VIVEKANAND COLLEGE, KOLHAPUR(AUTONOMOUS)
STATEMENT OF SYLLABUS COVERED
Year- 2021-22   Term- I[st]

Name of teacher- Mr. V. B. Pujari

Department- B.C.A.

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Remark
B.C.A.- I Sem-I	Programming in C Part-I	Problem Solving Methods:Problem definition, **Steps in Problem Solving (Define Problem, Analyze Problem, Explore Solution).** ALGORITHM: Definition, notations, characteristics of algorithm, examples on algorithm. FLOWCHARTS: Definition, features of flowcharts, symbols, examples, coding, running, debugging-types of errors (syntax, logical, runtime errors.)	Problem Solving Methods:Problem definition, **Steps in Problem Solving (Define Problem, Analyze Problem, Explore Solution).** ALGORITHM: Definition, notations, characteristics of algorithm, examples on algorithm. FLOWCHARTS: Definition, features of flowcharts, symbols, examples, coding, running, debugging-types of errors (syntax, logical, runtime errors.)	......	
		Introduction to c:History, features of c language, Character set, Identifiers: variables, constants, symbolic constants, keywords. Data types, Operators: Arithmetic, relational, logical, assignment, bitwise, increment/decrement and special operators, **Concept of operator Precedence & Associatively. Comments-types of comments, Use of Comments, Header Files(conio,stdio,string,math).** Structure of C Program, Input and Output Functions.	Introduction to c:History, features of c language, Character set, Identifiers: variables, constants, symbolic constants, keywords. Data types, Operators: Arithmetic, relational, logical, assignment, bitwise, increment/decrement and special operators, **Concept of operator Precedence & Associatively. Comments-types of comments, Use of Comments, Header Files(conio,stdio,string,math).** Structure of C Program, Input and Output Functions.	......	
		Control Structures:Conditional statements: if, If-else nested if-else, switch statement. Loops: while, for, do...While loop, Unconditional statements: Break, continue, exit, goto statements.	Control Structures:Conditional statements: if, If-else nested if-else, switch statement. Loops: while, for, do...While loop, Unconditional statements: Break, continue, exit, goto statements.	......	
		Arrays and Strings:Arrays: Meaning and definition, Declaration, Initialization and types of arrays (single and multidimensional arrays). Strings: Meaning and definition, Declaration, Initialization String functions strlen(), strrev(), strlwr(), strupr(), strcat(), strcmp() , strcpy(). Handling of character array.	Arrays and Strings:Arrays: Meaning and definition, Declaration, Initialization and types of arrays (single and multidimensional arrays). Strings: Meaning and definition, Declaration, Initialization String functions strlen(), strrev(), strlwr(), strupr(), strcat(), strcmp() , strcpy(). Handling of character array.	......	
B.C.A.-IISem-III	Object Oriented Programming with	Principles of Objective Oriented Programming:History of OOP, Introduction to Object Oriented Programming, Basic Concepts of	Principles of Objective Oriented Programming: History of OOP, Introduction to Object Oriented Programming, Basic Concepts of Object Oriented	......	

	C++	Object Oriented Programming, Benefits of Object Oriented Programming, Object Oriented Languages, Difference between C and C++. Beginning with C++ Tokens, Keywords, Identifiers and Constants, Data Types, Type Compatibility, Variables, Operators in C++, Operator Precedence, Control Structures (Conditional, Unconditional and Looping).	Programming, Benefit of Object Oriented Programming, Object Oriented Languages, Difference between C and C++. Beginning with C++ Tokens, Keywords, Identifiers and Constants, Data Types, Type Compatibility, Variables, Operators in C++, Operator Precedence, Control Structures (Conditional, Unconditional and Looping).		, '
		Functions in C++, Classes & Objects: Concept of Function, main() Function, Inline Functions, Function Overloading, Specifying a Class, Data members and Member Functions, Access Specifiers, Friend Function, Static data Member, Object declaration and Initialization, Arrays of Objects **Constructors & Destructors, Inheritance** Constructors-Definition, Use of Constructors, Types of Constructors (Default, Parameterized, Copy, Dynamic), Destructors-Definition, Use, Inheritance-Definition, Types of Inheritance (Single, Multiple, Multilevel, Hierarchical, Hybrid)	**Functions in C++, Classes & Objects:** Concept of Function, main() Function, Inline Functions, Function Overloading, Specifying a Class, Data members and Member Functions, Access Specifiers, Friend Function, Static data Member, Object declaration and Initialization, Arrays of Objects **Constructors & Destructors, Inheritance** Constructors-Definition, Use of Constructors, Types of Constructors (Default, Parameterized, Copy, Dynamic), Destructors-Definition, Use, Inheritance-Definition, Types of Inheritance (Single, Multiple, Multilevel, Hierarchical, Hybrid)	......	
		Pointers, Virtual Functions &Polymorphism Pointer, Pointer to Object, this pointer, Pointer to Derived Classes, Polymorphism: Meaning, compile Time and Run time polymorphism, Rules for Operator Overloading, Operator Overloading (Unary & Binary)-with member function and friend function.	**Pointers, Virtual Functions &Polymorphism** Pointer, Pointer to Object, this pointer, Pointer to Derived Classes, Polymorphism: Meaning, compile Time and Run time polymorphism, Rules for Operator Overloading, Operator Overloading (Unary & Binary)-with member function and friend function.	......	
		Working with Files: File-Definition, Use, Classes for File Stream Operations, Opening and Closing a File, File Opening Modes, File Pointers, Manipulation of File Pointer(using-seekg,seekp,tellg,tellp), Input Output Operations-get ( ) Put ( ), read ( ) Write ( ).	**Working with Files** File-Definition, Use, Classes for File Stream Operations, Opening and Closing a File, File Opening Modes, File Pointers, Manipulation of File Pointer(using-seekg,seekp,tellg,tellp), Input Output Operations- get ( ) Put ( ), read ( ) Write ( ).	......	
B.C.A.-IIISem-V	**E-Commerce**	**Introduction to E-Commerce:**Defining Commerce; Main Activities of Electronic	**Introduction to E-Commerce:**Defining Commerce; Main Activities of Electronic	......	

		Commerce; Benefits of E-Commerce; Broad Goals of Electronic Commerce; Main Components of E-Commerce; Functions of Electronic Commerce – Communication, Process Management, Service Management, Transaction Capabilities; Limitations, Challenges and opportunities, Process of E-Commerce; Types of E-Commerce; Role of Internet and Web in E-Commerce; Technologies Used; E-Commerce Systems; Pre-requisites of E-Commerce; Scope of E-Commerce; E-Business Models. EDI- Concept, Components, working mechanism of EDI, Advantages and disadvantages of EDI. Difference between E-Business and E-Commerce, Introduction to M-Commerce.	Commerce; Benefits of E-Commerce; Broad Goals of Electronic Commerce; Main Components of E-Commerce; Functions of Electronic Commerce – Communication, Process Management, Service Management, Transaction Capabilities; Limitations, Challenges and opportunities, Process of E-Commerce; Types of E-Commerce; Role of Internet and Web in E-Commerce; Technologies Used; E-Commerce Systems; Pre-requisites of E-Commerce; Scope of E-Commerce; E-Business Models. EDI- Concept, Components, working mechanism of EDI, Advantages and disadvantages of EDI. Difference between E-Business and E-Commerce, Introduction to M-Commerce.		
		Electronic payment System Concept of e-payment, Difference between traditional and electronics payment system, **UPI, NCPI**, Digital cash, Credit and Debit card system, Smart Card, **E Wallet**, Prepaid, post paid and instant payment system, Electronic funds transfer, Concept of e-banking.	**Electronic payment System** Concept of e-payment, Difference between traditional and electronics payment system, **UPI, NCPI**, Digital cash, Credit and Debit card system, Smart Card, **E Wallet**, Prepaid, post paid and instant payment system, Electronic funds transfer, Concept of e-banking.	......	
		E-Security: Concept of E-security, Security threats-concept and types, Malicious code, Phishing and identity theft, Hacking and cyber vandalism, Credit card fraud/Theft, Spoofing, Denial of service (DoS), Firewall and proxy server.	**E-Security:** Concept of E-security, Security threats-concept and types, Malicious code, Phishing and identity theft, Hacking and cyber vandalism, Credit card fraud/Theft, Spoofing, Denial of service (DoS), Firewall and proxy server.	......	
		Security Solutions Concept of encryption and decryption, Symmetric and asymmetric key encryption, Cipher text, Digital Envelopes, Digital certificates, Security socket layer (SSL), Limitations of encryption solutions.	**Security Solutions** Concept of encryption and decryption, Symmetric and asymmetric key encryption, Cipher text, Digital Envelopes, Digital certificates, Security socket layer (SSL), Limitations of encryption solutions.	......	

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VIVEKANAND COLLEGE, KOLHAPUR(AUTONOMOUS)
STATEMENT OF SYLLABUS COVERED
Year- 2021-22   Term- IInd

Name of teacher- Mr. V. B. Pujari   Department- BCA

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Rema rk
BCA-I Sem-II	Programming in C Part II	**User defined functions:** Need, multi functioned program, form of a c function, return value and their type, calling a function, category of a functions, **Actual and Formal arguments**, functions with array, Storage classes: auto, external, static and register. **Command line argument. Preprocessors-Introduction, types of Preprocessor.**	**User defined functions:** Need, multi functioned program, form of a c function, return value and their type, calling a function, category of a functions, **Actual and Formal arguments**, functions with array, Storage classes: auto, external, static and register. **Command line argument. Preprocessors-Introduction, types of Preprocessor.**	......	
		Pointers:Understanding pointers, accessing address of variable, declaration and initializing pointers, pointer expression, pointer to array and functions, function call by value and by reference. **Dynamic memory allocation-malloc(),calloc(),realloc().**	Pointers:Understanding pointers, accessing address of variable, declaration and initializing pointers, pointer expression, pointer to array and functions, function call by value and by reference. **Dynamic memory allocation-malloc(),calloc(),realloc().**	......	
		Structures and Unions:Defining and processing a structure, array of structure, array within structure, structure within structure, Defining and processing a Unions. **Difference between structure and union.**	Structures and Unions:Defining and processing a structure, array of structure, array within structure, structure within structure, Defining and processing a Unions. **Difference between structure and union.**	......	
		File Handling:Defining and opening a file, File opening mode- open, modify, write, Closing a file, Functions:fopen(), fclose(), fscanf(), Input/Output Operations on file: getc(), putc(), getw(), putw(), fprintf(), fscanf(), ftell(), fseek(), rewind().	File Handling:Defining and opening a file, File opening mode- open, modify, write, Closing a file, Functions:fopen(), fclose(), fscanf(), Input/Output Operations on file: getc(), putc(), getw(), putw(), fprintf(), fscanf(), ftell(), fseek(), rewind().	......	
B.C.A.-IISem-VI	Organizational Behavior	**Introduction to Organizational Behavior:** Definition, Importance, Scope, Fundamental Concepts of OB, Disciplines continuing to O.B. Evolution of O.B	**Introduction to Organizational Behavior:** Definition, Importance, Scope, Fundamental Concepts of OB, Disciplines continuing to O.B. Evolution of O.B	......	
		Attitude, Values and Motivation: Meaning of attitude, perception, Effects of employee attitudes, components of Attitude, Organizational Values, Importance of Motivation, Motivation process, Motivation model. Maslow's Need Hierarchy Theory	**Attitude, Values and Motivation:** Meaning of attitude, perception, Effects of employee attitudes, components of Attitude, Organizational Values, Importance of Motivation, Motivation process, Motivation model. Maslow's Need Hierarchy Theory	......	
		Organizational culture, Quality Work Life and	**Organizational culture, Quality Work Life and**	......	

		Stress Management : A) Organization Culture & Stress Management: B) Stress Management C) Quality Work Life	**Stress Management :** A) Organization Culture & Stress Management: B) Stress Management C) Quality Work Life		
		Group Behavior ,Conflict and Stress: Nature of Group. Types of Groups, Team Building and Effective team works, Stages of group Formation, Concept of conflict- Conflicts & Stress – Concept, why and how & Management	**Group Behavior ,Conflict and Stress:** Nature of Group. Types of Groups, Team Building and Effective team works, Stages of group Formation, Concept of conflict- Conflicts & Stress – Concept, why and how & Management	......	
B.C.A.-IIISem-VI	Linux Operating System	**Introduction** 12 1.1 Operating system 1.2 Types of operating system 1.3 Functions of operating system 1.4 History and development of Linux 1.5 Features of Linux 1.6 Login , logout procedure, Concept of shell, kernel, Kernel-shell relationship	**Introduction** 12 1.1 Operating system 1.2 Types of operating system 1.3 Functions of operating system 1.4 History and development of Linux 1.5 Features of Linux 1.6 Login , logout procedure, Concept of shell, kernel, Kernel-shell relationship	......	
		Handling files and directory's 12 2.1 Concept of file, types, file system tree 2.2 Different GPU (clear ,cal , date, wc, who) 2.3 file handling- ls ,cat ,cp, mv , rm commands , listing file names, usingmeta characters (* , ? ,[ ]). 2.4 Concept of directory , home directory , directory handling commands- cd ,mkdir, rmdir,pwd. 2.5 Basic file attributes, change file/directory, chmod command 2.6 Filters-cut, paste, sort, unique, head, tail, grep commands. 2.7 Command linking using pipe (|) operator, command substitution.	**Handling files and directory's** 12 2.1 Concept of file, types, file system tree 2.2 Different GPU (clear ,cal , date, wc, who) 2.3 file handling- ls ,cat ,cp, mv , rm commands , listing file names, using meta characters (* , ? ,[ ]). 2.4 Concept of directory , home directory , directory handling commands- cd , mkdir, rmdir,pwd. 2.5 Basic file attributes, change file/directory, chmod command 2.6 Filters-cut, paste, sort, unique, head, tail, grep commands. 2.7 Command linking using pipe (|) operator, command substitution.	......	
		VI editor 12 3.1 Vi Editor, use of VI , features of VI 3.3 Different modes and working with VI editor 3.4 Command mode -cursor movements(k,j,h,l), delete(character, line, word), Screen up , down, use of repeat factor , joining lines (J), searching for	**VI editor** 12 3.1 Vi Editor, use of VI , features of VI 3.3 Different modes and working with VI editor 3.4 Command mode -cursor movements(k,j,h,l), delete(character, line, word), Screen up , down, use of repeat factor , joining lines (J), searching for	......	

		pattern (/ and ?) 3.5 Input mode- switching with (I,o,r,s,a,I,O,R,S,A) 3.6 ex mode – saving (w, x, q)	pattern (/ and ?) 3.5 Input mode- switching with (I,o,r,s,a,I,O,R,S,A) 3.6 ex mode – saving (w, x, q)		
		Simple Shell programming 12 4.1 Concept of Shell Script, running a shell script 4.2 Statements – read , echo , test , if, case , exit. 4.3 Loops- while, until, for 4.4 Command line arguments 4.5 Exit status of a command	**Simple Shell programming** 12 4.1 Concept of Shell Script, running a shell script 4.2 Statements – read , echo , test , if, case , exit. 4.3 Loops- while, until, for 4.4 Command line arguments 4.5 Exit status of a command	......	

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VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)
STATEMENT OF SYLLABUS COVERED

Year- 2021-22

Name of teacher- Ms. Vaishali Durgaram Patil

Term- Ist

Department- BCA

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Remark
B.C.A I Sem-I	Fiancial Accounting with Tally	**Introduction to Financial Accounting** Meaning and Definition of Financial Accounting, Objectives of Accounting, Various users of Accounting Information, Accounting Terminologies, Accounting Concepts and Conventions, Double entry system, Types of Accounts and Golden rules of accounting. Books of Prime Entry, Subsidiary Books and Ledger Creation.	**Introduction to Financial Accounting** Meaning and Definition of Financial Accounting, Objectives of Accounting, Various users of Accounting Information, Accounting Terminologies, Accounting Concepts and Conventions, Double entry system, Types of Accounts and Golden rules of accounting. Books of Prime Entry, Subsidiary Books and Ledger Creation.	......	
		Preparation of Financial Statements Trial Balance – Meaning, Definition, purpose and features, preparation of Trial Balance. Final Accounts – Introduction, Objectives of Final Accounts, Adjustments before Preparing Final Accounts, Preparation of Trading Account, Profit and Loss Account, Balance Sheet.	**Preparation of Financial Statements** Trial Balance – Meaning, Definition, purpose and features, preparation of Trial Balance. Final Accounts – Introduction, Objectives of Final Accounts, Adjustments before Preparing Final Accounts, Preparation of Trading Account, Profit and Loss Account, Balance Sheet.	......	
		Introduction to Tally Tally History and Journey, Difference between manual accounting v/s computerized accounting, Tally features, Tally Fundamentals - Company Data – Gateway of Tally, Creating and Maintaining a Company, Loading a Company, F11: Company Features, F12: Configuration. Voucher Entry, Inventory - Stock Groups, Stock Categories, Stock Items, Units of Measurement, Bills of Materials, Batches & Expiry Dates.	**Introduction to Tally** Tally History and Journey, Difference between manual accounting v/s computerized accounting, Tally features, Tally Fundamentals - Company Data – Gateway of Tally, Creating and Maintaining a Company, Loading a Company, F11: Company Features, F12: Configuration. Voucher Entry, Inventory - Stock Groups, Stock Categories, Stock Items, Units of Measurement, Bills of Materials, Batches & Expiry Dates.	......	
		Report: Profit and Loss A/C, Balance Sheet, Interest Calculations, Statutory Master-VAT, Inventory report, Day Book, Use of Reports in Business	**Report:** Profit and Loss A/C, Balance Sheet, Interest Calculations, Statutory Master-VAT, Inventory report, Day Book, Use of Reports in Business	......	

B.C.A II Sem-III	Management Accounting	Introduction to Management Accounting:- Meaning and Nature of Management Accounting, Role of Management, Accountant in Planning, Controlling and Decision Making, Difference between Financial Accounting and Management Accounting, Tools and Techniques of Management Accounting	Introduction to Management Accounting:- Meaning and Nature of Management Accounting, Role of Management, Accountant in Planning, Controlling and Decision Making, Difference between Financial Accounting and Management Accounting, Tools and Techniques of Management Accounting	......	
		Financial Statement Analysis:- Importance of Financial Statement Analysis, Techniques of Financial Statement Analysis- Ratio Analysis, Classification of Ratios- Profitability Ratio, Turnover Ratios, Liquidity Ratios, Solvency Ratios.	**Financial Statement Analysis:-** Importance of Financial Statement Analysis, Techniques of Financial Statement Analysis- Ratio Analysis, Classification of Ratios- Profitability Ratio, Turnover Ratios, Liquidity Ratios, Solvency Ratios.	......	
		Cost-Volume- Profit(CVP) Analysis and Decision Making- Break Even Analysis, Cost-Volume- Profit Analysis, Decision Making- Make or Buy Decisions, Shut Down or Continue Decisions, Alternative Course of Action etc.	**Cost-Volume- Profit(CVP)** Analysis and Decision Making- Break Even Analysis, Cost-Volume- Profit Analysis, Decision Making- Make or Buy Decisions, Shut Down or Continue Decisions, Alternative Course of Action etc.	......	
		Budgetary Control:- Meaning of Budget and Budgetary Control, Objectives, Advantages, Limitations of Budgetary Control, Types of Budget- Production, Sales, Cash, Master Budget, Capital Expenditure,	**Budgetary Control:-** Meaning of Budget and Budgetary Control, Objectives, Advantages, Limitations of Budgetary Control, Types of Budget- Production, Sales, Cash, Master Budget, Capital Expenditu Input AnOutput	......	
BCA II Sem-III	HRM	**Introduction to HRM :** Introduction , Concept, Definition, HRD, Functions of HRM , Organization of HRD Role HRM , Qualities of HR Manager, Limitations & challenges of HRM	**Introduction to HRM :** Introduction , Concept, Definition, HRD, Functions of HRM , Organization of HRD Role HRM , Qualities of HR Manager, Limitations & challenges of HRM	......	
		Human resource Planning & Development : Meaning and need of HRP , Process of HRP in I.T. Industry, Factors affecting HRP, Job Analysis	**Human resource Planning & Development :** Meaning and need of HRP , Process of HRP in I.T. Industry, Factors affecting HRP, Job Analysis	......	
		Virtual Organization : Virtual Organization: meaning, type., Difference	**Virtual Organization :** Virtual Organization: meaning, type., Difference	......	

			between Traditional and Virtual Organization. ,features of Virtual Organization, HRM in Virtual Organization,	between Traditional and Virtual Organization. ,features of Virtual Organization, HRM in Virtual Organization,		
			Employee Separation Employee Separation practices in I.T. industry, Voluntary Retirement Schemes , Resignation-Discharge-Dismissal-Suspension-Layoff, Exit interview	**Employee Separation** Employee Separation practices in I.T. industry, Voluntary Retirement Schemes , Resignation-Discharge-Dismissal-Suspension-Layoff, Exit interview		
B.C.A III Sem-V	Cost Accounting		**Introduction to cost Accounting:** Concept of cost, costing, Cost Accounting and Cost Accountancy, Objectives, Advantages and Limitations of Cost Accounting, Difference between cost Accounting & Financial Accounting, CostUnit and cost centre. Elements of Cost, Preparation of cost sheet.	**Introduction to cost Accounting:** Concept of cost, costing, Cost Accounting and Cost Accountancy, Objectives, Advantages and Limitations of Cost Accounting, Difference between cost Accounting & Financial Accounting, CostUnit and cost centre. Elements of Cost, Preparation of cost sheet.	......
			Cost Accounting of Material, Labour and Overheads : Methods of pricing of material issues FIFO, LIFO, Simple Average, weighted Average. Methods of Wages- Time basis, Piece Basis, Labour Turn over(Theory) Classification, Allocation, Absorption and Apportionment of Overheads (Theory)	**Cost Accounting of Material, Labour and Overheads :** Methods of pricing of material issues FIFO, LIFO, Simple Average, weighted Average. Methods of Wages- Time basis, Piece Basis, Labour Turn over(Theory) Classification, Allocation, Absorption and Apportionment of Overheads (Theory)	......
			Methods of Costing - Process: Costing excluding calculation of Equivalent production, contract costing, service costing (Transport Costing).	**Methods of Costing - Process:** Costing excluding calculation of Equivalent production, contract costing, service costing (Transport Costing).	......
			Reconciliation of Cost and Financial Accounts: Reconciliation of Cost and Financial Accounts	**Reconciliation of Cost and Financial Accounts:** Reconciliation of Cost and Financial Accounts	

(Signature of the Head of Department)

DEPARTMENT OF B. C. A.
VIVEKANAND COLLEGE, KOLHAPUR
(AUTONOMOUS)

(Signature of the Teacher)

VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)
STATEMENT OF SYLLABUS COVERED

Year- 2021-22   Term- IInd

Name of teacher- Mrs. Vaishali D. Patil   Department- BCA

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Remark
B.C.A- I Sem-II	HRM	**Introduction to HRM :** Introduction , Concept, Definition, HRD, Functions of HRM , Organization of HR, Role HRM , Qualities of HR Manager, Limitations & challenges of HRM.	**Introduction to HRM :** Introduction , Concept, Definition, HRD, Functions of HRM , Organization of HR, Role HRM , Qualities of HR Manager, Limitations & challenges of HRM.	......	
		Human resource Planning & Development : Meaning and need of HRP , Process of HRP in I.T. Industry, Factors affecting HRP , Job Analysis , Job Description, Recruitment and Selection procedures in I.T. Industry. Training and Development methods followed in I.T. Industry.	**Human resource Planning & Development :** Meaning and need of HRP , Process of HRP in I.T. Industry, Factors affecting HRP , Job Analysis , Job Description, Recruitment and Selection procedures in I.T. Industry. Training and Development methods followed in I.T. Industry.	......	
		Employee Separation Employee Separation practices in I.T. industry, Voluntary Retirement Schemes, Resignation-Discharge-Dismissal-Suspension-Layoff, Exit interview.	**Employee Separation** Employee Separation practices in I.T. industry, Voluntary Retirement Schemes, Resignation-Discharge-Dismissal-Suspension-Layoff, Exit interview.	......	
		Compensation Management: Components of remuneration, factors effecting wage and salary levels, variable compensation, incentive schemes.	**Compensation Management: Components of remuneration, factors effecting wage and salary levels, variable compensation, incentive schemes.**	......	
B.C.A II Sem-IV	ED	**Entrepreneurship:-** Concept, Classification – Functions, Qualities of successful Entrepreneurship , Concept of Entrepreneur and entrepreneur. Entrepreneurship in modern Era.	**Entrepreneurship:-** Concept, Classification – Functions, Qualities of successful Entrepreneurship , Concept of Entrepreneur and entrepreneur. Entrepreneurship in modern Era.	......	
		Entrepreneurship Development:- Concept, objectives, process, problems, measures in Entrepreneurship Development , Role of Entrepreneurship In Economic Development (Theories), Institutional support for Entrepreneurship Development - National Institute for Entrepreneurship and Small Business Development (NIESBD), Small Industry Development Bank of India (SIDBI), District Industry Censes (DIC)	**Entrepreneurship Development:-** Concept, objectives, process, problems, measures in Entrepreneurship Development , Role of Entrepreneurship In Economic Development (Theories), Institutional support for Entrepreneurship Development - National Institute for Entrepreneurship and Small Business Development (NIESBD), Small Industry Development Bank of India (SIDBI), District Industry Censes (DIC)	......	

		Project Management:- Project- classification of project, Stages of Project Management, Reasons for failure for, Project, Project for Retail stores, Hotel, Hospital, Dairy.	**Project Management:-** Project- classification of project, Stages of Project Management, Reasons for failure for, Project, Project for Retail stores, Hotel, Hospital, Dairy.	......	
		Successful IT Indian Entrepreneurs:- Ratan Tata, Azim Premji, Narayan Murthy, Anand Mahindra, Kumar Mangalam Birla, Nandan Nilekani.Suspension-Layoff, Exit interview	**Successful IT Indian Entrepreneurs:-** Ratan Tata, Azim Premji, Narayan Murthy, Anand Mahindra, Kumar Mangalam Birla, Nandan Nilekani.Suspension-Layoff, Exit interview	......	
BCA III Sem-VI	**Strategic Management**	**Introduction to Strategic Management** Concept of Mission, Vision, Objectives, Concept of Strategy, Importance of Strategy, Levels of Strategy, Strategic Management Process – Different Phases.	**Introduction to Strategic Management** Concept of Mission, Vision, Objectives, Concept of Strategy, Importance of Strategy, Levels of Strategy, Strategic Management Process – Different Phases.	......	
		Environment Analysis Concept and Characteristics of environment, components of internal environment, SWOC, Components of external environment, PESTEL Framework – Porter's Five Forces	**Environment Analysis** Concept and Characteristics of environment, components of internal environment, SWOC, Components of external environment, PESTEL Framework – Porter's Five Forces	......	
		Strategies Types and Analysis Corporate strategies: stability strategy, expansion strategy, retrenchment strategy.-adv/disadv. Competitive strategy: cost leadership, Differentiation and Focus Strategy – Types – adv/disadv. BCG Matrix, TOWS Matrix, ANSOFF Matrix.	**Strategies Types and Analysis** Corporate strategies: stability strategy, expansion strategy, retrenchment strategy.-adv/disadv. Competitive strategy: cost leadership, Differentiation and Focus Strategy – Types – adv/disadv. BCG Matrix, TOWS Matrix, ANSOFF Matrix.	......	
		Strategic Evaluation and Control Strategic evaluation: imp, problems -Benchmarking for strategy evaluation. Strategic Control : Types and techniques of strategic control, -operational control-managing strategic change-types, mechanism and process of	**Strategic Evaluation and Control** Strategic evaluation: imp, problems -Benchmarking for strategy evaluation. Strategic Control : Types and techniques of strategic control, -operational control-managing strategic change-types, mechanism and process of	......	

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DEPARTMENT OF B. C. A.
VIVEKANAND COLLEGE, KOLHAPUR
(AUTONOMOUS)

(Signature of the Teacher)

VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)
STATEMENT OF SYLLABUS COVERED

Year- 2021-22   **Term- I**[st]

Name of teacher- Mrs. MeghaSagar Patil   **Department- BCA**

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Remark
B.C.A I Sem-I	Fundamental of Computers	**Module I Introduction to computer**: Computer Characteristics, Concept of Hardware, Software , Evolution of computer and Generations, Types of computer – Analog & Digital computers, Hybrid computers, General purpose & Special Purpose Computer, Limitations of Computer, Applications of Computer in Various fields. Structure and Working of Computer: Functional Block diagram of computer. CPU, ALU, Memory Unit, Bus structure of Digital Computer - Address, data and control bus.	**Introduction to computer**: Computer Characteristics, Concept of Hardware, Software , Evolution of computer and Generations, Types of computer – Analog & Digital computers, Hybrid computers, General purpose & Special Purpose Computer, Limitations of Computer, Applications of Computer in Various fields. Structure and Working of Computer: Functional Block diagram of computer. CPU, ALU, Memory Unit, Bus structure of Digital Computer - Address, data and control bus.	......	
		Module II Input /Output Devices: Input device – Keyboard, Mouse, Scanner, MICR, OMR. Output devices – VDU, Printers – Dot Matrix, Daisy-wheel, Inkjet, Laser, Line printers and Plotters. Computer Memory : Memory Concept , Memory cell, memory organization, Semiconductor memory- RAM, ROM, PROM,EPROM, Secondary Storage devices - Magnetic tape, Magnetic Disk (floppy disk & Hard disk.), Compact Disk.	**Module II Input /Output Devices**: Input device – Keyboard, Mouse, Scanner, MICR, OMR. Output devices – VDU, Printers – Dot Matrix, Daisy-wheel, Inkjet, Laser, Line printers and Plotters. Computer Memory : Memory Concept , Memory cell, memory organization, Semiconductor memory- RAM, ROM, PROM,EPROM, Secondary Storage devices - Magnetic tape, Magnetic Disk (floppy disk & Hard disk.), Compact Disk.	......	
		Module III Computer Language and Software: Number System - Decimal, Binary, Octal & Hexadecimal, Conversion from One base to another base. Computer Codes - : BCD, EBCDIC, ASCII, Machine Language, Assembly language, High Level language, Assembler, Compiler, Interpreter. Characteristics of good Language. Software - System and application software	**Module III Computer Language and Software:** Number System - Decimal, Binary, Octal & Hexadecimal, Conversion from One base to another base. Computer Codes - : BCD, EBCDIC, ASCII, Machine Language, Assembly language, High Level language, Assembler, Compiler, Interpreter. Characteristics of good Language. Software - System and application software	......	

			Module IV Operating System: Operating system, Evolution of operating system. Function of operating system. Types of operating systems. Detailed study of Windows Operating System. Introduction and Features of LINUX OS.	**Module IV Operating System:** Operating system, Evolution of operating system. Function of operating system. Types of operating systems. Detailed study of Windows Operating System. Introduction and Features of LINUX OS.	......
B.C.A II Sem- III	**System Analysis And Design**		**Module I Introduction to System Concepts** 1.1 Definition , Elements of System 1.2 Characteristics of System 1.3 Types of System 1.4 System Concepts	**Module -I Introduction to System Concepts** 1.1 Definition , Elements of System 1.2 Characteristics of System 1.3 Types of System 1.4 System Concepts	......
			Module II Requirement Analysis 2.1 Definition of System Analysis 2.2 Requirement Anticipation 2.3 Knowledge and Qualities of System Analyst 2.4 Role of a System Analyst 2.5 Feasibility Study And It's Types 2.6 Fact Gathering Techniques 2.7 SRS(System Requirement Specification)	**Module II Requirement Analysis** 2.1 Definition of System Analysis 2.2 Requirement Anticipation 2.3 Knowledge and Qualities of System Analyst 2.4 Role of a System Analyst 2.5 Feasibility Study And It's Types 2.6 Fact Gathering Techniques 2.7 SRS(System Requirement Specification)	......
			Module III Introduction to Software Engineering 3.1 Definition Need for software Engineering 3.2 Software Characteristics 3.3 Software Qualities (McCall's Quality Factors **Software Development Methodologies** 3.4 SDLC (System Development Life Cycle) 3.5 Waterfall Model 3.6 Spiral Model 3.7 Prototyping Model 3.8 RAD Model	**Module III Introduction to Software Engineering** 3.1 Definition Need for software Engineering 3.2 Software Characteristics 3.3 Software Qualities (McCall's Quality Factors **Software Development Methodologies** 3.4 SDLC (System Development Life Cycle) 3.5 Waterfall Model 3.6 Spiral Model 3.7 Prototyping Model 3.8 RAD Model	......
			Module IV Analysis and Design Tools 4.1 Entity-Relationship Diagrams 4.2 Decision Tree and Decision Table 4.3 Data Flow Diagrams (DFD) 4.4 Data Dictionary 4.4.1 Elements of DD 4.4.2 Advantage of DD 4.5 Input And Output Design	**Module IV Analysis and Design Tools** 4.1 Entity-Relationship Diagrams 4.2 Decision Tree and Decision Table 4.3 Data Flow Diagrams (DFD) 4.4 Data Dictionary 4.4.1 Elements of DD 4.4.2 Advantage of DD 4.5 Input And Output Design	......

		4.6 CASE STUDIES (Based on Above Topic) **Software Testing** 4.7 Definition, Test characteristics 4.8 Types of testing 4.8.1 Black-Box Testing 4.8.2 White-Box Testing 4.8.3 Unit testing 4.8.4 Integration testing 4.9 Validation &Verification	4.6 CASE STUDIES (Based on Above Topic) **Software Testing** 4.7 Definition, Test characteristics 4.8 Types of testing 4.8.1 Black-Box Testing 4.8.2 White-Box Testing 4.8.3 Unit testing 4.8.4 Integration testing 4.9 Validation &Verification		
B.C.A III Sem-V	**Networking**	**Module I Basics of Data communication** 1.1. Data Communication concept 1.1.1 Components-sender, receiver, message, transmission media 1.1.2 Data Flow- simplex, half-duplex, or full-duplex 1.2 Networks 1.2.1 Definition, Advantages and disadvantages 1.2.2 Categories of Networks- LAN, WAN. MAN 1.2.3 Network Architecture-Client-Server and Peer to peer 1.3 Multiplexing and switching 1.3.1 Frequency-Division Multiplexing, Wavelength-Division Multiplexing, Time-Division Multiplexing 1.3.2 Circuit switching, Packet Switching, Message Switching	**Module I Basics of Data communication** 1.1. Data Communication concept 1.1.1 Components-sender, receiver, message, transmission media 1.1.2 Data Flow- simplex, half-duplex, or full-duplex 1.2 Networks 1.2.1 Definition, Advantages and disadvantages 1.2.2 Categories of Networks- LAN, WAN. MAN 1.2.3 Network Architecture-Client-Server and Peer to peer 1.3 Multiplexing and switching 1.3.1 Frequency-Division Multiplexing, Wavelength-Division Multiplexing, Time-Division Multiplexing 1.3.2 Circuit switching, Packet Switching, Message Switching	......	
		Module IITransmission media and Reference Models 2.1 Transmission Media 2.1.1 Guided Media - Twisted-Pair Cable, Coaxial Cable, Fiber-Optic Cable 2.1.2 Unguided Media: Radio Waves, Microwaves, Infrared, satellite communication 2.2 Transmission Modes- Parallel and Serial -(Asynchronous, Synchronous) 2.3 Reference Models 2.3.1 OSI reference model 2.3.2 TCP/IP reference model 2.3.3 Comparison of OSI and TCP/IP reference	**Module II Transmission media and Reference Models** 2.1 Transmission Media 2.1.1 Guided Media - Twisted-Pair Cable, Coaxial Cable, Fiber-Optic Cable 2.1.2 Unguided Media: Radio Waves, Microwaves, Infrared, satellite communication 2.2 Transmission Modes- Parallel and Serial -(Asynchronous, Synchronous) 2.3 Reference Models 2.3.1 OSI reference model 2.3.2 TCP/IP reference model 2.3.3 Comparison of OSI and TCP/IP reference	......	

		model 2.4 Protocol Standards 2.5 IP address scheme and characteristics of IP address	model 2.4 Protocol Standards 2.5 IP address scheme and characteristics of IP address		
		Module III Data link, Network and Transport layer 3.1 Data link Layer- 3.1.1Design issues 3.1.2 Framing, error detection and correction 3.2 Network layer 3.2. 1 design issues of network layer 3.2.2 Routing algorithm (shortest path, Flooding, distance vector,) 3.2.3 Congestion control 3.3 Transport layer 3.3.1 Transport Layer Primitives: listen, connect, send, receive, disconnect 3.3.2 Protocols: TCP, UDP	**Module III Data link, Network and Transport layer** 3.1 Data link Layer- 3.1.1Design issues 3.1.2 Framing, error detection and correction 3.2 Network layer 3.2. 1 design issues of network layer 3.2.2 Routing algorithm (shortest path, Flooding, distance vector,) 3.2.3 Congestion control 3.3 Transport layer 3.3.1 Transport Layer Primitives: listen, connect, send, receive, disconnect 3.3.2 Protocols: TCP, UDP	......	
		Module IV Session, Presentation and Application layer 12 4.1 Session layer: 4.1.1 Services: dialog management, synchronization, activity management, exception handling 4.1.2 Remote procedure calls 4.2 Presentation layer: 4.2.1 Services: Translation, compression, encryption 4.2.2 Cryptography: concept, symmetric key & asymmetric key cryptography 4.3 Application layer: 4.3.1 Function4.3.2 Domain name system (DNS),Hypertext Transfer Protocol (HTTP),Simple Mail Transfer Protocol (SMTP) ,Telnet, File Transfer Protocol (FTP)	**Module IV Session, Presentation and Application layer 12** 4.1 Session layer: 4.1.1 Services: dialog management, synchronization, activity management, exception handling 4.1.2 Remote procedure calls 4.2 Presentation layer: 4.2.1 Services: Translation, compression, encryption 4.2.2 Cryptography: concept, symmetric key & asymmetric key cryptography 4.3 Application layer: 4.3.1 Function4.3.2 Domain name system (DNS),Hypertext Transfer Protocol (HTTP),Simple Mail Transfer Protocol (SMTP) ,Telnet, File Transfer Protocol (FTP)	......	

HEAD
DEPARTMENT OF B. C. A.
VIVEKANAND COLLEGE, KOLHAPUR
(AUTONOMOUS)

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JUNE
1964

(Signature of the Head of Department)

(Signature of the Teacher)

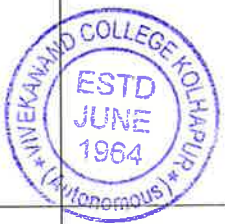**Year- 2021-22**   **Term- IInd**

Name of teacher- Mrs. MeghaSagar Patil   Department- BCA

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Rema rk

B.C.A- I Sem-II	DBMS	**Module I Introduction of Database**
		1.1 Introduction
		1.2 Definition of DBMS
		1.3 file processing system Vs DBMS
		    1.3.1 Limitation of file processing system
		    1.3.2 Comparison of File processing system and DBMS
		1.4 Advantages and Disadvantages of DBMS
		1.5 Users of DBMS
		    1.5.1 Database Designers
		    1.5.2 Application programmer
		    1.5.3 Sophisticated Users
		    1.5.4 End Users
		1.6 Capabilities of good DBMS
		1.7 Types of Database System:
		    1.7.1 Centralized database system
		    1.7.2 client-server system
		1.7.3 Distributed database system.
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			1.2 Definition of DBMS
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			    1.7.1 Centralized database system
			    1.7.2 client-server system
			1.7.3 Distributed database system.
				......	

		Module II Organization of Database System
		2.1 Introduction
		2.2. Logical and Physical Files
		    2.2.1 Logical and Physical Files Definitions
		    2.2.2 File Structure
		2.3 Basic File Operations
		    2.3.1 Opening Files
		    2.3.2 Closing Files
		    2.3.3 Reading and Writing
		    2.3.4 Seeking
		2.4 File Organization
		    2.4.1 Field and Record structure in file
		    2.4.2 Record Types
		2.5 Types of file organization
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				......	

2.5.1 Files of Unordered Records (Heap Files)
    2.5.2 File of Ordered Records (Sorted Files)
    2.5.3 Hash Files
2.5.4 Indexed file
	2.5.1 Files of Unordered Records (Heap Files)
	    2.5.2 File of Ordered Records (Sorted Files)
	    2.5.3 Hash Files
	2.5.4 Indexed file

Module III Data Models
3.1 Introduction
3.2 Data Models
    3.2.1 Object Based Logical Model
    3.2.2 Record Base Logical Model
      a. Relational Model
      b. Network Model
      c. Hierarchical Model
3.3 Entity Relationship Model
    3.3.1 Entity Set
    3.3.2 Attribute
    3.3.3 Relationship Set
3.4 E-R Model terms Introduction
    a. Relation
    b. Tuple
    c. Attribute
    d. Cardinality
    e. Degree
    f. Domain
3.5 Keys
    3.5.1 Super Key
    3.5.2 Candidate Key
    3.5.3 Primary Key
    3.5.4 Foreign Key
3.6. Relational Database Design
    3.6.1 Introduction
    3.6.2 Normalization
    3.6.3 Normal Form
      3.6.1 1 NF
      3.6.2 2 NF
    3.6.3 3 NF
	Module III Data Models
	3.1 Introduction
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	    3.6.3 3 NF

Module IV Relational algebra 4.1 Introduction	**Module IV Relational algebra** 4.1 Introduction

		4.2 Operations a. Select b. Project c. Union d. Difference e. Intersection f. Cartesian Product g. Natural Join 4.3. SQL (Structured Query Language) 4.3.1 Introduction 4.3.2 History of SQL 4.3.3 Basic Structure 4.3.4 DDL Commands 4.3.5 DML Commands 4.3.6 Simple Queries 4.3.7 Nested Queries 4.3.8 Aggregate Functions 4.3.9 Clauses	4.2 Operations a. Select b. Project c. Union d. Difference e. Intersection f. Cartesian Product g. Natural Join 4.3. SQL (Structured Query Language) 4.3.1 Introduction 4.3.2 History of SQL 4.3.3 Basic Structure 4.3.4 DDL Commands 4.3.5 DML Commands 4.3.6 Simple Queries 4.3.7 Nested Queries 4.3.8 Aggregate Functions 4.3.9 Clauses	
B.C.A II Sem-IV	DBMS	**Module I Introduction of Database** 1.1 Introduction 1.2 Definition of DBMS 1.3 file processing system Vs DBMS 1.3.1 Limitation of file processing system 1.3.2 Comparison of File processing system and DBMS 1.4 Advantages and Disadvantages of DBMS 1.5 Users of DBMS 1.5.1 Database Designers 1.5.2 Application programmer 1.5.3 Sophisticated Users 1.5.4 End Users 1.6 Capabilities of good DBMS 1.7 Types of Database System: 1.7.1 Centralized database system 1.7.2 client-server system 1.7.3 Distributed database system.	**Module I Introduction of Database** 1.1 Introduction 1.2 Definition of DBMS 1.3 file processing system Vs DBMS 1.3.1 Limitation of file processing system 1.3.2 Comparison of File processing system and DBMS 1.4 Advantages and Disadvantages of DBMS 1.5 Users of DBMS 1.5.1 Database Designers 1.5.2 Application programmer 1.5.3 Sophisticated Users 1.5.4 End Users 1.6 Capabilities of good DBMS 1.7 Types of Database System: 1.7.1 Centralized database system 1.7.2 client-server system 1.7.3 Distributed database system.	......
		Module II Organization of Database System 2.1 Introduction 2.2. Logical and Physical Files 2.2.1 Logical and Physical Files Definitions 2.2.2 File Structure	**Module II Organization of Database System** 2.1 Introduction 2.2. Logical and Physical Files 2.2.1 Logical and Physical Files Definitions 2.2.2 File Structure	......

| | | | 2.3 Basic File Operations
    2.3.1 Opening Files
    2.3.2 Closing Files
    2.3.3 Reading and Writing
    2.3.4 Seeking
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    2.4.1 Field and Record structure in file
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| | | | **Module III Data Models**
3.1 Introduction
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    3.2.1 Object Based Logical Model
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			3.6.3 3 NF		

		Module IV Relational algebra
		4.1 Introduction
		4.2 Operations
		  a. Select
		  b. Project
		  c. Union
		  d. Difference
		  e. Intersection
		  f. Cartesian Product
		  g. Natural Join
		4.3. SQL (Structured Query Language)
		  4.3.1 Introduction
		  4.3.2 History of SQL
		  4.3.3 Basic Structure
		  4.3.4 DDL Commands
		  4.3.5 DML Commands
		  4.3.6 Simple Queries
		  4.3.7 Nested Queries
		  4.3.8 Aggregate Functions
		4.3.9 Clauses
			Module IV Relational algebra
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			  4.3.6 Simple Queries
			  4.3.7 Nested Queries
			  4.3.8 Aggregate Functions
			4.3.9 Clauses
				......	

B.C.A III Sem-VI	DWDM	**Module I Introduction to Data Mining** 1.1 Basic Data mining Task 1.2 DM versus Knowledge Discovery in Databases 1.3 Data Mining Issues 1.4 Data Mining Metrics 1.5 Social implementation of Data Mining 1.6 Overview of Application of Data mining 1.6.1 Architecture of DW 1.6.2 OLAP and Data Cubes 1.6.3 Dimensional Data Modeling - star , snowflake schemas 1.6.4 Data processing - Need Data cleaning. Data integration and Transformation, Data reduction 1.6.5 machine learning 1.6.6 pattern matching	**Module I Introduction to Data Mining** 1.1 Basic Data mining Task 1.2 DM versus Knowledge Discovery in Databases 1.3 Data Mining Issues 1.4 Data Mining Metrics 1.5 Social implementation of Data Mining 1.6 Overview of Application of Data mining 1.6.1 Architecture of DW 1.6.2 OLAP and Data Cubes 1.6.3 Dimensional Data Modeling - star , snowflake schemas 1.6.4 Data processing - Need Data cleaning. Data integration and Transformation, Data reduction 1.6.5 machine learning 1.6.6 pattern matching	......	

		Module II Data Mining techniques 2.1 Frequent item - set and association rule mining: apriori algorithm, use of sampling for frequent item- set tree algorithm 2.2 graph sampling : frequent sub graph mining . tree mining ,sequence mining **2.3 Classification and prediction:** 2.3.1 Decision tree [3 hrs] 2.3.2 Construction, performance, attribute selection 2.3.3 Issues : Over fitting tree pruning methods, missing values, continuous classes 2.3.4 Classification and regression tree(CART) 2.3.5 Bayesians Classification [6 hrs] 2.3.6 Bayesians theorem , Narvee Bayes classifier 2.3.7 Bayesian networks 2.3.8 Inference 2.3.9 Parameter and structure learning 2.3.10 Leaner classification [4 hrs] 2.3.11 Least squares, logistics , perception and SVM classifiers 2.3.12 Prediction [3 hrs] 2.3.13 Linear regression 2.3.14 Non-linear regression	**Module II Data Mining techniques** 2.1 Frequent item - set association rule mining: apriori algorithm, use of sampling for frequent item- set tree algorithm 2.2 graph sampling : frequent sub graph mining . tree mining ,sequence mining **2.3 Classification and prediction:** 2.3.1 Decision tree [3 hrs] 2.3.2 Construction, performance, attribute selection 2.3.3 Issues : Over fitting tree pruning methods, missing values, continuous classes 2.3.4 Classification and regression tree(CART) 2.3.5 Bayesians Classification [6 hrs] 2.3.6 Bayesians theorem , Narvee Bayes classifier 2.3.7 Bayesian networks 2.3.8 Inference 2.3.9 Parameter and structure learning 2.3.10 Leaner classification [4 hrs] 2.3.11 Least squares, logistics , perception and SVM classifiers 2.3.12 Prediction [3 hrs] 2.3.13 Linear regression 2.3.14 Non-linear regression	......	
		Module III Clustering 3.1 K-means 3.2 expectation maximization (EM) algorithm 3.3 Hierarchical clustering , Carrolton clustering	**Module III Clustering** 3.1 K-means 3.2 expectation maximization (EM) algorithm 3.3 Hierarchical clustering , Carrolton clustering	......	
		Module IVSoftware for Data mining and application of Data mining 10 4.1 R 4.2 Weka 4.3 Sample applications of data mining	**Module IV Software for Data mining and application of Data mining 10** 4.1 R 4.2 Weka 4.3 Sample applications of data mining	......	

(Signatureof the Head of Department)

(Signature of the Teacher)

VIVEKANAND COLLEGE, KOLHAPUR(AUTONOMOUS)
STATEMENT OF SYLLABUS COVERED

Year- 2021-22 **Term- 1st Term**

Name of teacher- Mr. Raju Shivaji Sawant **Department- BCA**

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Remark
B.C.A III Sem- V	RDBMS with Oracle	**Module I: Relational Database Management System:** 1.1 Concept of RDBMS, Difference between DBMS and RDBMS, Features of RDBMS. 1.2 Introduction of Oracle, Role and responsibilities of DBA. 1.3 RDBMS Terminology- Relation, Tuple, Cardinality, Attribute, Degree,Primary Key, Domain, Codd's Rules 1.4 Relational Model, Functional Dependencies, Normalization and its types	**Module I:Relational Database Management System:** 1.1 Concept of RDBMS, Difference between DBMS and RDBMS, Features of RDBMS. 1.2 Introduction of Oracle, Role and responsibilities of DBA. 1.3 RDBMS Terminology- Relation, Tuple, Cardinality, Attribute, Degree,Primary Key, Domain, Codd's Rules 1.4 Relational Model, Functional Dependencies, Normalization and its types	......	
		Module II:INTRODUCTION TO SQL 2.1 Features of SQL, Data types, 2.2 Classification of SQL Commands – DDL (create, alter, drop), DML (insert, update, delete), DCL (grant, revoke), TCL (rollback, commit). 2.3 SQL Integrity Constraints-(Primary key, Foreign key, unique key, not null, default, check) 2.4 Select statement with group by and order by clause 2.5 SQL Operators-arithmetic, relational, Logical, Like, Between, IN operator 2.6 SQL Functions- Arithmetic functions, Conversion Functions, Date function, Aggregate functions, String functions.	**Module II:INTRODUCTION TO SQL:** 2.1 Features of SQL, Data types, 2.2 Classification of SQL Commands – DDL (create, alter, drop), DML (insert, update, delete), DCL (grant, revoke), TCL (rollback, commit). 2.3 SQL Integrity Constraints-(Primary key, Foreign key, unique key, not null, default, check) 2.4 Select statement with group by and order by clause 2.5 SQL Operators-arithmetic, relational, Logical, Like, Between, IN operator 2.6 SQL Functions- Arithmetic functions, Conversion Functions, Date function, Aggregate functions, String functions.	......	
		Module IIIJOIN AND SUB QUERIES:	**Module IIIJOIN AND SUB QUERIES:**	......	

		3.1 Join types - Inner Join, Outer Join, Cross Join and self-Join 3.2 Sub-queries, Multiple sub queries, nesting of sub queries, sub queries in DML commands. 3.3 Correlated queries, Indexes, Sequences. Views-Create View, Drop, View and its Advantages. , Denial of service (DoS), Firewall and proxy server.	3.1 Join types - Inner Jo Outer Join, Cross Join and self-Join 3.2 Sub-queries, Multiple sub queries, nesting of sub queries, sub queries in DML commands. 3.3 Correlated queries, Indexes, Sequences. Views-Create View, Drop, View and its Advantages. , Denial of service (DoS), Firewall and proxy server.		
		Module IVINTRODUCTION TO PL/SQL: 4.1 Introduction to PL/SQL, Block Structure 4.2 Data types in PL-SQL 4.3 Control Structures-Branching statements, Iterative Control statements. 4.4 Cursors –Concept, Types- Implicit, Explicit, Procedure to create explicit cursors, Cursor Attributes. 4.5 TRIGGERS: Concept and types.	**Module IVINTRODUCTION TO PL/SQL:** 4.1 Introduction to PL/SQL, Block Structure 4.2 Data types in PL-SQL 4.3 Control Structures-Branching statements, Iterative Control statements. 4.4 Cursors –Concept, Types- Implicit, Explicit, Procedure to create explicit cursors, Cursor Attributes. 4.5 TRIGGERS: Concept and types.	......	
B.C.A III Sem- VI	**Visual Programming**	**Module: Introduction** 1.1 overview, Architecture, Features of .NET , 1.2 Meta data, CLR, Managed and unmanaged code 1.3 CTS, CLS, .NET base classes 1.4 Introduction to Visual Studio .NET IDE 1.5 Types of JIT compiler	**Module:Introduction** 1.1 overview, Architecture, Features of .NET , 1.2 Meta data, CLR, Managed and unmanaged code 1.3 CTS, CLS, .NET base classes 1.4 Introduction to Visual Studio .NET IDE 1.5 Types of JIT compiler	......	
		Module II Introduction To C# 12 2.1 Introduction to C#, Entry point method, command line arguments 2.2 Compiling and building projects, Compiling a C# program using command line utility, CSC.EXE, Different valid forms of main. 2.3 Global stack and heap memory, reference type and data type, casting implicit and explicit 2.4 Boxing and unboxing, pass by value and pass by reference and outparameters 2.5 Partial class, DLL, Difference between DLL	**Module II Introduction To C# 12** 2.1 Introduction to C#, Entry point method, command line arguments 2.2 Compiling and building projects, Compiling a C# program using command line utility, CSC.EXE, Different valid forms of main. 2.3 Global stack and heap memory, reference type and data type, casting implicit and explicit 2.4 Boxing and unboxing, pass by value and pass by reference and outparameters 2.5 Partial class, DLL, Difference between	......	

		and EXE	DLL and EXE		
		Module-III : Introduction to Web Programming 3.1 Understanding role of WEB server and WEB browser, HTTP request and response structure. 3.2 Introduction to ASP, Types of path, FORM tag 3.3 Types of server controls 3.4 Validation controls-Base validator, compare validator, range validator, grouping control validator 3.5 Web forms life cycle 3.6 Event handling in WEB forms, response.redirect, server.response, cross page post back property of button 3.7 ASP.NET state management 3.8 WEB.config, globalization and localization, AppDomain	**Module-III : Introduction to Web Programming** 3.1 Understanding role of WEB server and WEB browser, HTTP request and response structure. 3.2 Introduction to ASP, Types of path, FORM tag 3.3 Types of server controls 3.4 Validation controls-Base validator, compare validator, range validator, grouping control validator 3.5 Web forms life cycle 3.6 Event handling in WEB forms, response.redirect, server.response, cross page post back property of button 3.7 ASP.NET state management 3.8 WEB.config, globalization and localization, AppDomain	......	
		Module IV ADO .NET 12 4.1 Introduction to ADO.Net 4.2 ADO.NET Architecture- Conncetion, command, dat reader, data adapter, data set 4.3 Understanding connected layaer of ADO.NET and disconnected layer of ADO.NET	**Module ADO .NET 12** 4.1 Introduction to ADO.Net 4.2 ADO.NET Architecture- Conncetion, command, dat reader, data adapter, data set 4.3 Understanding connected layaer of ADO.NET and disconnected layer of ADO.NET4.9 Validation &Verification	......	

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VIVEKANAND COLLEGE, KOLHAPUR(AUTONOMOUS)
STATEMENT OF SYLLABUS COVERED

Year- 2021-22　　　Term- IInd

Name of teacher- Mr. Raju Shivaji Sawant　　　Department- BCA

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Remark
B.C.A- III Sem-VI	Java Programming	**Module IIntroduction To Java** 1.1 History and features of Java Programming 1.2 Difference between Java & C++ 1.3 Java Environment 1.4 Java tokens, constants, variables, data types, type casting 1.5 Operators and Expressions 1.6 Implementing Java Program 1.7 Branching and looping statements 1.8 Class, objects, methods 1.9 Constructors and destructor	**Module IIntroduction To Java** 1.1 History and features of Java Programming 1.2 Difference between Java & C++ 1.3 Java Environment 1.4 Java tokens, constants, variables, data types, type casting 1.5 Operators and Expressions 1.6 Implementing Java Program 1.7 Branching and looping statements 1.8 Class, objects, methods 1.9 Constructors and destructor	......	
		Module II Inheritance and Packages 2.1 Defining sub class, subclass constructor 2.2 Inheritance-Multiple and hierarchical 2.3 Defining packages, system packages 2.4 Creating & accessing packages 2.5 Adding a class to package 2.6 Polymorphism- function overloading and over ridding, its difference	**Module II Inheritance and Packages** 2.1 Defining sub class, subclass constructor 2.2 Inheritance-Multiple and hierarchical 2.3 Defining packages, system packages 2.4 Creating & accessing packages 2.5 Adding a class to package 2.6 Polymorphism- function overloading and over ridding, its difference.	......	

		Module III Multithreading and Exception Handling 3.1 Creating threads, extending a thread class-declaring the class, run() method 3.2 Stopping and blocking threads 3.3 Life cycle of thread 3.4 Using thread method 3.5 Thread priority 3.6 Introduction to exception 3.7 Syntax of exception handling code 3.8 Multiple catch statement 3.9 Using finally statement 3.10 Throwing exception Files.	**Module III Multithreading and Exception Handling** 3.1 Creating threads, extending a thread class-declaring the class, run() method 3.2 Stopping and blocking threads 3.3 Life cycle of thread 3.4 Using thread method 3.5 Thread priority 3.6 Introduction to exception 3.7 Syntax of exception handling code 3.8 Multiple catch statement 3.9 Using finally statement 3.10 Throwing exception	......	
		Module IV Applets Programming & Introduction to AWT 4.1 Introduction to applets 4.2 Building applet code 4.3 Applet life cycle 4.4 Adding applet code to HTML file 4.5 Introduction to Abstract Window Toolkit (AWT)	**Module IV Applets Programming & Introduction to AWT** 4.1 Introduction to applets 4.2 Building applet code 4.3 Applet life cycle 4.4 Adding applet code to HTML file 4.5 Introduction to Abstract Window Toolkit (AWT)	......	
B.C.A II Sem-IV	Web Technology	**Module I : Internet and WWW :** 1.1 Network, Client, Server, 1.2 What is Internet & Applications, WWW 1.3 URL, DNS, Bbrowsers,Web Development: 2.1 :Introduction, features, steps in web development, . 2.2 Scripting Languages 2.3 HTML,structure 2.4 Basic Tags 2.5 Formatting tags , examples	**Module I : Internet and WWW :** 1.1 Network, Client, Server, 1.2 What is Internet & Applications, WWW 1.3 URL, DNS, Bbrowsers, Web Development: 2.1 :Introduction, features, steps in web development, . 2.2 Scripting Languages 2.3 HTML,structure 2.4 Basic Tags 2.5 Formatting tags , examples	......	
		Module II HTML tags : 3.1 Heading and paragraph tags, font tag. <table> tag 3.2 List Tags-ordered and unordered list tags: <BR>, <HR>.,<Marquee>	**Module II HTML tags :** 3.1 Heading and paragraph tags, font tag. <table> tag 3.2 List Tags-ordered and unordered list tags: <BR>, <HR>.,<Marquee>	......	

		3.3 : Hyperlink, <A> Image and Image maps, <form> tag, form controls to design UI	3.3 : Hyperlink, <A> Image and Image maps, <form> tag, form controls to design UI	
		Module IIIJAVA SCRIPT : 4.1 Introduction, Difference in Client-Side and Server-Side Script, features, introduction to Java script 4.2 keywords, data types, control statements (if-else, looping) with examples 4.3 objects in java. Events and Event Handlers, 4.4 Dialogue boxes, Built-in functions and Validations	**Module III JAVA SCRIPT :** 4.1 Introduction, Difference in Client-Side and Server-Side Script, features, introduction to Java script 4.2 keywords, data types, control statements (if-else, looping) with examples 4.3 objects in java. Events and Event Handlers, 4.4 Dialogue boxes, Built-in functions and Validations	......
		Module IV Introduction to Server-Side scripting 5.1 ASP – Advantages and limitations, server set-up for ASP (PWS/IIS), built in ASP objects 5.2 loop Structure, control structure (If-Else-Then), methods to get data from 5.3 Clients – (GET and POST), difference between GET and POST 5.4,database handling, connections and record set object. 5.5Case Studies: On line Shopping Website, University Website 4.3.8 Aggregate Functions 4.3.9 Clauses	**Module Introduction to Server-Side scripting** 5.1 ASP – Advantages and limitations, server set-up for ASP (PWS/IIS), built in ASP objects 5.2 loop Structure, control structure (If-Else-Then), methods to get data from 5.3 Clients – (GET and POST), difference between GET and POST 5.4,database handling, connections and record set object. 5.5Case Studies: On line Shopping Website, University Website 4.3.8 Aggregate Functions 4.3.9 Clauses	......

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(Signature of the Teacher)

Year- 2021-22   **Term- IInd**

Name of teacher- Ms. Nikita Patil   **Department- BCA**

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Remark
B.C.A II Sem-IV	Mathematics Foundation	**Unit 1 SETS:** 1.1 Meaning of a set. 1.2 Methods of describing of a set.1.2.1 Tabular form 1.2.2 Set builder form 1.3 Types of a set 1.3.1 Finite set, Infinite set, Empty set, Subset, Universal set.1.3.2 Equal sets, Disjoint sets, Complementary set. 1.4 Operation on Sets 1.4.1 Union of sets 1.4.2 Intersection of sets 1.4.3 Difference of sets. 1.5 De Morgan's Laws (without proof). 1.6 Venn diagram. 1.7 Cartesian product of two sets. 1.8 Idempotent laws, Identity laws, Commutative Laws, Associative laws, Distributive laws, Inverse laws, Domination Laws, Absorption laws, Involution laws. 1.9 Duality. 1.10 Computer Representation of sets and its operations. 1.11 Examples based on above.	**Unit 1 SETS:** 1.1 Meaning of a set. 1.2 Methods of describing of a set.1.2.1 Tabular form 1.2.2 Set builder form 1.3 Types of a set 1.3.1 Finite set, Infinite set, Empty set, Subset, Universal set.1.3.2 Equal sets, Disjoint sets, Complementary set. 1.4 Operation on Sets 1.4.1 Union of sets 1.4.2 Intersection of sets 1.4.3 Difference of sets. 1.5 De Morgan's Laws (without proof). 1.6 Venn diagram. 1.7 Cartesian product of two sets. 1.8 Idempotent laws, Identity laws, Commutative Laws, Associative laws, Distributive laws, Inverse laws, Domination Laws, Absorption laws, Involution laws. 1.9 Duality. 1.10 Computer Representation of sets and its operations. 1.11 Examples based on above.	......	
		Unit 2 Logic : 2.1 Introduction 2.2 Meaning of Statement (Proposition). 2.3 Simple and compound statements. 2.4 Truth values of a statement. 2.5 Law of excluded middle. 2.6 Logical Operations: Negation, Conjunction, Disjunction, Implication, Double Implication. 2.7 Equivalence of Logical statements. 2.8 Truth Tables and construction of truth tables. 2.9 Converse, Inverse and Contra positive. 2.10 Statement forms: Tautology, Contradiction, Contingency. 2.11 Duality, Laws of logic: Idempotent laws, Commutative laws, Associative laws, Identity laws,Involution laws, Distributive laws, Complement laws, De Morgan's laws. 2.12 Argument: Valid and Invalid	**Unit 2 Logic :** 2.1 Introduction 2.2 Meaning of Statement (Proposition). 2.3 Simple and compound statements. 2.4 Truth values of a statement. 2.5 Law of excluded middle. 2.6 Logical Operations: Negation, Conjunction, Disjunction, Implication, Double Implication. 2.7 Equivalence of Logical statements. 2.8 Truth Tables and construction of truth tables. 2.9 Converse, Inverse and Contra positive. 2.10 Statement forms: Tautology, Contradiction, Contingency. 2.11 Duality, Laws of logic: Idempotent laws, Commutative laws, Associative laws, Identity laws,Involution laws, Distributive laws, Complement laws, De Morgan's laws. 2.12 Argument: Valid and Invalid	......	

		arguments. 2.13 Examples based above.	arguments. 2.13 Examples based on above.		
		Unit 3 Matrices : 3.1 Meaning of a matrix, Order of matrix. 3.2 Types of matrices 3.2.1 Row matrix, Column matrix, Null matrix, Unit matrix 3.2.2 Square Matrix, Diagonal matrix, Scalar matrix, 3.2.3 Symmetric matrix, Skew - symmetric matrix 3.2.4 Transpose of a matrix, 3.3 Definition of Determinants of order 2nd & 3rd and their expansions 3.4 Singular and Non-Singular Matrices 3.5 Algebra of Matrices 3.5.1 Equality of matrices 3.5.2 Scalar Multiplication of matrix 3.5.3 Addition of matrices, Subtraction of matrices 3.5.4 Multiplication of matrices. 3.6 Elementary Row & Column Transformations 3.7 Inverse of Matrix (Using Elementary Transformations) 3.8 Examples based on above.	**Unit 3 Matrices :** 3.1 Meaning of a matrix, Order of matrix. 3.2 Types of matrices 3.2.1 Row matrix, Column matrix, Null matrix, Unit matrix 3.2.2 Square Matrix, Diagonal matrix, Scalar matrix, 3.2.3 Symmetric matrix, Skew - symmetric matrix 3.2.4 Transpose of a matrix, 3.3 Definition of Determinants of order 2nd & 3rd and their expansions 3.4 Singular and Non-Singular Matrices 3.5 Algebra of Matrices 3.5.1 Equality of matrices 3.5.2 Scalar Multiplication of matrix 3.5.3 Addition of matrices, Subtraction of matrices 3.5.4 Multiplication of matrices. 3.6 Elementary Row & Column Transformations 3.7 Inverse of Matrix (Using Elementary Transformations) 3.8 Examples based on above.	......	
		Unit 4 Graph Theory : 4.1 Introduction to Graph 4.2 Kinds of Graph : Simple, Multi and Pseudo Graph 4.3 Digraph 4.4 Weighted Graph 4.5 Degree of Vertex, Isolated Vertex 4.6 Path, Cycle, A-Cycle, 4.7 Types of Graph: Complete, Regular, Bi-Partite, Complete Bi-partite, Isomorphism of Graph 4.8 Matrix Representation of Graph: Adjacency and Incidence Matrix 4.9 Operation on Graph: Union, Intersection, Complement, Product of Graphs, Fusion of Graphs 4.10 Examples based on above.	**Unit 4 Graph Theory :** 4.1 Introduction to Graph 4.2 Kinds of Graph : Simple, Multi and Pseudo Graph 4.3 Digraph 4.4 Weighted Graph 4.5 Degree of Vertex, Isolated Vertex 4.6 Path, Cycle, A-Cycle, 4.7 Types of Graph: Complete, Regular, Bi-Partite, Complete Bi-partite, Isomorphism of Graph 4.8 Matrix Representation of Graph: Adjacency and Incidence Matrix 4.9 Operation on Graph: Union, Intersection, Complement, Product of Graphs, Fusion of Graphs 4.10 Examples based on above.	......	

VIVEKANAND COLLEGE, KOLHAPUR(AUTONOMOUS)
STATEMENT OF SYLLABUS COVERED

Year- 2021-22

Name of teacher- Mr. AjitPawar

Term- I[st]

Department- B.C.A.

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Remark
B.C.A.- II Sem- III	Computer Oriented Statistical Methods	**(A) Introduction to Statistics** 1.1 Meaning and Scope of Statistics, Primary and Secondary data. 1.2 Frequency, Frequency distribution, Qualitative and quantitative data, Discrete and Continuous variables. 1.3 Representation of frequency distribution by graphs: Histogram, Frequency polygon, Frequency curve, O give curve. 1.4 Numerical examples based on 1.2 1.5 Definition: Random Experiment, Sample space, Event and Types of Events. Classical Definition of Probability of an Event. Conditional Probability. 1.6 Addition and Multiplication laws of probability for two events(Without proof). 1.7 Examples without use of permutations and combination	**(A) Introduction to Statistics** 1.1 Meaning and Scope of Statistics, Primary and Secondary data. 1.2 Frequency, Frequency distribution, Qualitative and quantitative data, Discrete and Continuous variables. 1.3 Representation of frequency distribution by graphs: Histogram, Frequency polygon, Frequency curve, O give curve. 1.4 Numerical examples based on 1.2 1.5 Definition: Random Experiment, Sample space, Event and Types of Events. Classical Definition of Probability of an Event. Conditional Probability. 1.6 Addition and Multiplication laws of probability for two events(Without proof). 1.7 Examples without use of permutations and combination.	......	
		Measures of Central Tendency and Dispersion **2.1 Measures of central Tendency (Averages)** 2.1.1 Meaning of averages, Requirements of good average 2.1.2 Definitions of Arithmetic mean (A.M.), Combined mean, Median, Quartiles, Mode,	**Measures of Central Tendency and Dispersion** **2.1 Measures of central Tendency (Averages)** 2.1.1 Meaning of averages, Requirements of good average 2.1.2 Definitions of Arithmetic mean (A.M.), Combined mean, Median, Quartiles, Mode,	......	

Relation between mean, median and mode. 2.1.3 Merits and Demerits of Mean, Median and Mode 2.1.4 Numerical examples based on 2.1.2 2.1.5 Determination of Median and Mode by Graph **2.2 Measures of Dispersion(Variability):** 2.2.1 Meaning of Variability, Absolute and Relative measures of dispertion. 2.2.2 Definitions of Q.D., M.D., S.D. and Variance, Combined variance and their relative measures, Coefficient of Variation 15(C.V.). 2.2.3 Numerical examples based on 2.2.2.	Relation between mean, median and mode. 2.1.3 Merits and Demerits of Mean, Median and Mode 2.1.4 Numerical examples based on 2.1.2 2.1.5 Determination of Median and Mode by Graph **2.2 Measures of Dispersion(Variability):** 2.2.1 Meaning of Variability, Absolute and Relative measures ofdispertion. 2.2.2 Definitions of Q.D., M.D., S.D. and Variance, Combined variance and their relative measures, Coefficient of Variation 15(C.V.). 2.2.3 Numerical examples based on 2.2.2.	
Analysis of Bivariate data **3.1 Correlation** 3.1.1 Concept of Correlation, Types of correlation (Positive, Negative, Linear and Non-linear), Methods of studying correlation: Scatter diagram, Karl Pearson's Correlation Coefficient (r) and Spearman's Rank Correlation Coefficient (R). 3.1.2 Interpretation of $r = +1$, $r = -1$, $r = 0$. 3.1.3 Numerical examples on 3.1.1and 3.1.2 **3.Regression:** 3.2.1. Concept of Regression, Definitions of regression coefficients and Equations of regression lines. Properties of regression coefficients. (Statements only) 3.2.2 Numerical examples on 3.2.1.	**Analysis of Bivariate data** **3.1 Correlation** 3.1.1 Concept of Correlation, Types of correlation (Positive, Negative, Linear and Non-linear), Methods of studying correlation: Scatter diagram, Karl Pearson's Correlation Coefficient (r) and Spearman's Rank Correlation Coefficient (R). 3.1.2 Interpretation of $r = +1$, $r = -1$, $r = 0$. 3.1.3 Numerical examples on 3.1.1and 3.1.2 **3.Regression:** 3.2.1. Concept of Regression, Definitions of regression coefficients and Equations of regression lines. Properties of regression coefficients. (Statements only) 3.2.2 Numerical examples on 3.2.1.	......
Module4 – Sampling Techniques and Time Series Analysis **4.1 Sampling Techniques:** 4.1.1 Definitions of Sample, Population, Sampling, Sampling Method and Census	**Module4 – Sampling Techniques and Time Series Analysis** **4.1 Sampling Techniques:** 4.1.1 Definitions of Sample, Population, Sampling, Sampling Method and Census	......

| | | method. Advantages of sampling method over census method.
4.1.2 Types of sampling: Simple Random Sampling (with and without replacement), Stratified
Random Sampling, Merits and Demerits of S.R.S. and Stratified Sampling
4.1.3 Simple examples on Stratified Sampling.
4.2 Time Series: (Analysis and Forecasting)
4.2.1 Meaning and components of Time Series
4.2.2 Methods of determination of trend by
    (I) Method of Moving Averages.
    (II) Method of Progressive Averages.
    (III) Method of Least Squares (St.Line only)
     4.2.3 Numerical examples on 4.2.2. | method. Advantages of sampling method over census method.
4.1.2 Types of sampling: Simple Random Sampling (with and without replacement), Stratified
Random Sampling, Merits and Demerits of S.R.S. and Stratified Sampling
4.1.3 Simple examples on Stratified Sampling.
4.2 Time Series: (Analysis and Forecasting)
4.2.1 Meaning and components of Time Series
4.2.2 Methods of determination of trend by
    (I) Method of Moving Averages.
    (II) Method of Progressive Averages.
    (III) Method of Least Squares (St.Line only)
     4.2.3 Numerical examples on 4.2.2. | | |

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Year- 2021-22   **Term- IInd**
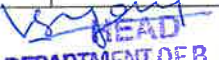
Name of teacher- Mrs. Kishori Abhijeet Sawardekar   Department- BCA

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Remark
B.C.A I Sem- II	Basics of Web Technology	**Module 1:Introduction** Introduction to internet and its applications, E-mail, telnet, FTP, E-commerce, video conferencing, e-business. Internet service providers, domain name server, internet address, World Wide Web , uniform resource locator (URL), browsers – internet explorer, netscape navigator etc. search engine, web saver – apache, proxy server, HTTP protocols.	**Module 1:Introduction** Introduction to internet and its applications, E-mail, telnet, FTP, E-commerce, video conferencing, e-business. Internet service providers, domain name server, internet address, World Wide Web , uniform resource locator (URL), browsers – internet explorer, netscape navigator etc. search engine, web saver – apache, proxy server, HTTP protocols.	......	
		Module 2 : HTML-5 What is HTML-5 , Basic Tags, Structure, Layout, Web Development Process Overview of HTML Tags, Formatting Tags, Headings(H1-H6), Tags and Attributes, Paragraph Tag, FONT Tag, List Tags, Ordered and Unordered Tags, Hyperlink, <HR><Marquee> Tags, Image <img> Tag with all attributes, Image and Image map. <TABLE>..</TABLE> tag with all attributes .<FORM>tag,Examples and case studies based on all tags.	**Module 2 : HTML-5** What is HTML-5 , Basic Tags, Structure, Layout, Web Development Process Overview of HTML Tags, Formatting Tags, Headings(H1-H6), Tags and Attributes, Paragraph Tag, FONT Tag, List Tags, Ordered and Unordered Tags, Hyperlink, <HR><Marquee> Tags, Image <img> Tag with all attributes, Image and Image map. <TABLE>..</TABLE> tag with all attributes .<FORM>tag,Examples and case studies based on all tags.	......	
		Module IIIBasic of CSS Introduction to CSS, CSS Basics, Syntax / Rule of CSS , Selectors, properties and values, Applying CSS to HTML tags, Types : Internal, Inline, External CSS,CSS Colors, Background and color, CSS Box Model, CSS Margins, Padding, Borders CSS Text and Font Properties	**Module IIIBasic of CSS** Introduction to CSS, CSS Basics, Syntax / Rule of CSS , Selectors, properties and values, Applying CSS to HTML tags, Types : Internal, Inline, External CSS,CSS Colors, Background and color, CSS Box Model, CSS Margins, Padding, Borders CSS Text and Font Properties	......	

		Module 4:CSS – Page Layout Classes IDs DIVs Spans, The Box, Styling Page Divisions, Paragraph Formatting. NavBars : Adding a Navigation Bar, Customizing a Navigation Bar. Case Study: Select any topic of your interest and Design Project using above technologies which suit for Desktop and Laptop computer screen only.	**Module 4: CSS – Page Layout** Classes IDs DIVs Spans, The Box, Styling Page Divisions, Paragraph Formatting. NavBars : Adding a Navigation Bar, Customizing a Navigation Bar. Case Study: Select any topic of your interest and Design Project using above technologies which suit for Desktop and Laptop computer screen only.	....	
B.C.A I Sem-II	**Operating System**	**Module I Introduction of Operating System-** Definition, Objectives, Functions, Generations of OS, Types of OS (Batch, Multiprogramming, Time Sharing, Real time, Distributed, Personal, Mobile). OS Structure (Monolithic, Layered, Microkernel, Exokernel, Client-Server).	**Module -I Introduction of Operating System-** Definition, Objectives, Functions, Generations of OS, Types of OS (Batch, Multiprogramming, Time Sharing, Real time, Distributed, Personal, Mobile). OS Structure (Monolithic, Layered, Microkernel, Exokernel, Client-Server).	....	
		Module II Process Management – Process Management- Introduction to Processes, Process Model, Process creation, Process termination, Process hierarchy, Process states.	**Module II Process Management –** Process Management- Introduction to Processes, Process Model, Process creation, Process termination, Process hierarchy, Process states.	....	
		Module III Memory Management- Memory Management- Introduction to memory management, Requirements (Relocation, Protection, Sharing, Logical organization, Physical organization). Memory partitioning-Fixed partitioning, Dynamic partitioning, Paging, Segmentation. Concept of Virtual memory.	**Module III Memory Management-** Memory Management- Introduction to memory management, Requirements (Relocation, Protection, Sharing, Logical organization, Physical organization). Memory partitioning-Fixed partitioning, Dynamic partitioning, Paging, Segmentation. Concept of Virtual memory.	....	
		Module IV File System- Files & File system, File structure, File types, File access, File attributes, Basic file operations. Directories- Single-level & Hierarchical directory systems, Path names & Directory operations. Differentiate between Windows and Linux OS.	**Module IV File System-** Files & File system, File structure, File types, File access, File attributes, Basic file operations. Directories- Single-level & Hierarchical directory systems, Path names & Directory operations. Differentiate between Windows and Linux OS.	....	

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(Signature of the Teacher)