Shri Swami Vivekanand Shikshan Sanstha's

VIVEKANAND COLLEGE, KOLHAPUR

(Autonomous)

Department Of BCA

Syllabus for Academic Council

BCA-II

Vivekanand College, Kolhapur (Autonomous)

Choice Based Credit System

Bachelor of Computer Applications (B.C.A.)

Under the Faculty of commerce

(To be implemented from Academic Year 2019 - 2020)

B.C.A. Part – II CBCS Pattern (2019 – 2020)

S E M E S T E R – III																		
Sr. No.	**Course Title**	**TEACHING SCHEME**						**EXAMINATION SCHEME**										
		THEORY			**PRACTICAL**			**THEORY**					**PRACTICAL**					
								External			**Internal**		**External**					
		No. of lectures	**Hours**	**Credits**	**No. of lectures**	**Hours**	**Credits**	**Hours**	**Max**	**Min**	**Max**	**Min**	**Hours**	**Max**	**Min**			
1	DSC-A	4	3.2	**4**				3	80	32	20	4						
2	DSC-A	4	3.2	**4**				3	80	32	20	4						
3	DSC-A	4	3.2	**4**				3	80	32	20	4						
4	DSC-A	4	3.2	**4**				3	80	32	20	4						
5	DSC-A	4	3.2	**4**	---	---	---	3	80	32	20	4						
6	DSC-A	--	--	--	2	1.6	**2**	--	--	--	--	--	3	50	20			
7	AECC-A	--	--	--	2	1.6	**2**	--	--	--	--	--	3	50	20			
	Total	**20**	**16**	**20**	**4**	**3.2**	**4**		**400**		**100**	**---**		100				
S E M E S T E R – IV																		
1	DSC-	4	3.2	**4**				3	80	32	20	4						
2	DSC-A	4	3.2	**4**				3	80	32	20	4						
3	DSC-A	4	3.2	**4**				3	80	32	20	4						
4	DSC-A	4	3.2	**4**				3	80	32	20	4						
5	DSC-A	4	3.2	**4**	---	---	---	3	80	32	20	4						
6	DSC-A	--	--	--	2	1.6	**2**	--	--	--	--	--	3	50	20			
7	AECC-A	--	--	--	2	1.6	**2**	--	--	--	--	--	3	50	20			
	Total	**20**	**16**	**20**	**4**	**3.2**			**400**		**100**	**---**		**100**				
Grand Total		**40**	**32**	**40**	**8**	**6.4**	**8**		**800**		**200**	**---**		**200**				

• Student contact hours per week Hours (Min.)	• Total Marks for B.C.A.-II (Including English) : **1200**
• Theory and Practical Lectures : Minutes Each	• Total Credits for B.C.A.-I (Semester I & II) : **48**
• **AECC**- Ability Enhancement Compulsory Course (1)- English • **GEC**-Generic Elective Core. (for Semester I & II) • Course list as per enclosed Annexure. ***Separate passing is mandatory for Theory, Internal and Practical.***	
• Practical Examination will be conducted annually for 50 Marks per DSCcourse (subject).	

Semester III			Semester IV		
Course Code	Course Title	Work Load	Course Code	Course Title	Work Load
1405C	Management Accounting	4	1412D	Entrepreneurship Development	4
1406C	Human Resource Management	4	1413D	Web Technology	4
1407 C	System Analysis and Design	4	1414D	Database Management System	4
1408C	Object Oriented Programming with C++	4	1415D	Organizational Behavior	4
1409C	Computer Oriented Statistical Methods	4	1416D	Computer Mathematics	4
1410C	Lab Course based on 1408 C	2	1417D	Lab Course on 1413D & 1414D	2
1411C	Lab Course based on 1409 C	2	1418D	Mini Project	2

Vivekanand College (Autonomous), Kolhapur.

Department of BCA

Programme Outcomes

This program will provide well trained manpower for the Industries in the area of Information Technology. This programme Develop practical skills among the students to provide solutions to industry, society and business. The program will help the students to pursue career as developer, tester, and designer in IT industries. Also to pursue post graduate education in the fields of Information Technology and Computer Applications.

Management Accounting

Semester	**III**	Total credit	4
Course code	Core Course –**BCA 1405 C**	Credit pattern	L-60, T --,P--
Course title	**Management Accounting**		

Course objectives	
1	To develop an understanding of the conceptual framework of Management Accounting
2	To understand the process of budgeting and use of marginal costing and standard costing

Module	Content
I	**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.
II	**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.
III	**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.
IV	**Budgetary Control:-** Meaning of Budget and Budgetary Control, Objectives, Advantages, Limitations of Budgetary Control, Types of Budget- Production, Sales, Cash, Master Budget, Capital Expenditure, Budgeting.

Learning Recourses		
1	Reference Books	1. Management Accounting By Khan and Jain 2. Principles of Management Accounting By Manmohan and Goyal 3. Principles of Management Accounting BY Maheshwari 4. Management Accounting By Pandey I. M. 5. Introduction to Management Accounting By Charles T. Homgren

Course Outcome

- This course aims to develop an understanding of the conceptual framework of management accounting. After the successful completion of the course the student acquires the knowledge in the management accounting techniques in decision making.

Vivekanand College, Kolhapur (Autonomous)

B.C.A Part – II (Semester III)

Core Course –

Subject Code – BCA 1406 C

Human Resource Management

NEW SYLLABUS

Objective:-

1 Students should understand the concept of Human Resource Management within the organization.

2. To know the proper Recruitment and Selection Procedure in organization.

Module -1 : **Introduction to HRM :**
Introduction , Concept, Definition, HRD, Functions of HRM , Organization of HRD
Role HRM , Qualities of HR Manager, Limitations & challenges of HRM

Module-2 : **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

Module -3 **Virtual Organization :**
Virtual Organization: meaning, type., **Difference between Traditional and Virtual Organization.** ,features of Virtual Organization, HRM in Virtual Organization,
HRIS
Module-4 **Employee Separation**
Employee Separation practices in I.T. industry, Voluntary Retirement Schemes
, Resignation-Discharge-Dismissal-Suspension-Layoff, Exit interview,

Course Outcomes :

On completion of this course students should be able to understand the nature of Human Resources and its significance to the organization.

Vivekanand College, Kolhapur (Autonomous)

Department of BCA

BCA-II, Sem-III

Cource Name-: System Analysis & Design
Course Code-:1407C

Marks-100 (TH-80, CA-20)

Course Outcomes:

On Completion of the course students should be able to:

1. This course enables students to understand system concepts and its application in Software development.
2. Understanding the different Methods to develop any software.
3. To get the knowledge of System Analysis, Analyst, Design tools.
4. To Aware about the different software testing methods.

Unit	Name of the Topic	Number of lecturer
Unit 1	**Introduction to System Concepts** 1.1 Definition , Elements of System 1.2 Characteristics of System 1.3 Types of System 1.4 System Concepts	8
Unit 2	**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)	12
Unit 3	**Introduction to Software Engineering** 3.1 Definition Need for software Engineering 3.2 Software Characteristics 3.3 Software Qualities (McCall's Quality Factors	8
Unit 4	**Software Development Methodologies** 4.1 SDLC (System Development Life Cycle) 4.2 Waterfall Model 4.3 Spiral Model 4.4 Prototyping Model 4.5 RAD MODEL	10
Unit 5	**Analysis and Design Tools** 5.1 Entity-Relationship Diagrams 5.2 Decision Tree and Decision Table	12

	5.3 Data Flow Diagrams (DFD) 5.4 Data Dictionary 5.4.1 Elements of DD 5.4.2 Advantage of DD 5.6 Input And Output Design 5.7 CASE STUDIES (Based on Above Topic)	
Unit 6	**Software Testing** 6.1 Definition, Test characteristics 6.2 Types of testing 6.2.1 Black-Box Testing 6.2.2 White-Box Testing 6.2.3 Unit testing 6.2.4 Integration testing 6.3 Validation 6.4 Verification	10
	Total No. of Lectures	**60**

Recommended Books :

1)Software Engineering - Roger s. Pressman.

2)SADSE (System Analysis Design) - Prof. Khalkar and Prof. Parthasarathy.

3) System Analysis and Design by Ikvindarpal Singh

4) System Analysis and Design by Eilas M Award

5) System Analysis and Design by Dennis and Wixom

6) System Analysis and Design by Goyal A

Course Name: Object Oriented Programming with C++
Course Code: 1408C

Marks-100 (TH-80, CA-20)

Course Outcomes:

On completion of the course students should be able to:

1. Understand the features of C++ supporting object oriented programming
2. Understand the relative merits of C++ as an object oriented programming language
3. Understand how to apply the major object-oriented concepts to implement object oriented programs in C++, encapsulation, inheritance and polymorphism
4. Understand advanced features of C++ specifically stream I/O and file handling.
5. Student will be able to implement concept of OOP

Modules	Name of Topic	No. of Lectures
Module-1	**Principles of Objective Oriented Programming** History of OOP, Introduction to Object Oriented Programming, Basic Concepts of Object Oriented Programming, Benefits of Object Oriented Programming, Object Oriented Languages, Difference between C and C++.	**08**
Module-**2**	**Beginning with C++** Tokens, Keywords, Identifiers and Constants, Data Types, Type Compatibility, Variables, Operators in C++, Operator Precedence, Control Structures (Conditional, Unconditional and Looping).	**08**
Module-**3**	**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.	**10**
Module-4	**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),	**12**
Module-5	**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.	**12**
Module-6	**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 ( ).	**10**
	Total	**60**

References:

1. Object Oriented Programming with C++ by E Balagurusami.
2. Object Oriented Programming using C++ books By Yashwant Kanetkar
3. Object Oriented Programming in C++ by Rajesh K Shukla
4. The C++ Programming Language written by Bjarne Stroustrup.
5. Object Oriented Programming in C++ by Robert Lafore
6. Test Your Skills in Object Oriented Programming with C++ by R S Salaria

Vivekanand College, Kolhapur

(Autonomous)

Department of BCA

BCA-II

Course Name: Computer Oriented Statistical Methods
Core course-1409C

Course Outcomes:

On completion of the course students will:

- have the versatility to work effectively in a broad range of analytic, scientific, government, financial, health, technical and other positions.
- **be mathematically, statistically and numerically literate. In particular, graduates will:**
  - recognize the importance and value of mathematical and statistical thinking, training, and approach to problem solving, on a diverse variety of disciplines;
  - recognize and appreciate the connections between theory and applications;
  - be able to independently read mathematical and statistical literature of various types, including survey articles, scholarly books, and online sources; and

Detail Syllabus

Module 1 –(A) Introduction to Statistics **(15)**

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

(B) Probability

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.

Module 2 – Measures of Central Tendency and Dispersion **(18)**

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 (C.V.).

2.2.3 Numerical examples based on 2.2.2.

Module 3 – Analysis of Bivariate data **(15)**

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 (12)

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.

Note: Use of Nonprogrammable calculator is allowed

Reference Book

1) Mathematical Statistics by H.C. Saxena and J. N. Kapur

2) Business Statistics by G. V. Kumbhojkar

3) Fundamentals of Statistics by S. C. Gupta

4) Business Statistics by S. S. Desai

5) Business Statistics - SIM-Shivaji University, Kolhapur

Object Oriented Programming with C++ Practical
Course Code: 1410C

List of experiments:
1 WAP to understand the structure of C++ program
2 WAP to find the sum of two numbers using function.
3 WAP to find Simple Interest and Compound Interest.
4 WAP to demonstrate the working of following Loops: While, Do While, For, If-Else, switch.
5 WAP Simple Program using Class and Object.
6 WAP to find greatest number amongst given three numbers using class.
7 WAP to find mean of data members of two classes using friend function.
8 WAP to demonstrate Static data member.
9 WAP to demonstrate Array of Object.
10 WAP using Constructor (with and without Parameter).
11 WAP using Destructor.
12 WAP to demonstrate Types of Inheritance.
13 WAP using Virtual Function.
14 WAP to Overload Unary Operator with member function and friend function.
15 WAP to Overload Binary Operator with member function and friend function.
16 WAP for file handing- Opening file using Constructor.
17 WAP for file handing- Opening file using open( ) method.
18 WAP for working with Multiple files.

Course Outcomes:

On Completion of the course students should be able to:
1) To Know the Fundamentals of Databases.
2) To understand how to use Databases in day to day Applications.

Computer Oriented Statistical Methods Practical

Lab Assignments

1-Formation of frequency distribution

2-Construct following types of charts with the help of given

data. a) Bar

b) Pie

c) Histogram

d) Ogive curve

3- Calculate Mean, mode and Median of given series (without using in built functions for mean, Mode Median in MS-Excel)

4- Calculate S.D. and C.V. (without using in built functions for SD & CV in MS-Excel)

5- Computation of correlation coefficient and rank correlation coefficient using appropriate statistical formula-

6- Time series computation of trend values by- Moving average Method

- Progressive average method
- Least square Method

(Note- Provide required data for each pract. Assignment)

Entrepreneurship Development

Semester	**IV**	Total credit	4
Course code	Core Course –**BCA 1412 D**	Credit pattern	L-60, T --,P--
Course title	**Entrepreneurship Development**		

Course objectives	
1	To impart theoretical knowledge & Entrepreneurship.
2	To develop Entrepreneurship qualities and skills.

Module	Content
I	**Entrepreneurship**:- Concept, Classification – Functions, Qualities of successful Entrepreneurship , Concept of Entrepreneur and entrepreneur. Entrepreneurship in modern Era.
II	**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)
III	**Project Management**:- Project- classification of project, Stages of Project Management, Reasons for failure for, Project, Project for Retail stores, Hotel, Hospital, Dairy.
IV	**Successful IT Indian Entrepreneurs:-** Ratan Tata, Azim Premji, Narayan Murthy, Anand Mahindra, Kumar Mangalam Birla, Nandan Nilekani.

Learning Recourses		
1	Reference Books	1. Management Accounting By Khan and Jain 2. Dynausic of Entrepreneurship Development - & Management –By vasaut Desai 3. Entrepreneurship Development in India- By C.B.Gupta and N.P.Srinivasan 4. Entrepreneurship Development-By S.S. Khanke 5. Entrepreneurship Development-By Godron E and Natarajan

Course Outcome

1. On completion of this course students should be able to start their own business.
2. To facilitate a clear perspective to diagnose and effectively handle human behavior issues in Organizations.
3. To develop greater insight into their own behavior in interpersonal and group, team, situations.

Vivekanand College, Kolhapur (Autonomous)
BCA-II, Sem-IV

Department of BCA
Course Name: Web Technology
Course Code-1413D

Marks-100 (TH-80, CA-20)

Course Outcomes :

On completion of this course students should be able to
1. Understand Web designing techniques
2. Develop commercial web development
3. Organize content, hosting and web publishing

Modules	Name of Topic	No. of Lectures
Module -1	**Internet and WWW :** 1.1 Network, Client, Server, 1.2 What is Internet & Applications, WWW 1.3 URL, DNS, Bbrowsers,	12
Module **-2**	**Web Development:** 2.1 **:I**ntroduction, features, steps in web development, . 2.2 Scripting Languages 2.3 HTML,structure 2.4 Basic Tags 2.5 Formatting tags , examples	12
Module **-3**	**HTML tags :** 3.1 Heading and paragraph tags, font tag. <table> tag 3.2 List Tags-ordered and unordered list tags: , <HR>.,<Marquee> 3.3 : Hyperlink, <A> Image and Image maps, <form> tag, form controls to design UI	12
Module-4	**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	12
Module -5	**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	12
	Total	60

Reference Books:

1. HTML, JavaScript, DHTML and PHP, Ivan Bayross, BPB publications, 2010 Edition
2. HTML Black Book, Steven Holzner, DreamTech Press, 2009 Edition
3. Web Technologies Black Book, Kogent Learning Solutions Inc., Dreamtech press, 2011 Edition
4. ASP.NET 4.0 Black Book, Kogent Learning Solutions Inc., Dreamtech press, 2012 Edition
5. ASP.NET 4.0 Programming, Joydip Kanjilal, TATA McGraw-Hill Education Private Ltd., 2010 Edition

Vivekanand College, Kolhapur (Autonomous)
BCA-II, Sem-IV

Department of BCA
Database Management System
Course Code-1414D

Marks-100 (TH-80, CA-20)
Course Outcomes:
On Completion of the course students should be able to:
1) To Know the Fundamentals of Databases.
2) To understand how to use Databases in day to day Applications.

Module No.	Name of Topic	No. of Lectures
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.	**15**
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 Files) 2.5.2 File of Ordered Records (Sorted Files) 2.5.3 Hash Files 2.5.4 Indexed file	**12**

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 3.6.2Normalization 3.6.3 Normal Form 3.6.1 1 NF 3.6.2 2 NF 3.6.3 3 NF	**13**
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	**20**

References:

1) Database System Concepts By Henry korth and A. Silberschatz
2) An Introduction to Database System by Bipin Desai
3) File Structure by Michael J. Folk, Greg, Riccardi
4) Teach Yourself SQL in 14 days by Jeff Parkins and Bryan Morgan
5) Database Management System by Raghu Ramakrishnan
6) An Introduction to Database System by Bipin Desai

Vivekanand College, Kolhapur (Autonomous)

B.C.A Part – II (Semester IV)

Core Course –

Subject Code – BCA 1415 C

Organizational Behavior

NEW SYLLABUS

Objective:- 1 Students should understand the impart that individual, group and structures have on their behavior within the organization.

2. They should identify the required behavioral model in the Organizational

Module -1 : **Introduction to Organizational Behavior::**
Definition, Importance, Scope, Fundamental Concepts of OB, Disciplines continuing to O.B.Evolution of O.B

Module -2 **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

Module -3 Organizational culture, Quality Work Life and Stress Management :
A) Organization Culture & Stress Management: B) Stress Management C) Quality Work Life

Module -4 Group Behaviour ,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

Course Outcomes:

After completion of this course, students should able to implement organizational related knowledge on personality ,perception, motivation, job satisfaction, moral , team management, leadership, stress management, counseling and guidance, etc.

Vivekanand College, Kolhapur (Autonomous)

Department of BCA

BCA-II, Sem-IV

Course Name-: Mathematics Foundation

Course Code-:1416D

Marks-100 (TH-80, CA-20)

Course Outcomes:

On completion of the course students should be able to:

Modules	Name of Topic	No. of Lectures
Module-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.	**15**
Module-**2**	**Logic (15)** 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 on above.	**15**

Module-**3**	**Matrices (15)** 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.	**15**
Module-4	**Graph Theory (15)** 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.	**15**
	Total	**60**

References:

1. Discrete Mathematics & Structures by Satinder Bal Gupta, *University Science Press*
2. Fundamental Approach to Discrete Mathematics by D. P. Acharjya, Sreekumar, *New Age International Publishers*
3. Discrete Mathematical Structures by Kolman, Busby, Ross, *Pearson Education Asia*
4. Matrices by Shantinarayan, *S. Chand & Co. , New Delhi*
5. Discrete Mathematics by Schaum Series
6. Discrete Mathematics by K D Joshi

Lab Course on DBMS and Web Technology
Course Code: 1417D

Practical's on Web Technology:

Unit-I

1. Programs based on singular and paired tags, formatting tags, list tags,
2. Programs based on marquee, hyperlink, image maps
3. Program based on frame tags

Unit-II

4. Programs based on CSS, cross browser testing
5. Programs based on creating forms, inputting values
6. Programs based on drop down and list box, text area, password
7. Program based on action buttons, radio, checkbox Unit-III
8. Programs based on control statements
9. Programs based on event handling and built in functions
10. Program based on validations

Unit-IV

11. Programs based on control statements (branching and looping)
12. Programs based on GET and POST method
13. Programs based on database handling
14. Design and develop interactive website using different HTML tags, ASP, Java Script and database handling.

Practical's on DBMS: (Take sample tables)

1. Write procedure for creating database.
2. Generate form and write steps in detail.
3. Establish relationship between tables and write steps for it.
4. Create reports using different queries based on multiple tables and write steps in detail for it.

I. Library system:

1. Create database for library system.
2. Establish essential relationship between tables.
3. Design form for above library system.
4. Generate following reports for library system.
    a.List of book with accession numbers
    b. List of books according to author
    c. List of books issued to student
    d. Demand books report of students

II. Design Database System for Payroll management system:

1. Draw ER diagram
2. Create database- contains 1. At least 5 tables 2. At least 3 fields with proper data type
3. Set primary key wherever required
4. Create relationship structure
5. Create form for each table
6. Insert at least 5 records in each table
7. Create different query using query wizard
8. Create at least 3 reports using report wizard (at least 5 records)

III. Design Database System for Hospital management system

1. Draw ER diagram

2. Create database- contains 1. At least 5 tables 2. At least 3 fields with proper data type
3. Set primary key wherever required
4. Create relationship structure
5. Create form for each table
6. Insert at least 5 records in each table
7. Create different query using query wizard
8. Create at least 3 reports using report wizard (at least 5 records)

Course Name: Mini Project

Course Code: 1418D

Mini Project (Any subject related to Computer Study.)

Marks- 50

Nature of Question Paper (Theory)
B.C.A. II

Marks 80

Instructions:-

1) **All Questions carry equal marks.**
2) **Attempt any five Questions out of seven.**
3) **Question No. 8 is Compulsory**

Q.1	**Long Answer**	**16Marks**
Q.2	**Long Answer**	**16Marks**
Q.3	**Long Answer**	**16Marks**
Q.4	**Long Answer**	**16Marks**
Q.5	**Long Answer**	**16Marks**
Q.6	**Long Answer**	**16Marks**
Q.7	**Long Answer**	**16Marks**
Q.8	**Write Short Notes (Attempt Four out of Six)**	**16Marks**

Note: Question of 16 Marks can be distributed in 8 + 8 marks sub questions.

Internal 20 Marks Evalution:

1. Assignments -6 Marks
2. Seminar -8 Marks
3. Oral -6 Marks