squared, and standard error• Testing for assumptions: normality, linearity, multicollinearity, and homoscedasticity• Cross-validation and model selection techniques• Hands-on practice with model diagnostics and validation <p>8: Nonlinear Regression Models</p> <ul style="list-style-type: none">• Introduction to nonlinear regression models• Implementing nonlinear regression models in Eixcel using the Solver add-in• Hands-on-practice with non-linear regression <p>9. Time Series Decomposition.</p> <ul style="list-style-type: none">• Understanding the components of time series data: trend, seasonality, and noise• Decomposing time series data in Excel using moving averages and seasonal indices <p>Hands-on practice with time series decomposition</p> <p>10: Advanced Time Series Forecasting Techniques</p> <p>Introduction to advanced time series Forecasting techniques: autoregressive (AR) and</p>

Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

IQAC Co-ordinator
Modern College of Computer Science & Information Technology, Aurangabad

Principal
Modern College of Computer Science & Information Technology, Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



moving average (MA) models

- Implementing advanced forecasting techniques in Excel using custom formulas and add-ins
- Hands-on practice with advanced time series forecasting techniques

11: Project and Review

- Applying the learned concepts to a real-world data analytics project
- Review of key concepts and techniques
- Presentation and discussion of final projects

Unit- IV:- Hypothesis Testing, Confidence Intervals And Excel Add-ins for Data Analytics:

1: Hypothesis Testing Basics Introduction to hypothesis testing and its importance

- Understanding null and alternative hypotheses
- Types of hypothesis tests: one-tailed and two-tailed tests
- Hands-on practice with hypothesis testing in Excel

2: Confidence Intervals

- Understanding confidence intervals and their interpretation
- Calculating confidence intervals for means and proportions in Excel
- Hands-on practice with constructing confidence intervals

3. T-Tests and Z-Tests

- Introduction to t-tests and z-tests
- Performing one-sample, two-sample, and paired t-tests in Excel using the Data Analysis ToolPak
- Conducting z-tests in Excel using custom formulas
- Hands-on practice with t-tests and z-tests

4: Chi-Square Tests and ANOVA

- Introduction to chi-square tests for independence and goodness-of-fit
- Performing chi-square tests in Excel using the Data Analysis ToolPak or custom formulas
- Introduction to Analysis of Variance (ANOVA) for comparing multiple means

Subale
Coordinator

Modern College of Computer Science & I.T.,
Aurangabad

Zmore

Angare
Principal

Modern College of Computer Science & I.T.



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



- Conducting one-way and two-way ANOVA in Excel using the Data Analysis ToolPak
- Hands-on practice with chi-square tests and ANOVA

5: Excel Analysis ToolPak

- Introduction to the Excel Analysis ToolPak and its features
- Using the ToolPak for statistical analysis: t-tests, ANOVA, correlation, and regression
- Hands-on practice with the Excel Analysis ToolPak

6: Power Query for Data Transformation

- Introduction to Power Query and its applications
- Importing, cleaning, and transforming data using Power Query
- Merging and appending queries to combine data from multiple sources.
- Hands-on practice with Power Query for data transformation

March

7: Power Pivot for Data Modeling

- Introduction to Power Pivot and data modeling in Excel
- Creating and managing data models using Power Pivot
- Working with calculated columns and measures using DAX (Data Analysis Expressions)
- Hands-on practice with Power Pivot for data modeling

8: Power Map for Geospatial Data Visualization

- Introduction to Power Map (3D Maps) for geospatial data visualization:
- Creating interactive, 3D geospatial visualizations using Power Map
- Customizing map layers, chart types, and visual elements
- Hands-on practice with Power Map for geospatial data visualization.

9: Advanced Hypothesis Testing Techniques

- Introduction to advanced hypothesis testing techniques: F-tests, Mann-Whitney U test, and Kruskal- Wallis test
- Implementing advanced hypothesis tests in Excel using custom formulas or third-party add-ins
- Hands-on practice with advanced hypothesis testing techniques

(Signature)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)

IOAC Co-ordinator

Modern College of Computer Science & I.T.

(Signature)
Principal

Modern College of Computer Science & I.T.,



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



10. Data Analytics Project and Review

- Applying the learned concepts to a real-world data analytics project involving hypothesis testing, Confidence intervals, and Excel add-ins
- Review of key concepts and techniques covered in the chapters
- Presentation and discussion of final projects

Unit-V: Test and Tutorials

Subale
(ADC)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Imore

IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Singare

Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-IV

Subject: Open Source Web Application

Month	Topic
November	Unit-I: Unit-I: Introduction to Web Development with MySQL and Apache Overview of web development and its components (HTML, CSS, JavaScript), Introduction to MySQL and Apache, Installing MySQL and Apache on a local machine,
December	Hasiz security guidelines for MySQL and Apache Unit-II: PHP Basics Functions in PHP meaning, calling, defining, and testing for existence, Arrays in PHP: creating and using arrays, and array related functions, Objects in PHP creating an object and object inheritance, Working with strings, dates, and time: formatting strings,
January	using date/time functions, and other related functions. Unit- III:- Advanced PHP Topics PHP with AJAX: Introducing Ajax- Ajax Basics-PHP and Ajax Database Database Driven Ajax, PHP with SEO: Basic SEO-Provocative SE Friendly URLs-Duplicate Content- CMS: Word press Creating an SE- Friendly Blog
February	Unit- IV:- Web Forms, Cookies, and File Handling Creating a simple input form and accessing form input with user-defined arrays, Working with HTML, and PIIP code on a single page, using hidden files to save state, and redirecting the user, Introduction to cookies, setting and deleting cookies with PHP, and an overview of session functions,
March	Working with files and directories: including files with include (), creating, deleting, opening, and validating files. Unit-V:- Test and Tutorials

Subodh
Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad.

Imare
IQAC Co-ordinator
Modern College of Computer Science & I.T.,
Aurangabad

Bingare
Principal
Modern College of Computer Science & I.T.,
Aurangabad.



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-IV

Subject: Basic Python Programming

Month	Topic
November	Unit-I: Introduction to Python and Basics of Programming 1. Introduction to Programming: Why learn Programming? 2. What is Python and Why Python? 3. Installing Python and setting up the development environment. 4. Understanding Python syntax and basic data types. . 5. Variables and Operators in Python. 6. Conditional Statements: If, Else, Elif, 7. Looping Statements: While loop and For loop.
December	8. Python Data Structures: Lists, Tuples. 9. Python Data Structures: Sets, Dictionaries. 10. Practice and Review Session. Unit-II: Python Functions, File I/O, and Exceptions 1. Introduction to Functions in Python, 2. Defining Functions and Calling them. 3. Function Parameters, Return Values, and Scope. 4. Introduction to Python Modules and Packages. 5. File Operations: Opening, reading, writing, and closing files.
January	6. Introduction to Exceptions and Error Handling 7. Try. Except, Else, Finally blocks. 7. Raising and catching exceptions. 8. Introduction to the 'with' statement for simplified File IVO and exception handling.

(Signature)
Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

(Signature)
IQAC Co-ordinator

(Signature)
Principal



PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)

Reg. No. F-11895/"A'bad"



	<p>9. Practice and Review Session.</p> <p>Unit- III: Object-Oriented Programming in Python</p> <ol style="list-style-type: none">1. Understanding the concept of Object-Oriented Programming.2. Classes and Objects in Python.3. The- init- method, class variables, and instance variables.4. Inheritance in Python.5. Overriding and Overloading methods.
February	<ol style="list-style-type: none">6. Polymorphism in Python.7. Encapsulation: Private methods and name mangling.8. Abstract Classes and Interfaces.9. Exception Handling in OOP.10. Practice and Review Session. <p>Unit- IV: Libraries and Advanced Topics</p> <ol style="list-style-type: none">1. Introduction to Python Libraries.2. Introduction to NumPy and its applications.3. Introduction to Pandas for data manipulation.4. Introduction to Matplotlib for data visualization.5. Understanding List Comprehensions.
March	<ol style="list-style-type: none">6. Introduction to Lambda functions and Map, Reduce, Filter functions.7. Generators, Decorators, and Context Managers in Python.8. Overview of Regular Expressions in Python.9. Introduction to Python's Standard Library.10. Practice and Review Session. <p>Unit V: Test and Tutorials</p>

Subali
Co-ordinator
(ADC)

Modern College of Computer Science & I.T.,
Aurangabad.

Jamare

ICAC Co-ordinator
Computer Science & I.T.,
Aurangabad

Bingare

IIC Principal
Modern College of Computer Science & I.T.,
Aurangabad



Reg. No. F-11895/"A'bad"

PARMITA EDUCATION SOCIETY

MODERN COLLEGE

OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

(Affiliated to Dr. B.A.M.U. University, Chh. Sambhajinagar)



Annual teaching planning 2023-2024

BCS

Semester-IV

Subject: Emotional Intelligence

Month	Topic
November	Unit-I: Introduction to Emotional Intelligence 1. What is Emotional Intelligence (EI)? 2. Why is EI important
December	3. Understanding the four components of EI: self-awareness, self-management, social awareness, and Relationship management. Unit-II: Developing Self-Awareness and Self-Management Skills 1. Assessing your EI using the Emotional Intelligence Appraisal 2. Strategies for improving self-awareness, including mindfulness and journaling
January	4. Techniques for improving self-management, including stress management, emotional regulation, and impulse control. Unit- III:- Developing Social Awareness and Relationship Management Skills 1. Understanding social awareness and empathy 2. Developing relationship management skills, including communication, conflict resolution, and leadership
February	1 Building and maintaining positive relationships Unit- IV:- Applying EI in Personal and Professional Settings 1. Applying EI in personal relationships, including family and friendships 2. Using EI in the workplace, including teamwork, leadership, and career development.
March	3. Developing an action plan for improving EI skills and setting goals for personal and professional growth. Unit-V: Test and Tutorials

Co-ordinator

Modern College of Computer Science & I.T.
Aurangabad.

IQAC Co-ordinator

Modern College of Computer Science & I.T.,
Aurangabad.

Principal

Modern College of Computer Science & I.T.
Aurangabad.