### VIVEKANAND C LLEGE, KOLHAPUR(AUTONO OUS)

### STATEMENT OF SYLLABUS COVERED

Year- 2021-22

Term- Ist

Name of teacher- Mr. V. B. Pujari

Department-B.C.A

			Department- B.C.A.		
Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Rema rk
B.C.A I Sem-I	Programmi ng in C Part-I	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 (Define Problem, Analyze Problem, Explore Solution). ALGORITHM: Definition, notations, characteristics of algorithm	•••••	
		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, doWhile loop, Unconditional statements: Break,	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, doWhile loop, Unconditional statements: Break,	•••••	
NVEKANAN	ESTD JUNE 1964	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.	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.		
B.C.A IISem- III	Object Oriented Programmi ng with		Principles of Objective Oriented Programming: History of OOP, Introduction to Object Oriented Programming, Basic Concepts of Object Oriented	••••	

IIISem-V	Commerce	Commerce; Main Activities of Electronic	Commerce; Main Activities of Electronic		<u> </u>
B.C.A	E-	Introduction to E-Commerce: Defining	Introduction to E-Commerce: Defining		
1	utonomous	get ( ) Put ( ), read ( ) Write ( ).	Output Operations- get ( ) Put ( ), read ( ) Write ( ).		
THE STATE OF THE S	1964	seekg,seekp,tellg,tellp), Input Output Operations-	File Pointer(using-seekg,seekp,tellg,tellp), Input		
(A)	JUNE E	Manipulation of File Pointer(using-	Opening Modes, File Pointers, Manipulation of		
(3)	STO E	for File Stream Operations, Opening and Closing a File, File Opening Modes, File Pointers,	Operations, Opening and Closing a File, File		
60	DLUEGE	Working with Files: File-Definition, Use, Classes	Working with Files File-Definition, Use, Classes for File Stream		
		friend function.	friend function.		
		(Unary & Binary)-with member function and	(Unary & Binary)-with member function and		
		for Operator Overloading, Operator Overloading	for Operator Overloading, Operator Overloading		
		compile Time and Run time polymorphism, Rules	compile Time and Run time polymorphism, Rules	•••••	
		Derived Classes, Polymorphism: Meaning,	Derived Classes, Polymorphism: Meaning,		
		Pointer, Pointer to Object, this pointer, Pointer to	Pointer, Pointer to Object, this pointer, Pointer to		
	20	Pointers, Virtual Functions & Polymorphism	Pointers, Virtual Functions & Polymorphism		
		(Single, Multiple, Multilevel, Hierarchical, Hybrid)	(Single, Multiple, Multilevel, Hierarchical, Hybrid)		
		Inheritance-Definition, Types of Inheritance	Inheritance-Definition, Types of Inheritance		
		Copy, Dynamic), Destructors-Definition, Use,	Copy, Dynamic), Destructors-Definition, Use,		
		Types of Constructors (Default, Parameterized,	Types of Constructors (Default, Parameterized,		
		Constructors-Definition, Use of Constructors,	Constructors-Definition, Use of Constructors,		
		Constructors & Destructors, Inheritance	Constructors & Destructors, Inheritance		
		Arrays of Objects	Arrays of Objects	• • • • •	
0		Member, Object declaration and Initialization,	Member, Object declaration and Initialization,		
		Access Specifiers, Friend Function, Static data	Access Specifiers, Friend Function, Static data		
		Class, Data members and Member Functions,	Class, Data members and Member Functions,		
		Functions, Function Overloading, Specifying a	Functions, Function Overloading, Specifying a		
		Concept of Function, main() Function, Inline	Concept of Function, main() Function, Inline		
		Functions in C++, Classes & Objects:	Functions in C++, Classes & Objects:		
		Looping).			
		Structures (Conditional, Unconditional and	(Conditional, Unconditional and Looping).		
		Operators in C++, Operator Precedence, Control	C++, Operator Precedence, Control Structures		
		Data Types, Type Compatibility, Variables,	Types, Type Compatibility, Variables, Operators in		
		Tokens, Keywords, Identifiers and Constants,	Tokens, Keywords, Identifiers and Constants, Data		
		Languages, Difference between C and C++. Beginning with C++	Beginning with C++		
		Oriented Programming, Object Oriented	Programming, Object Oriented Languages, Difference between C and C++.		
1	C++	Object Oriented Programmin 3enefits of Object	Programming, Benefit of Object Oriented		, '

	Commerce; Benefits of E mmerce; Broad	Commerce; Benefits & E-Commerce; Broad		î
	Goals of Electronic Commerce; Main	Goals of Electronic Commerce; Main		(4)
	Components of E-Commerce; Functions of	Components of E-Commerce; Functions of		
	Electronic Commerce - Communication,	Electronic Commerce - Communication,		
	Process Management, Service Management,	Process Management, Service Management,		
	Transaction Capabilities; Limitations,	Transaction Capabilities; Limitations,		
	Challenges and opportunities, Process of E-	Challenges and opportunities, Process of E-		
	Commerce; Types of E-Commerce; Role of	Commerce; Types of E-Commerce; Role of		
	Internet and Web in E-Commerce;	Internet and Web in E-Commerce;		
	Technologies Used; E-Commerce Systems;	Technologies Used; E-Commerce Systems;		
	Pre-requisites of E-Commerce; Scope of E-	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,		8	
	Introduction to M-Commerce.	Commerce, Introduction to M-Commerce.		
	Electronic payment System	Electronic payment System	1	
	Concept of e-payment, Difference between traditional	Concept of e-payment, Difference between traditional		
	and electronics payment system, UPI, NCPI, Digital	and electronics payment system, UPI, NCPI, Digital		
1	cash, Credit and Debit card system, Smart Card, E	cash, Credit and Debit card system, Smart Card, E	•••••	
	Wallet, Prepaid, post paid and instant payment system,	Wallet, Prepaid, post paid and instant payment system,		
	Electronic funds transfer, Concept of e-banking.	Electronic funds transfer, Concept of e-banking.		
	E-Security: Concept of E-security, Security threats-	E-Security: Concept of E-security, Security threats-		
	concept and types, Malicious code, Phishing and	concept and types, Malicious code, Phishing and		
	identity theft, Hacking and cyber vandalism, Credit	identity theft, Hacking and cyber vandalism, Credit		
	card fraud/Theft, Spoofing, Denial of service (DoS),	card fraud/Theft, Spoofing, Denial of service (DoS),		
	Firewall and proxy server.	Firewall and proxy server.		
×	Security Solutions	Security Solutions		
	Concept of encryption and decryption, Symmetric and			
	asymmetric key encryption, Cipher text, Digital	asymmetric key encryption, Cipher text, Digital Envelopes, Digital certificates, Security socket layer	•••••	
	Envelopes, Digital certificates, Security socket layer	(SSL), Limitations of encryption solutions.		
	(SSL), Limitations of encryption solutions.	(OOL), Limitations of energytion solutions.		



(Signature of the Teacher)

(Signature PARTHE PREAD OF Department)

(NEKANAND COLLEGE, KOLHAPUR

(AUTONOMOUS)

# VIVEKANAND CCLLEGE, KOLHAPUR(AUTON MOUS) STATEMENT OF SYLLABUS COVERED

Year- 2021-22

 $\textbf{Term-}\,\mathbf{II}^{nd}$ 

T .	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	Programmi ng 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.		
14		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. <b>Dynamic memory allocation-malloc(),calloc(),realloc()</b> .	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	Organizati onal 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.		
	ESTD JUNE 1964 Autonomous	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 :	Stress Management :		· ·
		A) Organization Culture & Stress Management: B)	A) Organization Culture & Stress Management: B)		ž.
		Stress Management C) Quality Work Life	Stress Management C) Quality Work Life		
		Group Behavior ,Conflict and Stress:	Group Behavior ,Conflict and Stress:		
		Nature of Group. Types of Groups, Team Building	Nature of Group. Types of Groups, Team Building		
		and Effective team works, Stages of group	and Effective team works, Stages of group	•••••	
		Formation, Concept of conflict- Conflicts & Stress	Formation, Concept of conflict- Conflicts & Stress		
		<ul> <li>Concept, why and how &amp; Management</li> </ul>	– Concept, why and how & Management		
B.C.A	Linux	Introduction 12	Introduction 12		
IIISem-	Operating	1.1 Operating system	1.1 Operating system		
VI	System	1.2 Types of operating system	1.2 Types of operating system		
		1.3 Functions of operating system	1.3 Functions of operating system		
		1.4 History and development of Linux	1.4 History and development of Linux		
		1.5 Features of Linux	1.5 Features of Linux		
		1.6 Login, logout procedure, Concept of shell,	1.6 Login, logout procedure, Concept of shell,		
		kernel, Kernel-shell relationship	kernel, Kernel-shell relationship		
		Handling files and directory's 12	Handling files and directory's 12		
		2.1 Concept of file, types, file system tree	2.1 Concept of file, types, file system tree		
		2.2 Different GPU (clear, cal, date, wc, who)	2.2 Different GPU (clear, cal, date, wc, who)		
		2.3 file handling- ls ,cat ,cp, mv , rm commands	2.3 file handling- ls ,cat ,cp, mv , rm commands		
		, listing file names, usingmeta characters (*,?	, listing file names, using		
		,[]).	meta characters (*,?,[]).		
		2.4 Concept of directory, home directory,	2.4 Concept of directory, home directory,		1
		directory handling commands- cd ,mkdir,	directory handling commands- cd,		
		rmdir,pwd.	mkdir, rmdir,pwd.		
		2.5 Basic file attributes, change file/directory,	2.5 Basic file attributes, change file/directory,		
		chmod command	chmod command		
		2.6 Filters-cut, paste, sort, unique, head, tail,	2.6 Filters-cut, paste, sort, unique, head, tail,		
		grep commands.	grep commands.		
		2.7 Command linking using pipe ( ) operator,	2.7 Command linking using pipe ( ) operator,		
	7	command substitution.	command substitution.		
/	COLLEGE	VI editor 12	VI editor 12		
13	ESTD E	3.1 Vi Editor, use of VI, features of VI	3.1 Vi Editor, use of VI, features of VI		
ES (	ESTD ) S	3.3 Different modes and working with VI editor	3.3 Different modes and working with VI editor		
UNEKANA	1964	3.4 Command mode -cursor movements(	3.4 Command mode -cursor movements(	•••••	
1/2	Qutonomous.	k,j,h,l), delete( character, line, word),	k,j,h,l), delete( character, line, word),		
		Screen up, down, use of repeat factor, joining	Screen up, down, use of repeat factor, joining		
		lines (J), searching for	lines (J), searching for		

	pattern ( / and ?)	pattern (/ and ?)	4)
ľ	3.5 Input mode- switching with (	3.5 Input mode- switching with (	
	I,o,r,s,a,I,O,R,S,A)	I,o,r,s,a,I,O,R,S,A)	
	3.6  ex mode - saving (w, x, q)	3.6  ex mode - saving (w, x, q)	
	Simple Shell programming 12	Simple Shell programming 12	
	4.1 Concept of Shell Script, running	a shell 4.1 Concept of Shell Script, running a shell	
	script	script	
	4.2 Statements – read, echo, test, is	f, case, 4.2 Statements – read, echo, test, if, case,	
	exit.	exit.	******
	4.3 Loops- while, until, for	4.3 Loops- while, until, for	
3:	4.4 Command line arguments	4.4 Command line arguments	
	4.5 Exit status of a command	4.5 Exit status of a command	

(Signature of the Head of Department)

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



### VIVEKANAND COLLEGE, KOLHAPUR (AUTONO OUS)

#### STATEMENT OF SYLLABUS COVERED

Year- 2021-22 Name of teacher- Ms. Vaishali Durgaram Patil Term- I<sup>st</sup>
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.	•••••	
NEKAM.	ESTD JUNE 1964	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 A Junting:- 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 Manageme 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		. 8
		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		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		
	ESTD HAPP 1964	Human resource Planning & Development :  Meaning and need of HRP, Process of HRP in LT, Industry, Factors affecting HRP, Joh Analysis Virtual Organization :	Human resource Planning & Development:  Meaning and need of HRP, Process of HRP in LT Industry, Factors affecting HRP, Joh Analysis Virtual Organization:  Virtual Organization: meaning, type., Difference		

		between Traditional and Virtue rganization. ,features of Virtual Organization, HRM in Virtual Organization,	between Traditional and Vall Organization. ,features of Virtual Organization, HRM in Virtual Organization,	1 .	. (4)
		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)	1	
	9	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	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		

(Signature of the Head of Department)

DEPARTMENT OF B. C. A.
VIVEKANAND GOLLIGE, KOLHARUR
(AUTONOMOUS)





### VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS) STATEMENT OF SYLLABUS COVERED

Year- 2021-22

Name of teacher- Mrs. Vaishali D. Patil

Term- II<sup>nd</sup>
Department- BCA

Class B.C.A- I Sem-II	Subject HRM	Syllabus assigned  Introduction to HRM: Introduction, Concept, Definition, HRD, Functions of HRM, Organization of HR, Role HRM, Qualities of HR Manager, Limitations & challenges of HRM.	Syllabus Covered  Introduction to HRM: Introduction, Concept, Definition, HRD, Functions of HRM, Organization of HR, Role HRM, Qualities of HR Manager, Limitations & challenges of HRM.	Syllabus not to Covered	Rema rk
G.		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.		9
S. H. I.	ESTD JUNE 1964	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		ß
BCA III Sem-VI	Strategic Manageme nt	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 strategyadv/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 strategyadv/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		





### VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS) STATEMENT OF SYLLABUS COVERED

Year- 2021-22

Term- Ist

Name of teacher- Mrs. MeghaSagar Patil

Department-BCA

B.C.A   Fundamental of   Computers   Computers   Computers   Sem-I   Computers   Computers   Computers   Sem-I   Computers   Evolution of computer and Generations, Types of computer — Analog & Digital computers, Hybrid 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   Introduction to computer: Computer of Characteristics, Concept of Hardware, Software of Computer of Computer, Limitations of Computer of Structure and Working of Computer: Purpose Computer, Limitations of Computer of Structure and Working of Computer: Purpose Computer, Limitations of Computer of Structure and Working of Computer of Structure and Working of Computer: Purpose Computer, Limitations of Computer	Syllabus not to R Covered	Remar
Computers  Characteristics, Concept of Hardware, Software, Evolution of computer and Generations, Types of computer — Analog & Digital computers, Hybrid 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  Characteristics, Concept of Hardware, Software, Evolution of computer and Generations, Types of computer — Analog & Digital computer Purpose Computer, Limitations of Comp Hybrid computers, General purpose & Spe Purpose Computer, Limitations of Comp Hybrid computers, General purpose & Spe Purpose Computer and Generations, Types of computer — Analog & Digital computer Purpose Computer, Limitations of Comp Hybrid computers, General purpose & Spe Purpose Computer, Limitations of Comp Memory Unit, Bus structure of Digital Comp - Address, data and control bus.  Module II Input /Output Devices: Input devices - Keyboard, Mouse, Scanner, MICR, OMR. Output devices — VDU, Printers — Dot Matrix, Daisy-wheel, Inkjet, Laser, Line printers and	uter	
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 Digital computer — Analog & Digital computer Hybrid computers, General purpose & Special Purpose Computer, Limitations of Computers and Hybrid computers, General purpose & Special Purpose Computer, Limitations of Computer in Various fields. Structure and Working of Computer: Functional Block diagram of computer. CPU, A 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	vare	
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  Hybrid computers, General purpose & Special Purpose Computer, Limitations of Comp Purpose Computer, Limitations of Comp Purpose Computer, Limitations of Comp Memory Unit, Bus structure and Working of Computer: Functional Block diagram of computer. CPU, A Memory Unit, Bus structure of Digital Comp - Address, data and control bus.  Module II Input /Output Devices: Input de - Keyboard, Mouse, Scanner, MICR, OMR. Output devices - VDU, Printers - Dot Matrix, Daisy-wheel, Inkjet, Laser, Line printers and	ypes	
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	ters,	
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  Applications of Computer in Various fits Structure and Working of Computer: Functional Block diagram of computer. CPU, A Memory Unit, Bus structure of Digital Comp - Address, data and control bus.  Module II Input /Output Devices: Input de - Keyboard, Mouse, Scanner, MICR, OMR. Output devices - VDU, Printers - Dot Matrix, Daisy-wheel, Inkjet, Laser, Line printers and	ecial	
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    Structure and Working of Computer: Functional Block diagram of computer. CPU, A Memory Unit, Bus structure of Digital Computer - Address, data and control bus.    Module II Input / Output Devices: Input devices - Keyboard, Mouse, Scanner, MICR, OMR. Output devices - VDU, Printers - Dot Matrix, Daisy-wheel, Inkjet, Laser, Line printers and	uter,	
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  Block diagram of computer. CPU, A Memory Unit, Bus structure of Digital Comp - Address, data and control bus.  Module II Input /Output Devices: Input de - Keyboard, Mouse, Scanner, MICR, OMR. Output devices - VDU, Printers - Dot Matrix, Daisy-wheel, Inkjet, Laser, Line printers and		
Unit, Bus structure of Digital Computer - Address, data and control bus.  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  Memory Unit, Bus structure of Digital Computer - Address, data and control bus.  Module II Input /Output Devices: Input de - Keyboard, Mouse, Scanner, MICR, OMR. Output devices - VDU, Printers - Dot Matrix, Daisy-wheel, Inkjet, Laser, Line printers and		
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 - Address, data and control bus.  Module II Input /Output Devices: Input de  - Keyboard, Mouse, Scanner, MICR, OMR. Output devices - VDU, Printers - Dot Matrix Daisy-wheel, Inkjet, Laser, Line printers and		
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  Module II Input /Output Devices: Input de  - Keyboard, Mouse, Scanner, MICR, OMR. Output devices - VDU, Printers - Dot Matrix Daisy-wheel, Inkjet, Laser, Line printers and	uter	
- Keyboard, Mouse, Scanner, MICR, OMR. Output devices – VDU, Printers – Dot Matrix, Daisy-wheel, Inkjet, Laser, Line printers and - Keyboard, Mouse, Scanner, MICR, OMR. Output devices – VDU, Printers – Dot Matrix, Daisy-wheel, Inkjet, Laser, Line printers and		
Output devices – VDU, Printers – Dot Matrix, Daisy-wheel, Inkjet, Laser, Line printers and Daisy-wheel, Inkjet, Laser, Line printers and	vice	
Daisy-wheel, Inkjet, Laser, Line printers and Daisy-wheel, Inkjet, Laser, Line printers and		
		51
Plotters. Computer Memory: Memory Concept, Plotters. Computer Memory: Memory Conc	ept,	
Memory cell, memory organization,  Memory cell, memory organization,	•••••	
Semiconductor memory- RAM, ROM,  Semiconductor memory- RAM, ROM,  REPORT FROM A FRENCH FROM A FRAME OF THE PROPERTY OF THE PRO		
PROM,EPROM, PROM,EPROM,		
Secondary Storage devices - Magnetic tape,  Secondary Storage devices - Magnetic tape,  Secondary Storage devices - Magnetic tape,	-	
Magnetic Disk (floppy disk & Hard disk.),  Magnetic Disk (floppy disk & Hard disk.)	SK.),	
Compact Disk.  Compact Disk.		
Module III Computer Language and  Software Number System Desired Birary	.,	
Software: Number System - Decimal, Binary, Octal & Hexadecimal, Conversion from One base Octal & Hexadecimal, Conversion from One		
to another base. Computer Codes - : BCD, EBCDIC, ASCII, Machine Language, Assembly EBCDIC, ASCII, Machine Language, Assembly		
language High Level language Accembler language High Level language Accembler		
Compiler, Interpreter. Characteristics of good  Compiler, Interpreter. Characteristics of good	d	
G. G. and and indication of the property of the control of the con	1 1	
Software - System and application software - System and application software		

		Module IV Operating System: Operating	Module IV Operating System: Operating		
	×	system, Evolution of operat, system. Function	system, Evolution of olating system. Function		
		of operating system. Types of operating systems.	of operating system. Types of operating systems.		**
		Detailed study of Windows Operating System.	Detailed study of Windows Operating System.	547225	
		Introduction and Features of LINUX OS.	Introduction and Features of LINUX OS.		
B.C.A	System Analysis	Module I Introduction to System Concepts	Module -I Introduction to System Concepts		
II	And Design	1.1 Definition, Elements of System	1.1 Definition, Elements of System		
Sem-		1.2 Characteristics of System	1.2 Characteristics of System		
III		1.3 Types of System	1.3 Types of System	******	
		1.4 System Concepts	1.4 System Concepts		
		1.1 System Concepts	The System Concepts		
		Module II Requirement Analysis	Module II Requirement Analysis		
		2.1 Definition of System Analysis	2.1 Definition of System Analysis		
		2.2 Requirement Anticipation	2.2 Requirement Anticipation		
		2.3 Knowledge and Qualities of System Analyst	2.3 Knowledge and Qualities of System Analyst		
		2.4 Role of a System Analyst	2.4 Role of a System Analyst		1
		2.5 Feasibility Study And It's Types	2.5 Feasibility Study And It's Types		
		2.6 Fact Gathering Techniques	2.6 Fact Gathering Techniques		
		2.7 SRS(System Requirement Specification)	2.7 SRS(System Requirement Specification)		
		Module III Introduction to Software	Module III Introduction to Software		
		Engineering	Engineering		
		3.1 Definition Need for software Engineering	3.1 Definition Need for software Engineering		
		3.2 Software Characteristics	3.2 Software Characteristics		
		3.3 Software Qualities ( McCall's Quality	3.3 Software Qualities (McCall's Quality		
		Factors	Factors		
		Software Development Methodologies	Software Development Methodologies	******	
		3.4 SDLC (System Development Life Cycle)	3.4 SDLC (System Development Life Cycle)		
		3.5 Waterfall Model	3.5 Waterfall Model		
		3.6 Spiral Model	3.6 Spiral Model		
		3.7 Prototyping Model	3.7 Prototyping Model		
		3.8 RAD Model	3.8 RAD Model		
		Module IV Analysis and Design Tools	Module IV Analysis and Design Tools		
	COLLEGE	4.1 Entity-Relationship Diagrams	4.1 Entity-Relationship Diagrams		
	ECTD E	4.2 Decision Tree and Decision Table	4.2 Decision Tree and Decision Table	-	
	13/ FOID 13	4.3Data Flow Diagrams (DFD)	4.3Data Flow Diagrams (DFD)		
	1964 /51	4.4 Data Dictionary	4.4 Data Dictionary	10.000	
	19	4.4.1 Elements of DD	4.4.1 Elements of DD		
	Autonomous	4.4.2 Advantage of DD	4.4.2 Advantage of DD		
		4.5 Input And Output Design	4.5 Input And Output Design		

		4.6 CASE STUDIES (Based on Above Topic)	4.6 CASE STUDIES (Based on Above Topic)		
		Software Testing	Software Testing		*
		4.7 Definition, Test characteristics	4.7 Definition, Test characteristics		
		4.8 Types of testing	4.8 Types of testing		
		4.8.1 Black-Box Testing	4.8.1 Black-Box Testing		
	5	4.8.2 White-Box Testing	4.8.2 White-Box Testing		
		4.8.3 Unit testing	4.8.3 Unit testing		
		4.8.4 Integration testing	4.8.4 Integration testing		
		4.9 Validation & Verification	4.9 Validation & Verification		
B.C.A	Networking	Module I Basics of Data communication	Module I Basics of Data communication		
III	Metworking	1.1. Data Communication concept	1.1. Data Communication concept	J	
1		1.1.1 Components-sender, receiver, message,	1.1.1 Components-sender, receiver, message,		
Sem- V		transmission media	transmission media		
V		1.1.2 Data Flow- simplex, half-duplex, or full-	1.1.2 Data Flow- simplex, half-duplex, or full-		
		duplex	duplex		
		1.2 Networks	1.2 Networks		
		1.2.1 Definition, Advantages and disadvantages	1.2.1 Definition, Advantages and disadvantages		
		1.2.2 Categories of Networks- LAN, WAN.	1.2.2 Categories of Networks- LAN, WAN.		
		MAN	MAN		
		1.2.3 Network Architecture-Client-Server and	1.2.3 Network Architecture-Client-Server and		
		Peer to peer	Peer to peer		
	9	1.3 Multiplexing and switching	1.3 Multiplexing and switching		
		1.3.1 Frequency-Division Multiplexing,	1.3.1 Frequency-Division Multiplexing,		
		Wavelength-Division Multiplexing,	Wavelength-Division Multiplexing,	2	
		Time-Division Multiplexing	Time-Division Multiplexing		
		1.3.2 Circuit switching, Packet Switching,	1.3.2 Circuit switching, Packet Switching,		
		Message Switching	Message Switching		
		Module IITransmission media and Reference	Module II Transmission media and		
		Models	Reference Models		
		2.1 Transmission Media	2.1 Transmission Media		
		2.1.1 Guided Media - Twisted-Pair Cable,	2.1.1 Guided Media - Twisted-Pair Cable,		
		Coaxial Cable, Fiber-Optic Cable	Coaxial Cable, Fiber-Optic Cable		
		2.1.2 Unguided Media: Radio Waves,	2.1.2 Unguided Media: Radio Waves,		
		Microwaves, Infrared, satellite	Microwaves, Infrared, satellite		
		communication	communication	******	
	COLLEGE	2.2 Transmission Modes- Parallel and Serial -(	2.2 Transmission Modes- Parallel and Serial -(		
-/	FSTD &	Asynchronous, Synchronous)	Asynchronous, Synchronous)		
	I JUNE )	2.3 Reference Models	2.3 Reference Models		
1	1964 /5/	2.3.1 OSI reference model	2.3.1 OSI reference model		
	*(Autonomous)	2.3.2 TCP/IP reference model	2.3.2 TCP/IP reference model		
		2.3.3 Comparison of OSI and TCP/IP reference	2.3.3 Comparison of OSI and TCP/IP reference		

	model	model		
	2.4 Protocol Standards	2.4 Protocol Standards	14	
	2.5 IP address scheme and characteristics of IP	2.5 IP address scheme and characteristics of IP		
	address	address		
	Module III Data link, Network and Transport	Module III Data link, Network and Transport		
	layer	layer		
N.	3.1 Data link Layer-	3.1 Data link Layer-		
	3.1.1Design issues	3.1.1Design issues		
	3.1.2 Framing, error detection and correction	3.1.2 Framing, error detection and correction		
	3.2 Network layer	3.2 Network layer		-
	3.2. 1 design issues of network layer	3.2. 1 design issues of network layer		
	3.2.2 Routing algorithm (shortest path, Flooding,	3.2.2 Routing algorithm (shortest path, Flooding,	•••••	
	distance vector,)	distance vector,)		
	3.2.3 Congestion control	3.2.3 Congestion control		
	3.3 Transport layer	3.3 Transport layer		
	3.3.1 Transport Layer Primitives: listen, connect,	3.3.1 Transport Layer Primitives: listen, connect,		
	send, receive, disconnect	send, receive, disconnect		
	3.3.2 Protocols: TCP, UDP	3.3.2 Protocols: TCP, UDP		
	Module IV Session, Presentation and	Module IV Session, Presentation and		
	Application layer 12	Application layer 12		
	4.1 Session layer:	4.1 Session layer:		
	4.1.1 Services: dialog management,	4.1.1 Services: dialog management,		
	synchronization, activity management,	synchronization, activity management,		
	exception handling	exception handling		
	4.1.2 Remote procedure calls	4.1.2 Remote procedure calls		
	1			
1 1	4.2 Presentation layer:	4.2 Presentation layer:		
	4.2 Presentation layer: 4.2.1 Services: Translation, compression,	4.2 Presentation layer: 4.2.1 Services: Translation, compression,		
	4.2.1 Services: Translation, compression,	,	•••••	
	4.2.1 Services: Translation, compression, encryption	4.2.1 Services: Translation, compression,	*****	
	4.2.1 Services: Translation, compression, encryption 4.2.2 Cryptography: concept, symmetric key &	4.2.1 Services: Translation, compression, encryption	•••••	
	4.2.1 Services: Translation, compression, encryption 4.2.2 Cryptography: concept, symmetric key & asymmetric key cryptography	4.2.1 Services: Translation, compression, encryption 4.2.2 Cryptography: concept, symmetric key &	•••••	
	<ul> <li>4.2.1 Services: Translation, compression, encryption</li> <li>4.2.2 Cryptography: concept, symmetric key &amp; asymmetric key cryptography</li> <li>4.3 Application layer:</li> </ul>	4.2.1 Services: Translation, compression, encryption 4.2.2 Cryptography: concept, symmetric key & asymmetric key cryptography	•••••	
	4.2.1 Services: Translation, compression, encryption 4.2.2 Cryptography: concept, symmetric key & asymmetric key cryptography	4.2.1 Services: Translation, compression, encryption 4.2.2 Cryptography: concept, symmetric key & asymmetric key cryptography 4.3 Application 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	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	•••••	
	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	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	•••••	

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

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# IVEKANAND OLLEGE, KOLHAPUR (AUTONOMOU STATEMENT OF SYLLABUS COVERED Term- II<sup>nd</sup>

Year- 2021-22

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.	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.	·····	
and the state of t	COLLEGE GOLHADOL STATE OF THE STORY OF THE S	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	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		

	2.5.1 Files of Unordered Records (Heap	2.5.1 Files of Unordered Records (Heap	
	Files)	Files)	
	2.5.2 File of Ordered Records (Sorted	2.5.2 File of Ordered Records (Sorted	
	Files)	Files)	
	2.5.3 Hash Files	2.5.3 Hash Files	
	2.5.4 Indexed file	2.5.4 Indexed file	
	Module III Data Models	Module III Data Models	
	3.1 Introduction	3.1 Introduction	
	3.2 Data Models	3.2 Data Models	
	3.2.1 Object Based Logical Model	3.2.1 Object Based Logical Model	
	3.2.2 Record Base Logical Model	3.2.2 Record Base Logical Model	
	a. Relational Model	a. Relational Model	
	b. Network Model	b. Network Model	
	c. Hierarchical Model	c. Hierarchical Model	
	3.3 Entity Relationship Model	3.3 Entity Relationship Model	
	3.3.1 Entity Set	3.3.1 Entity Set	
	3.3.2 Attribute	3.3.2 Attribute	
	3.3.3 Relationship Set	3.3.3 Relationship Set	
	3.4 E-R Model terms Introduction	3.4 E-R Model terms Introduction	
	a. Relation	a. Relation	
	b. Tuple	b. Tuple	
	c. Attribute	c. Attribute	
	d. Cardinality	d. Cardinality	
	e. Degree	e. Degree	
	f. Domain	f. Domain	
	3.5 Keys	3.5 Keys	
	3.5.1 Super Key	3.5.1 Super Key	
	3.5.2 Candidate Key	3.5.2 Candidate Key	
	3.5.3 Primary Key	3.5.3 Primary Key	
	3.5.4 Foreign Key	3.5.4 Foreign Key	
	3.6. Relational Database Design	3.6. Relational Database Design	
	3.6.1 Introduction	3.6.1 Introduction	
-	3.6.2Normalization	3.6.2Normalization	
	3.6.3 Normal Form	3.6.3 Normal Form	
COLLEGA	3.6.1 1 NF	3.6.1 1 NF	
3 FOTO TO	3.6.2 2 NF	3.6.2 2 NF	
(S) JUNE ) E	3.6.3 3 NF	3.6.3 3 NF	
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Monomous!	Module IV Relational algebra	Module IV Relational algebra	
	4.1 Introduction	4.1 Introduction	

		4.2 Operations	4.2 Operations		
		a. Select	a. Select		
		b. Project	b. Project		•
		c. Union	c. Union		
		d. Difference	d. Difference		
		e. Intersection	e. Intersection		
		f. Cartesian Product	f. Cartesian Product		
		g. Natural Join	g. Natural Join		
		4.3. SQL (Structured Query Language)	4.3. SQL (Structured Query Language)		
		4.3.1 Introduction	4.3.1 Introduction		
1		4.3.2 History of SQL	4.3.2 History of SQL		
		4.3.3 Basic Structure	4.3.3 Basic Structure		
		4.3.4 DDL Commands	4.3.4 DDL Commands		
		4.3.5 DML Commands	4.3.5 DML Commands	×	
		4.3.6 Simple Queries	4.3.6 Simple Queries		
		4.3.7 Nested Queries	4.3.7 Nested Queries		
		4.3.8 Aggregate Functions	4.3.8 Aggregate Functions		
•		4.3.9 Clauses	4.3.9 Clauses		
B.C.A II	DBMS	Module I Introduction of Database	Module I Introduction of Database		
Sem-IV		1.1 Introduction	1.1 Introduction		
		1.2 Definition of DBMS	1.2 Definition of DBMS		
		1.3 file processing system Vs DBMS	1.3 file processing system Vs DBMS		
		1.3.1 Limitation of file processing system	1.3.1 Limitation of file processing system		
		1.3.2 Comparison of File processing system	1.3.2 Comparison of File processing system		
		and DBMS	and DBMS		
		1.4 Advantages and Disadvantages of DBMS	1.4 Advantages and Disadvantages of DBMS		
		1.5 Users of DBMS	1.5 Users of DBMS		
		1.5.1 Database Designers	1.5.1 Database Designers		
		1.5.2 Application programmer	1.5.2 Application programmer		
		1.5.3 Sophisticated Users	1.5.3 Sophisticated Users		
		1.5.4 End Users	1.5.4 End Users		
	E	1.6 Capabilities of good DBMS	1.6 Capabilities of good DBMS		
		1.7 Types of Database System:	1.7 Types of Database System:		
/	COLLEGE	1.7.1 Centralized database system	1.7.1 Centralized database system		
13	ESTD E	1.7.2 client-server system	1.7.2 client-server system		
13/	ILINE E	1.7.3 Distributed database system.	1.7.3 Distributed database system.		
13	1964 /5/	Module II Organization of Database System	Module II Organization of Database System		
	Pulonomous 1	2.1 Introduction	2.1 Introduction		
	- Ononio	2.2. Logical and Physical Files	2.2. Logical and Physical Files Definitions	•••••	
		2.2.1 Logical and Physical Files Definitions	2.2.1 Logical and Physical Files Definitions		
K		2.2.2 File Structure	2.2.2 File Structure		

	2.3 Basic File Operations	2.3 Basic File Operations		
	2.3.1 Opening Files	2.3.1 Opening F		
	2.3.2 Closing Files	2.3.2 Closing Files		
	2.3.3 Reading and Writing	2.3.3 Reading and Writing		
	2.3.4 Seeking	2.3.4 Seeking		ļ
	2.4 File Organization	2.4 File Organization		
	2.4.1 Field and Record structure in file	2.4.1 Field and Record structure in file		
	2.4.2 Record Types	2.4.2 Record Types		
	2.5 Types of file organization	2.5 Types of file organization		
	2.5.1 Files of Unordered Records (Heap	2.5.1 Files of Unordered Records (Heap		
	Files)	Files)		
	2.5.2 File of Ordered Records (Sorted	2.5.2 File of Ordered Records (Sorted	ļ.	
	Files)	Files)		
	2.5.3 Hash Files	2.5.3 Hash Files		
	2.5.4 Indexed file	2.5.4 Indexed file		
	Module IIIData Models	Module III Data Models		
	3.1 Introduction	3.1 Introduction		
	3.2 Data Models	3.2 Data Models		
	3.2.1 Object Based Logical Model	3.2.1 Object Based Logical Model	*	
	3.2.2 Record Base Logical Model	3.2.2 Record Base Logical Model		
	a. Relational Model	a. Relational Model		
	b. Network Model	b. Network Model		
	c. Hierarchical Model	c. Hierarchical Model		
	3.3 Entity Relationship Model	3.3 Entity Relationship Model		
	3.3.1 Entity Set	3.3.1 Entity Set		
	3.3.2 Attribute	3.3.2 Attribute		
	3.3.3 Relationship Set	3.3.3 Relationship Set	-	1 .
	3.4 E-R Model terms Introduction	3.4 E-R Model terms Introduction		
	a. Relation	a. Relation	******	
	b. Tuple	b. Tuple		
	c. Attribute	c. Attribute		
	d. Cardinality	d. Cardinality		
	e. Degree	e. Degree		
	f. Domain	f. Domain	1	
NO GOLLEGO	3.5 Keys	3.5 Keys		
ST FOTO	3.5.1 Super Key	3.5.1 Super Key		
ESTD JUNE HAP 1964	3.5.2 Candidate Key	3.5.2 Candidate Key		
1964 15	3.5.3 Primary Key	3.5.3 Primary Key		
(A. *)	3.5.4 Foreign Key	3.5.4 Foreign Key		
on omous!	3.6. Relational Database Design	3.6. Relational Database Design 3.6.1 Introduction		
	3.6.1 Introduction			

		3.6.2Normalization	3.6.2Normalization	Ĭ	
		3.6.3 Normal Form	3.6.3 Normal Fo		
		3.6.1 1 NF	3.6.1 1 NF	~	*
		3.6.2 2 NF	3.6.2 2 NF		
		3.6.3 3 NF	3.6.3 3 NF	1	
		Module IV Relational algebra	Module IV Relational algebra		
		4.1 Introduction	4.1 Introduction		
		4.2 Operations	4.2 Operations	1	
		a. Select	a. Select		
	167	b. Project	b. Project		
		c. Union	c. Union		
		d. Difference	d. Difference		
		e. Intersection	e. Intersection		
		f. Cartesian Product	f. Cartesian Product		
		g. Natural Join	g. Natural Join		
		4.3. SQL (Structured Query Language)	4.3. SQL (Structured Query Language)	*****	
		4.3.1 Introduction	4.3.1 Introduction		
		4.3.2 History of SQL	4.3.2 History of SQL		
		4.3.3 Basic Structure	4.3.3 Basic Structure		
		4.3.4 DDL Commands	4.3.4 DDL Commands		
		4.3.5 DML Commands	4.3.5 DML Commands		
		4.3.6 Simple Queries	4.3.6 Simple Queries		
		4.3.7 Nested Queries	4.3.7 Nested Queries		
		4.3.8 Aggregate Functions	4.3.8 Aggregate Functions		
72		4.3.9 Clauses	4.3.9 Clauses		
B.C.A	DWDM	Module I Introduction to Data Mining	Module I Introduction to Data Mining		
III	DVVDIV	1.1 Basic Data mining Task	1.1 Basic Data mining Task		
Sem-VI		1.2 DM versus Knowledge Discovery in Databases	1.2 DM versus Knowledge Discovery in Databases		
		1.3 Data Mining Issues	1.3 Data Mining Issues		
Δ.		1.4 Data Mining Metrics	1.4 Data Mining Metrics		
		1.5 Social implementation of Data Mining	1.5 Social implementation of Data Mining		
		1.6 Overview of Application of Data mining	1.6 Overview of Application of Data mining		
		1.6.1 Architecture of DW	1.6.1 Architecture of DW	•••••	
		1.6.2 OLAP and Data Cubes	1.6.2 OLAP and Data Cubes		
	6115	1.6.3 Dimensional Data Modeling - star, snowflake	1.6.3 Dimensional Data Modeling - star, snowflake		
¥	COLLEGE	schemas	schemas		
	ESTD E	1.6.4 Data processing - Need Data cleaning. Data	1.6.4 Data processing - Need Data cleaning. Data		
(Like)	JUNE )	integration and Transformation,	integration and Transformation,		
1	1964	Data reduction	Data reduction		
1	Autonomous	1.6.5 machine learning	1.6.5 machine learning		
		1.6.6 pattern matching	1.6.6 pattern matching		

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

DEPARTMENT OF B. C. A.
VIVEKANAND COLLEGE, KOLHAPUR

(Signature of the Head of Department)



### VIVEKANAND CELLEGE, KOLHAPUR (AUTONOI DUS) STATEMENT OF SYLLABUS COVERED

Year- 2021-22

#### Term- 1<sup>st</sup> Term

Name of teacher- Mr. Raju Shivaji Sawant

**Department-BCA** 

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Remark
B.C.A	RDBMS with	Module I: Relational Database Management	Module I:Relational Database Management		
III	Oracle	System:	System:		
Sem-		1.1 Concept of RDBMS, Difference between	1.1 Concept of RDBMS, Difference between		
v		DBMS and RDBMS, Features of	DBMS and RDBMS, Features of		
		RDBMS.	RDBMS.		
		1.2 Introduction of Oracle, Role and	1.2 Introduction of Oracle, Role and		
		responsibilities of DBA.	responsibilities of DBA.	•••••	
		1.3 RDBMS Terminology- Relation, Tuple,	1.3 RDBMS Terminology- Relation, Tuple,	1	
		Cardinality, Attribute, Degree, Primary Key,	Cardinality, Attribute, Degree, Primary Key,		
		Domain, Codd's Rules	Domain, Codd's Rules	1	
		1.4 Relational Model, Functional Dependencies,	1.4 Relational Model, Functional		
		Normalization and its types	Dependencies, Normalization and its types		
		Module II:INTRODUCTION TO SQL	Module II:INTRODUCTION TO SQL:		
		2.1 Features of SQL, Data types,	2.1 Features of SQL, Data types,		
		2.2 Classification of SQL Commands – DDL	2.2 Classification of SQL Commands – DDL		
		(create, alter, drop), DML (insert,	(create, alter, drop), DML (insert,		
		update, delete), DCL (grant, revoke), TCL	update, delete), DCL (grant, revoke), TCL		
		(rollback, commit).	(rollback, commit).		
		2.3 SQL Integrity Constraints-(Primary key,	2.3 SQL Integrity Constraints-(Primary key,		
		Foreign key, unique key, not null,	Foreign key, unique key, not null,		
		default, check)	default, check)		
	8	2.4 Select statement with group by and order by	2.4 Select statement with group by and order		
		clause	by clause		Δ.
	COLLEGE	2.5 SQL Operators-arithmetic, relational,	2.5 SQL Operators-arithmetic, relational,		
	ESTD E	Logical, Like, Between, IN operator	Logical, Like, Between, IN operator		
	ESTD JUNE JUNE 1964	2.6 SQL Functions- Arithmetic functions,	2.6 SQL Functions- Arithmetic functions,		
	1964 /5/	Conversion Functions, Date function,	Conversion Functions, Date function,		
	(Autonomous)*	Aggregate functions, String functions.	Aggregate functions, String functions.		
	.tollowe	Module IIIJOIN AND SUB QUERIES:	Module IIIJOIN AND SUB QUERIES:		

		T. C. T. C.	2.1.T. ' A I. ' Outer Tain Cross		V2
		3.1 Join types - Inner Join, Cer Join, Cross	3.1 Join types - Inner Jo Outer Join, Cross		
		Join and self-Join	Join and self-Join		
		3.2 Sub-queries, Multiple sub queries, nesting of	3.2 Sub-queries, Multiple sub queries, nesting		
		sub queries, sub queries in	of sub queries, sub queries in		
		DML commands.	DML commands.		
		3.3 Correlated queries, Indexes, Sequences.	3.3 Correlated queries, Indexes, Sequences.		
		Views-Create View, Drop, View and	Views-Create View, Drop, View and		
		its Advantages., Denial of service (DoS),	its Advantages., Denial of service (DoS),		
		Firewall and proxy server.	Firewall and proxy server.		
		Module IVINTRODUCTION TO PL/SQL:	Module IVINTRODUCTION TO PL/SQL:		
		4.1 Introduction to PL/SQL, Block Structure	4.1 Introduction to PL/SQL, Block Structure		
		4.2 Data types in PL-SQL	4.2 Data types in PL-SQL		
		4.3 Control Structures-Branching statements,	4.3 Control Structures-Branching statements,		
		Iterative Control statements.	Iterative Control statements.	*****	
		4.4 Cursors –Concept, Types- Implicit, Explicit,	4.4 Cursors –Concept, Types- Implicit,		
		Procedure to create explicit	Explicit, Procedure to create explicit		
		cursors, Cursor Attributes.	cursors, Cursor Attributes.	27	
		4.5 TRIGGERS: Concept and types.	4.5 TRIGGERS: Concept and types.		
B.C.A	Visual	Module: Introduction	Module:Introduction		
III	Programming	1.1 overview, Architecture, Features of .NET,	1.1 overview, Architecture, Features of .NET,		
Sem-		1.2 Meta data, CLR, Managed and unmanaged	1.2 Meta data, CLR, Managed and unmanaged		
VI		code	code	*	
		1.3 CTS, CLS, .NET base classes	1.3 CTS, CLS, .NET base classes		
		1.4 Introduction to Visual Studio .NET IDE	1.4 Introduction to Visual Studio .NET IDE		
		1.5 Types of JIT compiler	1.5 Types of JIT compiler	x	
		Module II Introduction To C# 12	<b>Module II Introduction To C# 12</b>		
		2.1 Introduction to C#, Entry point method,	2.1 Introduction to C#, Entry point method,		
		command line arguments	command line arguments		
		2.2 Compiling and building projects, Compiling	2.2 Compiling and building projects,		
		a C# program using command	Compiling a C# program using command		
		line utility, CSC.EXE, Different valid forms of	line utility, CSC.EXE, Different valid forms of		
		main.	main.	•••••	
		2.3 Global stack and heap memory, reference	2.3 Global stack and heap memory, reference		
	COLLEGE	type and data type, casting implicit and explicit	type and data type, casting implicit and explicit		
	ESTD E	2.4 Boxing and unboxing, pass by value and	2.4 Boxing and unboxing, pass by value and		
	AN JUNE	pass by reference and outparameters	pass by reference and outparameters		
	1964	2.5 Partial class, DLL, Difference between DLL	2.5 Partial class, DLL, Difference between		

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	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	•••••	
3	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 CELLEGE, KOLHAPUR(AUTON MOUS) STATEMENT OF SYLLABUS COVERED

Year- 2021-22

Term- II<sup>nd</sup>

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.	******	



	(4)	Module III Multithreading d Exception	Module III Multithe ding and Exception		2001
		Handling	Handling		
		3.1 Creating threads, extending a thread class-	3.1 Creating threads, extending a thread class-		
		declaring the class, run()	declaring the class, run()		
		method	method		
		3.2 Stopping and blocking threads	3.2 Stopping and blocking threads		
		3.3 Life cycle of thread	3.3 Life cycle of thread		
		3.4 Using thread method	3.4 Using thread method	•••••	
		3.5 Thread priority	3.5 Thread priority		
		3.6 Introduction to exception	3.6 Introduction to exception		
		3.7 Syntax of exception handling code	3.7 Syntax of exception handling code		1
		3.8 Multiple catch statement	3.8 Multiple catch statement		
		3.9 Using finally statement	3.9 Using finally statement		
		3.10 Throwing exception Files.	3.10 Throwing exception		
		Module IV Applets Programming &	Module IV Applets Programming &		
		Introduction to AWT	Introduction to AWT		
		4.1 Introduction to applets	4.1 Introduction to applets		
		4.2 Building applet code	4.2 Building applet code		
		4.3 Applet life cycle	4.3 Applet life cycle	•••••	
		4.4 Adding applet code to HTML file	4.4 Adding applet code to HTML file		
		4.5 Introduction to Abstract Window Toolkit	4.5 Introduction to Abstract Window Toolkit		
		(AWT)	(AWT)		
B.C.A	Web	Module I: Internet and WWW:	Module I: Internet and WWW:		
II	Technology	1.1 Network, Client, Server,	1.1 Network, Client, Server,		
Sem-IV	3.	1.2 What is Internet & Applications, WWW	1.2 What is Internet & Applications, WWW		
		1.3 URL, DNS, Bbrowsers, Web Development:	1.3 URL, DNS, Bbrowsers,		
-		2.1 :Introduction, features, steps in web	Web Development:		
		development, . 2.2 Scripting Languages	2.1 :Introduction, features, steps in web	0505010515050	198
		2.3 HTML,structure	development, . 2.2 Scripting Languages		
		2.4 Basic Tags	2.3 HTML,structure		
		2.5 Formatting tags, examples	2.4 Basic Tags		
			2.5 Formatting tags, examples		
		Module II HTML tags :	Module II HTML tags:		
	COLLEGE	3.1 Heading and paragraph tags, font tag.	3.1 Heading and paragraph tags, font tag.		
1	2010/0	tag	tag	*****	
le le	ESID )	3.2 List Tags-ordered and unordered list tags:	3.2 List Tags-ordered and unordered list tags:		
an	to the state of th	 , <hr/> ., <marquee></marquee>	 , <hr/> ., <marquee></marquee>	1	1

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3.3: Hyperlink, <a> Image 1 Image maps,</a>	3.3: Hyperlink, <a> nage and Image maps,</a>		- 1
<form> tag, form controls to design UI</form>	<form> tag, form controls to design UI</form>		*
Module IIIJAVA SCRIPT:	Module III JAVA SCRIPT:		
4.1 Introduction, Difference in Client-Side and	4.1 Introduction, Difference in Client-Side and		
Server-Side Script, features, introduction to Java	Server-Side Script, features, introduction to		
script	Java script		
4.2 keywords, data types, control statements (if-	4.2 keywords, data types, control statements		
else, looping) with examples	(if-else, looping) with examples		
4.3 objects in java. Events and Event Handlers,	4.3 objects in java. Events and Event Handlers,		
4.4 Dialogue boxes, Built-in functions and	4.4 Dialogue boxes, Built-in functions and		
Validations	Validations		
Module IV Introduction to Server-Side scripting	Module Introduction to Server-Side scripting		
5.1 ASP – Advantages and limitations, server set-up	5.1 ASP – Advantages and limitations, server		
for ASP (PWS/IIS), built in ASP objects	set-up for ASP (PWS/IIS), built in ASP objects		
5.2 loop Structure, control structure (If-Else-Then),	5.2 loop Structure, control structure (If-Else-		
methods to get data from 5.3 Clients – (GET and	Then), methods to get data from 5.3 Clients –		
POST), difference between GET and POST	(GET and POST), difference between GET and		
5.4,database handling, connections and record set	POST		
object.	5.4, database handling, connections and record		
5.5Case Studies: On line Shopping Website,	set object.		
University Website	5.5Case Studies: On line Shopping Website,	>	
4.3.8 Aggregate Functions	University Website		
4.3.9 Clauses	4.3.8 Aggregate Functions		
	4.3.9 Clauses		

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### VIVEKANAND CELLEGE, KOLHAPUR(AUTONOL DUS)

#### STATEMENT OF SYLLABUS COVERED

Year- 2021-22 Name of teacher- Ms. Nikita Patil Term- II<sup>nd</sup>
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.	laws, Identity laws, Commutative Laws, Associative laws, Distributive laws, Inverse laws, Domination Laws, Absorption laws, Involution laws. 1.9 Duality. 1.10 Computer Representation	•••••	
STATE OF THE STATE	COLLEGE TO LAPPE STONE 1964 TO TO NOT THE TOTAL TO TO THE TOTAL TO TO THE TOTAL TOT	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	(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	•••••	

	arguments 2.12 Evernales hazard shave	Communication 2 12 Francis L	T	
	arguments. 2.13 Examples based above.	arguments. 2.13 Examples ba on above.		,
	Unit 3 Matrices :	Unit 3 Matrices :		
	3.1 Meaning of a matrix, Order of matrix. 3.2	3.1 Meaning of a matrix, Order of matrix. 3.2		
	Types of matrices 3.2.1 Row matrix, Column	Types of matrices 3.2.1 Row matrix, Column	×	
	matrix, Null matrix, Unit matrix 3.2.2 Square	matrix, Null matrix, Unit matrix 3.2.2 Square		
	Matrix, Diagonal matrix, Scalar matrix, 3.2.3	Matrix, Diagonal matrix, Scalar matrix, 3.2.3		
	Symmetric matrix, Skew - symmetric matrix 3.2.4	Symmetric matrix, Skew - symmetric matrix 3.2.4		
	Transpose of a matrix, 3.3 Definition of	Transpose of a matrix, 3.3 Definition of		
	Determinants of order 2nd & 3rd and their	Determinants of order 2nd & 3rd and their		
	expansions 3.4 Singular and Non-Singular	expansions 3.4 Singular and Non-Singular	*****	ì
U 1	Matrices 3.5 Algebra of Matrices 3.5.1 Equality of	Matrices 3.5 Algebra of Matrices 3.5.1 Equality		
	matrices 3.5.2 Scalar Multiplication of matrix	of matrices 3.5.2 Scalar Multiplication of matrix	14	
	3.5.3 Addition of matrices, Subtraction of	3.5:3 Addition of matrices, Subtraction of		
	matrices 3.5.4 Multiplication of matrices. 3.6	matrices 3.5.4 Multiplication of matrices. 3.6		
	Elementary Row & Column Transformations	Elementary Row & Column Transformations		
	3.7 Inverse of Matrix (Using Elementary	3.7 Inverse of Matrix (Using Elementary		
	Transformations) 3.8 Examples based on above.	Transformations) 3.8 Examples based on above.		
	Unit 4 Graph Theory :	Unit 4 Graph Theory:		
	4.1 Introduction to Graph	4.1 Introduction to Graph		
	4.2 Kinds of Graph : Simple, Multi and Pseudo	4.2 Kinds of Graph : Simple, Multi and Pseudo		
	Graph 4.3 Digraph 4.4 Weighted Graph	Graph 4.3 Digraph 4.4 Weighted Graph		
	4.5 Degree of Vertex, Isolated Vertex	4.5 Degree of Vertex, Isolated Vertex 4.6 Path,		
	4.6 Path, Cycle, A-Cycle, 4.7 Types of Graph:	Cycle, A-Cycle, 4.7 Types of Graph: Complete,		
	Complete, Regular, Bi-Partite, Complete Bi-	Regular, Bi-Partite, Complete Bi-partite,		
	partite, Isomorphism of Graph	Isomorphism of Graph	•••••	
	4.8 Matrix Representation of Graph: Adjacency	4.8 Matrix Representation of Graph: Adjacency		3
	and Incidence Matrix	and Incidence Matrix		
	4.9 Operation on Graph: Union, Intersection,	4.9 Operation on Graph: Union, Intersection,	-	
	Complement, Product of Graphs, Fusion of			
	Graphs	Graphs		
	4.10 Examples based on above.	4.10 Examples based on above.		

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VIVEKANAND COLLEGE, KOLHAPITA

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# VIVEKANAND C LEGE, KOLHAPUR(AUTONON OUS) STATEMENT OF SYLLABUS COVERED

Year- 2021-22 Name of teacher- Mr. AjitPawar Term- I<sup>st</sup>
Department- B.C.A.

Class	subject	Syllabus assigned	Syllabus Covered	Syllabus not to Covered	Rema rk
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.		
* ANY EKANAN	ESTD JUNE 1964	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, mechan and mode 2.1.3 Merits and Demerits of Mean, Median Mode 2.1.4 Numerical examples based on 2.1.2 2.1.5 Determination of Median and Mode be 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	2.1.3 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.).	
	Analysis of Bivariate data  3.1 Correlation  3.1.1 Concept of Correlation, Type correlation (Positive, Negative, Linear Non-linear), Methods of studying correscatter diagram, Karl Pearson's Correct Coefficient (r) and Spearman's Correlation Coefficient (R).  3.1.2 Interpretation of r = + 1, r = -1, r = 0.  3.1.3 Numerical examples on 3.1.1 and 3.1  3.Regression:  3.2.1. Concept of Regression, Definitions regression coefficients and Equations of regression lines. Properties of regrescoefficients. (Statements only)  3.2.2 Numerical examples on 3.2.1.	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 3.1.1 and 3.1.2  3.Regression: 3.2.1. Concept of Regression, Definitions of regression coefficients and Equations of coefficients. (Statements only)	
(3)	Module4 – Sampling Techniques and Times Series Analysis 4.1 Sampling Techniques: 4.1.1 Definitions of Sample, Population Sampling, Sampling Method and Cen	Series Analysis 4.1 Sampling Techniques:  4.1.1 Definitions of Sample, Population,	••••

method. Advantages of same g 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 impling 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.	

(Signature of the Head of Department)

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DEPARTMENT OF B. C. A.
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# VIVEKANAND OLLEGE, KOLHAPUR (AUTONC JOUS) STATEMENT OF SYLLABUS COVERED

Year- 2021-22

Term- II<sup>nd</sup>

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.</form></marquee>	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, 	•••••	
	COLLEGE TO HAPUR 1964	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		

	8	Module 4:CSS – Page Layor 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 I yout 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 Osciolated Control of the Cont	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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