

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD.



CIRCULAR NO.SU/SCIENCE & TECHNOLOGY STUDIES/SYLL./B.VOC./78/2022.

It is hereby informed to all concerned that, on the recommendation of Ad-hoc Board in Vocational Studies and Dean, Faculty of Science & Technology the Hon'ble Vice-Chancellor has **accepted the curriculum of following B.Voc. Courses under Choice Based Credit and Grading System** in his emergency powers under Section-12 [7] of the Maharashtra Public Universities Act, 2016 on behalf of the Academic Council as appended herewith:

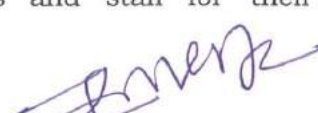
Sr.No.	Course Name	Semester
1	B.Voc in Software Development	(I & II)
2	B.Voc in Medical Laboratory Technology	(I & II)
3	B.Voc in Multimedia & Animation- Structure & syllabus [New]	(Sem-I to VI)
4	B.Voc in Multimedia & Animation [old]	(Sem-V & VI)
5	B.Voc in Organic Agriculture	(Sem-V & VI)
6	B.Voc in Bioproducts Technician	(Sem-I to VI)
7	M.Voc in Food Processing Technology	(Sem-I to IV)

This is effective from the **Academic Year 2020-21 and 2021-22** and onwards. This curriculum is also available on the University website www.bamu.ac.in.

All concerned are requested to note the contents of the circular and bring notice to the students, teachers and staff for their information and necessary action.

University campus,
Aurangabad-431 004.
Ref. No.SU/B.voc./Curri./2021-22

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**Deputy Registrar,
Academic [Syllabus]
Section.**

Date: 20.01.2022

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- 1] **The Principal All Affiliated Concerned Colleges, Dr.Babasaheb Ambedkar Marathwada University, Aurangabad.**
 - 2] **The Director, University Network & Information Centre, UNIC, with a request to upload the curriculum along with this Circular on University Website.**
- Copy to :-**
- 1] The Director, Board of Examinations & Evaluation, Dr.BAMU, A'bad
 - 2] **The Concerned Section, Examination Branch,**
 - 3] The Section Officer, [Eligibility Unit],
 - 4] **The Programmer [Computer Unit-1] Examinations, section, Dr.BAMU, A'bad**
 - 5] **The Programmer [Computer Unit-2] Examinations, section, Dr.BAMU, A'bad**
 - 6] The In-charge, [E-Suvidha Kendra],
 - 7] The B.Voc Section, Dr.BAMU,A'bad
 - 8] The Public Relation Officer,
 - 9] The Record Keeper,

**DR. BABASAHEB AMBEDKAR
MARATHWADA UNIVERSITY
AURANGABAD**



SYLLABUS OF
BACHELOR OF VOCATIONAL
IN

**B.Vov in - Software
Development
SEMESTER- I & II**

Choice Based Credit System

Effective from the Academic Year
2020-21 and 2021-22 & Onwards

2020-21



**Dr. Babasaheb
Ambedkar
Marathwada
University,
Aurangabad (MS)**



Uniform Curriculum Structure

Bachelor of Vocation

(B. Voc: Software Development)

(University Department and all Affiliation College)

Choice Based Credit System

Approved
Bachak

25/11/22
Dean
Faculty of Science & Technology
Dr. Babasaheb Ambedkar Marathwada
University, Aurangabad

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Program Structure for B. Voc. in Software Development B. Voc. F. Y. (Semester I + Semester II)

Class	Subject Code		Title of the Subject	Contact Hours Per Week		Evaluation Scheme (Marks)		Credit
				L	P	CIA	SEE	
SEMESTER – I								
NSQF Level-4 Qualification Title: Junior Software Developer								
F.Y.B.Voc.	General Education Component	BVOC.1.01	English language andcommunicative skills Part I	4	0	20	80	4
		BVOC.1.02	Numerical Aptitude & Logical reasoning	4	0	20	80	4
		BVOC.1.03	Fundamental of Information Technology	4	0	20	80	4
	Skill Component	BVOC.1.04	Programming Language Concepts	4	0	20	80	4
		BVOC.1.05	Software Engineering and Testing	4	0	20	80	4
		BVOC.1.06	Office Automation	4	0	20	80	4
		BVOC.1.07	Lab 1: Programming Language Concepts	0	4	25	25	2
		BVOC.1.08	Lab 2: Office Automation	0	4	25	25	2
		BVOC.1.09	Lab 3: Software Engineering and Testing	0	4	25	25	2
						195	555	30
SEMESTER – II								
NSQF Level-5 Qualification Title: Web Developer								
F.Y.B.Voc.	General Education Component	BVOC.2.01	English language andcommunicative skills Part II	4	0	20	80	4
		BVOC.2.02	Data Analysis and Discrete Mathematics	4	0	20	80	4
		BVOC.2.03	Operating System	4	0	20	80	4
	Skill Component	BVOC.2.04	Web Technology	4	0	20	80	4
		BVOC.2.05	Graphics Design and Content Management Tools	4	0	20	80	4
		BVOC.2.06	Desktop Publishing	4	0	20	80	4
		BVOC.2.07	Lab 1: Web Technology	0	4	25	25	2
		BVOC.2.08	Lab 2: Graphics Design and Content Management Tools	0	4	25	25	2
		BVOC.2.09	Lab 3: Desktop Publishing	0	4	25	25	2
						195	555	30

(Signature)

(Signature)
Faculty of Science
Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

B. Voc. in Software Development

B. Voc. F. Y. (Semester I)

B VOC.1.01 English language and communicative skills Part I

Credit : 04

Marks : 100

(15 Hours)

Objective: The objective of this paper is to familiarize the students with the importance of Communication and its associated components in the hard core corporate sector.

Outcome :

1. Students will be able to understand the computer organization and architecture with data representation techniques in computers.
2. Students will be able to understand the working, functions and handling of operating system.
3. Students will be able to understand and design algorithms and flowchart for solving problems.

UNIT I- The Sentence and Its Structure - How to Write Effective Sentence -- Phrases - What Are They? - The Noun Clauses - The Adverb Clause - The Relative Clause - How the Clauses Are Conjoined - Word - Classes and Related Topics - Understanding the Verb - Understanding the Auxiliary Verb - Understanding the Adverbs - Understanding the Pronoun - Prepositions.

(15 Hours)

UNIT II- Spelling and Pronunciation - Pronunciation, The Tense and Related topics- Presentness and Present Tenses - The Presentences of a Past Action - Interrogatives and Negatives - Negatives - How to Frame Questions - What's What? - Polite Expressions - Some Time Expressions - In Conversation - Letter Writing - Academic Assignments.

(15 Hours)

UNIT III - Self - Assessment; Identifying Strength & Limitations; Habits, Will-Power and Drives, Developing Self - Esteem and Building Self - Confidence, Significance of Self - Discipline, Understanding Perceptions, Attitudes, and Personality Types, Mind - Set: Growth and Fixed, Values and Beliefs, Motivation and Achieving Excellence; Goal Setting, Life and Career Planning , Constructive Thinking, Communicating Clearly; Understanding and Overcoming barriers.

(15 Hours)

UNIT IV - Active Listening, Persuasive Speaking and Presentation skills conducting Meetings, Writing Minutes, Sending Memos and Notices; etiquette: Effective E - mail Communication; Telephone Etiquette, Body Language in Group Discussion and Interview.

Books Recommended:

1. Dorch, Patricia. What Are Soft Skills? New York: Execu Dress Publisher, 2013.
2. Kulbhushan Kumar, Effective Business Communications, Khanna Publishing House (AICTE Recommended-2018)
3. Kamin, Maxine. Soft Skills Revolution: A Guide for Connecting with Compassion for Trainers, Teams, and Leaders Washington, DC: Pfeiffer & Company, 2013.
4. Klaus, Peggy, Jane Rohman & Molly Hamaker. The Hard Truth about Soft Skills. London: HarperCollins E - books, 2007.
5. Petes S. J. , Francis. Soft Skills and Professional Communication. New Delhi: Tata McGraw - Hill Education, 2011.
6. Stein, Steven J. & Howard E. Book. The EQ Edge: Emotional Intelligence and Your Success. Canada: Wiley & Sons, 2006.

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University, Aurangabad

B. Voc. in Software Development

B. Voc. F. Y. (Semester I)

BVOC.1.02 Numerical Aptitude & Logical reasoning

Credit : 04**Marks : 100****Learning Objectives:**

- Practicing Basics of mathematics
- Use of Numbers
- This course enables students to develop their ability to reason by introducing them to elements of reasoning
- Basics knowledge of different types of Series and Directions.

Course Outcomes:

- Develops problem solving skills of student
- Improves Basic and advanced calculations used in day to day life.
- Improves Mental Alertness
- Construct a logically sound and well-reasoned argument.

Unit I : Introduction of Number system	NOS	
Numbers: Types of numbers, Divisibility tests of numbers, Formulas for sum of natural numbers, arithmetic progression, Examples for practice.	SSC/N9001	10 Hours
Unit II HCF and LCM	NOS	
HCF and LCM : Methods of calculating highest common factor and greatest common divisor, factorization method, Division method, Finding HCF and LCM more than two numbers, LCM factorization method, Division method, Finding HCF and LCM more than two numbers, LCM and HCF of fractions and decimal numbers, Applications of LCM and HCF.	SSC/N9001	10 Hours
Unit III: Average	NOS	
Average: Definition of average, Formulae and theoretical problem on average.	SSC/N9001	10 Hours
Unit IV: Series of Numbers and Alphabets	NOS	
Series: Types of series, Number Series, Alphabet series, Alphanumeric series.	SSC/N9001	10 Hours
Unit V: Analogy	NOS	
Analogy: Completing the Analogous Pair, Direct/Simple Analogy, Choosing the Analogous Pair, Double Analogy, Number analogy, Alphabet analogy, Correlation between letters/numbers.	SSC/N9001	10 Hours
Unit VI: Direction Sense Test	NOS	
A. Introduction	SSC/N9001	10 Hours
B. Problems based on angular changes in direction		
C. General Problems based on Pythagoras Theorem		
D. Problems on shadows		

References

1. Quantitative Aptitude, Dr.R.S Aggarwal, S.Chand and Company
2. A Modern Approach to Verbal & Nonverbal Reasoning, Dr.R.S Aggarwal, S.Chand and Company
3. www.indiabix.com
4. www.allindiaexams.in

B. Voc. in Software Development

B. Voc. F. Y. (Semester I)

BVOC.1.03 Fundamental of Information Technology

Credit : 04**Marks : 100****Learning Objectives:**

- i. To create overall generic awareness about scope of the field of IT and to impart basic personal computing skills.
- ii. To create background knowledge for the various courses in the programme.
- iii. It will help them to pursue specialized programs leading to technical and professional careers and certifications in the IT industry.

Course Outcomes:

At the end of this course, student should be able to

- i. Understand basic concepts and terminology of information technology.
- ii. Have a basic understanding of computers and their operations.
- iii. Identify issues related to basic parts.
- iv. Understand number systems used in computers
- v. To impart functional knowledge about networks and internet. To give an overview of computer application in various fields and an overall generic awareness about the scope of the field of IT

Unit I: Introduction to Information Technology	NOS	Hours
Introduction, Characteristics of computer, Evolution of Computer, Block Diagram of a computer, Digital signals, Binary System, ASCII; Historic Evolution of Computers; Classification of computers: Microcomputer, Minicomputer, mainframes, Supercomputers; Personal computers: Desktop, Laptops, Palmtop, Tablet PC, Workstations, Client and Server Architecture, Hardware & Software; Von Neumann model, Applications of Computer, Capabilities and limitations of computer.	SSC/ N9001	10 Hours
Unit II Basic Computer Organization	NOS	
Input Devices :- Keyboard, Mouse, trackball, Joystick, electronic pen, Touch Screen, Image Scanner, OCR, OMR, MICR, Bar code reader, Digitizer, speech recognition devices. Output Devices :- Monitors, Dot-matrix printer, Ink-jet printer, Laser Printer, Plotter Modem and Projector Bio-metric devices Main Memory: - RAM, ROM, PROM, EPROM, UVEPROM, EEPROM, Base Memory, Cache Memory, Sequential Access Memory: - Magnetic Tape, Direct Access Memory: - HDD. Optical Storage: - CD, DVD, Blue-ray disk. Flash Memory: - Pen-drive, memory card.	SSC/ N9001	10 Hours

Unit III: Operating System and Introduction to Windows10	NOS	
Introduction to Operating System, Functions of Operating System, Types of Operating System, DOS and Windows OS, Linux OS, Smart phone OS and Android Operating System Architecture of DOS, Windows, Linux and Android Operating System.	SSC/ N9001	10 Hours
Unit IV: Number System and Computer Arithmetic	NOS	
Number system types: Decimal, Binary, Octal, Hexadecimal,Conversions from one number system to other number system, Binary Arithmetic: Addition, Subtraction, Multiplication,Division, Complement Method: One's Complement, Two's complement	SSC/ N9001	10 Hours
Unit V: Introduction to signals and Logic Gates	NOS	
Introduction to signals: Analog signal, Digital signalBasic Logic Gates: AND, OR, NOT Universal gates: NAND and NOR Special purpose gates: EX-OR and EX-NOR	SSC/ N9001	10 Hours
Unit VI: Introduction to Computer Network & Internet	NOS	
Definition of Network, Web Browser, Types of Web BrowserIntroduction to Google chrome, Searching and Browsing Websites, URL, Search engines, Search tips; Server, Workstation, switch, router, network operatingsystems; Internet: brief history, World Wide Web, Types of Network: - LAN, MAN, WAN, Data Transmission Modes, Internet connections: ISP, Dial-up, cable modem, WLL, DSL, leased line; E-Mail, Email software features (sendreceive, filter, attach, forward, copy, blind copy); File Transfer Protocol, Characteristics of web-based systems, Web pages,introduction to HTML.	SSC/ N9001	10 Hours

References:

1. Fundamentals of Computer by P.K. Sinha BPB publication 6th Edition ISBN: 81-7656- 752-3
2. Fundamentals of Microprocessor and Microcontrollers by B. Ram
3. Modern Digital Electronics -by R. P. Jain Tata McGraw -Hill Publication 3rd Edition ISBN: 978-0-07-049492-3
4. MICROPROCESSOR -by B. Ram publication 5th Edition.
5. Inside the PC by Peter Norton

B. Voc. in Software Development

B. Voc. F. Y. (Semester I)

BVOC.1.04 Programming Language Concepts

Credit : 04**Marks : 100****Learning Objectives:**

- i. Programming Language Concepts course would enable the students in understanding Basics of Programming Languages and design & write the simple software applications using C programming.
- ii. Learn how to design algorithms and flowcharts.
- iii. Learn fundamental concepts of C Programming such as. Variables and constants, Operators, conditional and looping statements, Arrays, functions, structure and union, pointer, file handling etc.

Course Outcomes:

After successful completion of this course, students should be able to:

- i. To design algorithms and flowcharts to solve any problems.
- ii. To write software program to solve the given problem
- iii. To use file handling for storing and processing data.
- iv. To design program using graphics function in C

Unit I: Introduction to Programming languages	NOS	Hours
Introduction to Computer and Its Types, Introduction to software's: System software, Application software, Databasesoftware, Why to Learn about programming Languages, Types of programming Languages, Compilers and Its Types, Interpreter, Algorithm, Flowcharts and Symbol for creating flowchart, Converting algorithm to flowchart, Overview of C Programming, Advantages and Application of C Language Character set, Keywords and Identifiers, Constants and Variables, Data types, Operators and Expressions, Operatorprecedence and associativity, Type casting	SSC/NOS-501	10 Hours
Unit II Data I/O, Control Structures	NOS	
Basic structure of C program, Formatted and UnformattedInput and Output, Conditional branching - if, switch statement, Iterative loops – while, do while and for statement, break and continue statement, goto statement.	SSC/NOS-501	10 Hours

Unit III: Arrays and Functions	NOS	
Introduction, Declaration and Initialization, Accessing Array elements, Memory, representation of Array, One dimensional Arrays, Two dimensional Arrays, Character Arrays and Strings. Introduction to Functions, Standard Library Functions, User Defined Functions (UDF) – Declaration, Definition, Function call, Parameter Passing - by value and by reference, Recursion, Storage Classes, Macros.	SSC/NOS-501	10 Hours
Unit IV Structure, Union and Pointers	NOS	
Defining Structure, Declaration, Initialization, Array of Structures, Structure and Functions, Nested Structures, Unions, Enumerated data type, typedef, Pointers and Dynamic Memory Allocation	SSC/NOS-501	10 Hours
Unit V: File Handling	NOS	
Creation of a new file, file opening mode, Opening an existing file, Reading from file (fscanf, fgets, fgetc), Writing to a file (fprintf or fputs, Moving to a specific location in a file (ftell, fseek, rewind), Reading and Writing Binary files, Closing a file (fclose)	SSC/NOS-501	10 Hours
Unit VI: Introduction to Graphics Programming in C	NOS	
Introduction, initializing the graphics, C Graphical functions: initgraph, setbkcolor, setcolor, textcolor, settextstyle, gotoxy, line, circle, rectangle, ellipse, floodfill, getimage, putimage, Closegraph, cleardevice, sleep, sound, delay etc. simple programs	SSC/NOS-501	10 Hours

References:

1. Let us C-Yashwant Kanetkar.
2. Programming in C- Balguruswamy
3. The C programming Lang., Pearson Ed - Dennis Ritchie
4. Structured programming approach using C- Forouzan & Ceilberg Thomson learning publication.
5. Pointers in C – Yashwant Kanetkar

B. Voc. in Software Development

B. Voc. F. Y. (Semester I)

BVOC.1.05 Software Engineering and Testing

Credit : 04**Marks : 100****Learning Objectives:**

- i. To develop software engineering skills and testing plans.
- ii. To understand system concepts and its application in Software development.
- iii. To enhance skills of designing and testing software.
- iv. To learn technical skills to assure production of quality software.

Course Outcomes:

- i. Ability to learn various methods of software development.
- ii. Ability to apply various software testing techniques

Unit I: Introduction to Software Engineering	NOS	Hours
The Evolving Role of Software, Software, Software Characteristics, Software Applications, Software Evolution, Software Crisis & Horizon, Software Myths		10 Hours
Unit II: Process Of Software	NOS	Hours
Software Engineering, Software Process, The Waterfall Model, Incremental Process Models, Evolutionary Process Models, Spiral Model		10 Hours
UNIT-III: A Generic View of Process	NOS	Hours
Software Engineering – A Layered Technology, Process Framework, Personal and Team Process Models, Personal Software Process (PSP), Team Software Process (TSP), Process Technology, Product and process		10 Hours

UNIT-IV: AGILE DEVELOPMENT	NOS	Hours
What Is Agility?, What Is an Agile Process?, The Politics of Agile Development, Agile Process Models, Feature Driven Development (FDD), Software Engineering Practice, The Essence of Practice, Core Principles, Communication, Planning, Modeling Practices		10 Hours
UNIT-V: SOFTWARE TESTING STRATEGIES	NOS	Hours
A Strategic Approach to Software Testing, Unit Testing, Integration Testing, Validation Testing, System Testing, The Art Of Debugging		10 Hours
UNIT-VI: TESTING APPLICATION	NOS	Hours
Software Testing Fundamentals, Internal and External Views of Testing, White-Box Testing, Basic Path Testing, Control Structural Testing, Black Box Testing		10 Hours

References:

1. Software Engineering (7 th edition) R.Pressmen M C Graw Hill ISBN-13: 978-0078022128
2. Software Engineering (8 th edition) R.Pressmen M C Graw Hill ISBN-10: 9780089022382
3. Software Testing Concepts and Tools Nageswara Rao Dreamtech Publication ISBN 8177227122, 9788177227123
4. Software Engineering by Roger S. Pressman, Sixth Edition, McGraw Hill International Pub, ISBN- 0077227808.
5. Software Testing in the Real World by Edward Kit, Addison – Wesley Pub, ISBN- 0201877562
6. Software Testing by Ron Patton, Second Edition, BPB Publication, ISBN- 9780672327988
7. The Art of Software Testing by G. J. Myers, Third Edition, Wiley-InterScience Pub, ISBN: 9781118031964

B. Voc. in Software Development

B. Voc. F. Y. (Semester I)

BVOC.1.06 Office Automation

Credit : 04**Marks : 100****Learning Objectives:**

- i. Office Automation course would enable the students in crafting professional word documents, excel spread sheets, power point presentations using the Microsoft suite of office tools.
- ii. This will help students to develop accurate and well-designed documents.
- iii. To familiarize the students in managing database with Microsoft Access.

Course Outcomes:

After successful completion of this course, students should be able to:

- i. To prepare well designed documentation.
- ii. To create, modify format and print document using MS Word.
- iii. To design pages using different page layouts.
- iv. To work with a Spreadsheet, Charts and perform basic calculations.
- v. To create effective presentations using power point.
- vi. To apply animations and themes to enhance the looks of the Presentation.
- vii. To design a database with related tables using MS Access.

Unit I: Introducing Windows 10	NOS	Hours
Windows concepts and Features, Windows Structure, Desktop, Taskbar, Start Menu, My Computer, Creating, Copying, Moving and Deleting files, Recycle Bin, Windows Accessories- Calculator, Notepad, Paint, WordPad, Using Scanner, System Tools, Basic DOS Commands	SSC/9004	10 Hours
Unit II Word Processing Part-I	NOS	
Introduction to MS Word, Features of MS Word, Creating Opening and editing documents, Menus and Toolbars, Keyboard shortcuts, Formatting text and paragraph, Find and Replace, AutoText, Auto Correct, Envelopes and labels	SSC/9004	10 Hours

Unit III: Word Processing Part-II	NOS	
Numbers and bullets, Page Layouts, Working with Tables, Inserting mathematical formulae, Graphics and Frames, Converting a word document into various formats like- Text, Rich Text format, PDF, Mail Merging, Table of Content, Insert End Note and Foot Note, Insert Table of Figures	SSC/9004	10 Hours
Unit IV: Working with Workbook and Spreadsheet	NOS	
Creating and Opening Workbooks, Compatibility mode, Saving and Sharing Workbooks, Exporting workbooks, Cell Basics, Formatting Cells, Modifying Columns, Rows and Cells, Formulas and Functions, Working with Data, Working with Charts, Printing Workbooks	SSC/9004	10 Hours
Unit V: Designing Presentation	NOS	
Getting Started with PowerPoint, Working with Slides, Working with Headers, Footers, and Notes, Inserting and Formatting Pictures, Formatting Text, Displaying the Presentation Outline, Inserting Charts, Tables, Videos, Audios and Objects, Arranging Slides, Adding Slide Transitions, Using animations.	SSC/9004	10 Hours
Unit VI: Database Management with MS Access	NOS	
Creating a New Database, Creating Tables, Working with Forms, Creating queries, Finding Information in Databases, Creating Reports, Types of Reports, Printing & Print Preview, Importing data from other databases viz. MS Excel.	SSC/9004	10 Hours

References:

1. EXCEL 2007 Made Simple by Satish Jain, BPB
2. Word 2007 by Rutkosky, BPB 3
3. PowerPoint 2007 Made Simple by Satish Jain, BPB
4. Mastering EXCEL 4 for Windows - Chester – BPB
5. Learning Microsoft Office 2010, Lisa Bucki, Chirsty Parish, SuznneWeixel

B. Voc. in Software Development

B. Voc. F. Y. (Semester I)

BVOC.1.07 Lab 1: Programming Language Concepts

Credit : 02

Marks : 50

Learning Objectives:

30 Hours

- i. Programming Language Concepts course would enable the students in understanding Basics of Programming Languages and design & write the simple software applications using C programming.
- ii. Learn how to design algorithms and flowcharts.
- iii. Learn fundamental concepts of C Programming such as. Variables and constants, Operators, conditional and looping statements, Arrays, functions, structure and union, pointer, file handling etc.

Course Outcomes:

After successful completion of this course, students should be able to:

- i. To design algorithms and flowcharts to solve any problems.
- ii. To write software program to solve the given problem
- iii. To use file handling for storing and processing data.
- iv. To design program using graphics function in C

Lab Work/ Practical List

Programs for the demonstration of all the concepts in C Programming Language.

Following List should be covered after the Programs for the demonstration of concepts of C language.

1. Write a C program for the following:
 - a) Swapping using third variable
 - b) Swapping without using third variable
2. Write a C program to find Largest of the three Number using ternary operator.
3. Write a C program to print grade of the Students based on percentage as follows:
 >=80% -- Distiction
 >=60% -- First Class
 >=40% -- Pass Class
 Otherwise -- Fail
4. Write a C program to Check whether given number is Armstrong Number.
5. Write a C program to convert given number into word format using switch control Structure
 e.g. 123 >>>OneTwoThree
6. Write a C program to print all prime Number between 1 to n.

7. Write a C program to Print given Pattern:

1>>>

2>>>

3>>>

8. Write a C program to find sum series: $1/1! - 2/2! + 3/3! - 4/4! \dots N/N!$.

9. Write a C program to find GCD and LCM of the given numbers.

10. Write a C program to find smallest and largest of n numbers using Arrays.

11. Write a C program to sort n numbers using Arrays in ascending or descending order.

12. Write a C program to find Addition of the two Matrix.

13. Write a C program to find Multiplication of the two Matrix.

14. Write a C program to find Transpose of the Matrix.

15. Write a C program to find sum of the diagonal of the Matrix.

16. Write a C program to find sum of the digits of the Number with and without Recursion.

With Recursion

Without Recursion

17. Write a C program to find Fibonacci series using recursion.

18. Write a C program to count the Number of the vowels and consonants in the String.

19. Write a C program by using Structure to display the information of the students. it include roll no.(int) , Name(char) , Gender(char) , fees(float).

20. Write a C program to swap two numbers using Call by Reference And call by value.

Call by Value

Call by Reference

21. Write a C program to add two integer using Pointers.

Using Function

Without Using Function

22. Write a C program to count number of the Characters, words and lines in the txt file.

23. Write a C program to display the contents of file on screen.

24. Write a C program to copy contents of one file to another.

25. Write a C program to read name and marks of n number of students from and store them in a file. If the file previously exists, add the information to the file.

26. Write a C program to write all the members of an array of structures to a file using fwrite(). Read the array from the file and display on the screen.

27. Write a C program to sort n strings using Arrays in ascending or descending order

28. Write a Program to draw basic graphics construction like line, circle, arc, ellipse and rectangle.

29. Write a Program to draw animation using increasing circles filled with different colors and patterns.

30. Program to make screen saver in that display different size circles filled with different colors and at random places.

31. Write a Program to make a moving colored Airplane/car using inbuilt functions.

32. Write a C Program to Remove Characters in String except Alphabets

33. Write a program in C to print individual characters of string in reverse order

34. Write a program in C to count total number of alphabets, digits and special characters in a string

35. Write a C program to check whether a given substring is present in the given string

36. Write a program in C to convert a string to lowercase

37. Write a program in C to make such a pattern like right angle triangle with a number which will repeat a number in a row.

The pattern like :

1

22

333

4444

38. Write a program in C to make such a pattern like right angle triangle with number increased by 1

The pattern like :

1

2 3

4 5 6

7 8 9 10

39. Write a program in C to make such a pattern like a pyramid with numbers increased by 1. Go to the editor

1

2 3 -

4 5 6

7 8 9 10

40. Write a program in C to make such a pattern like a pyramid with an asterisk. Go to the editor

*

**

41 Write a C program to reverse the digits of a given integer.

42. Write a C program to check whether an integer is a palindrome or not. An integer is a palindrome when it reads the same forward as backward

References:

1. Let us C-YashwantKanetkar.

2. Programming in C- Balguruswamy

3. The C programming Lang., Pearson Ecl – Dennis Ritchie

4. Structured programming approach using C- Forouzah&Ceilberg Thomson learning publication.

5. Pointers in C – YashwantKanetkar

B. Voc. in Software Development
B. Voc. F. Y. (Semester I)
BVOC.1.08 Lab 2: Office Automation

Credit : 02

Marks : 50

Lab Work/ Practical List

30 Hours

Task 1 Create project certificate Features to be covered:-Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colours, Inserting Header and Footer, Using Date and Time option in Word.

Task 2: Creating project Features to be covered:-Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check, Track Changes.

Task 3: Creating a Newsletter: Features to be covered: - Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes and Paragraphs

Task 4: Creating a Feedback form - Features to be covered- Forms, Text Fields, Inserting objects, Mail Merge in Word.

Tasks to be completed using MS Excel

Task1: Creating a Scheduler - Features to be covered: Gridlines, Format Cells, Summation, auto fill, formatting Text.

Task 2: Calculations - Features to be covered:- Cell Referencing, Formulae in excel – average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, LOOKUP/VLOOKUP

Task 3: Performance Analysis - Features to be covered: - Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators, Conditional formatting

Tasks to be completed using MS Power Point

Task1: Students will be working on basic power point utilities and tools. Topic covered includes :- PPT Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows

Task 2: Concentrating on the in and out of Microsoft power point. Topics covered includes: - Master Layouts (slide, template, and notes), Types of views (basic, presentation, slide slotter, notes etc.), and Inserting – Background, textures, Design Templates, Hidden slides. Auto content wizard, Slide Transition, Custom Animation, Auto Rehearsing

Task 3: Power point test would be conducted. Students will be given model power point presentation which needs to be replicated (exactly how it's asked).

Tasks to be completed using MS Access

Task 1: Creating Student's address Database and then list the data on the screen in alphabetical order and performing various queries.

Task 2: Generating Query in Access

Task 3: Generating the Report from Database and Importing and exporting data

B. Voc. in Software Development

B. Voc. F. Y. (Semester I)

BVOC.1.09 Lab 3: Software Engineering and Testing

Credit : 02

Marks : 50

Lab Work/ Practical List

30 Hours

- 1) Develop requirement specification of our project
- 2) Develop DFD model(level-0,level-1 dfd and data dictionary of the project)
- 3) Develop UML use case model for a problem
- 4) Develop sequence diagram
- 5) Develop class diagram
- 6) Take any system(e.g. ATM system) and study its system specification and report the various bugs
- 7) Write the any test case for any known application(e.g. banking system)
- 8) Create a test plan document for any application(library mgmt. system)
- 9) Study of any testing tool (e.g. winrunner)
- 10)Study of any testing tool(e.g. selenium)
- 11) Study of any bug tracking tool (e.g. Bugzilla,bugbit)
- 12) Study of any Test management tool (e.g. test director)
- 13) Study of any Open source testing tool (e.g. test link)

B. Voc. in Software Development

B. Voc. F. Y. (Semester II)

BVOC.2.01 English language and
communicative skills Part II**Credit : 04****Marks : 100****Course Objectives:**

1. To make a comprehensive use of English in day-to-day life.
2. To help Students develop the ability to learn and contribute critically.
3. To develop the writing skills of the students.
4. To help the students to understand the basic usages of English.

Course Outcome:**By the end of this course students should be able to:**

1. Understand and demonstrate Basic English usages for their different purposes.
2. Clear entrance examination and aptitude tests.
3. Write various letters, reports required for professional life.

Unit-1: Morphology	NOS	Hours
Morphology: Free & Bound Morphemes, Word Formation Processes, Morphological Analysis of words	SSC/N9001	10 Hours
Unit-2: Grammar in day-to-day use:	NOS	
Word Classes: Open and Closed Word Classes, Phrase: Types and functions of the phrases	SSC/N9001	10 Hours
Unit-3: Auxiliary Verbs	NOS	
Verbs: Primary Auxiliary and Secondary Auxiliary, Usages and Functions of modal auxiliaries, Questions using Modal Auxiliaries	SSC/N9001	10 Hours
Unit-4: Transformation of Sentences	NOS	
Voice: Active & Passive, Speech: Direct & Indirect	SSC/N9001	10 Hours
Unit-5: Error Detection	NOS	
Determiners: Article, Quantifiers and Demonstratives, Subject – Verb Agreement	SSC/N9001	10 Hours
Unit-6: Tenses and their usages	NOS	
Simple Present, Simple Past, Simple Future	SSC/N9001	10 Hours

Reference Books

1. Modern English Grammar-L. S. Deshpande (creative Publication)
2. A Practical English Grammar- A. J. Thomson. (Oxford University)
3. Macmillan Foundation English. - R. K. Dwivedi & a. Kumar (Mammalian India Ltd)
4. Writing English for You- G. Radhakrishna Pillai (Emerland Publication)
5. High School English Grammar & Composition - Wren & Martin (S. Chand)
6. Radiance Communication Skills- Editorial Board (SRTM University) Orient Black Swan.
7. English Grammar and Composition – Rejendra Pal and Prem Lata Suri (Sultan Chand and Sons)

B. Voc. in Software Development

B. Voc. F. Y. (Semester II)

BVOC.2.02 Data Analysis and Discrete Mathematics

Credit : 04**Marks : 100****Learning Objectives:**

- i. Practicing Basics of mathematics
- ii. Use of Numbers
- iii. This course enables students to develop their ability to reason by introducing them to elements of reasoning
- iv. Basics knowledge of different types of set mathematical logic relations and probability.

Course Outcomes:

- i. Develops problem solving skills of student
- ii. Improves Basic and advanced calculations used in day to day life.
- iii. Improves basics mathematics and statistics
- iv. Construct a logically sound and well-reasoned argument.

Unit-1: Set,	NOS	Hours
Meaning, Types of Set, Sub Set, Equity of Set, Operation on Set, Venn diagram, Problems on Set	SSC/N9001	10 Hours
Unit -2 : Mathematical Logic	NOS	
Proposition & Logical Operations, Truth Tables, Equivalence, Implications, Law of Logic, Predicates & Quantifier	SSC/N9001	10 Hours
Unit -3: Relation	NOS	
Meaning, Types of Relation, Operation on Relation, Function, Types of Function,	SSC/N9001	10 Hours
Unit -4 : Frequency Distribution	NOS	
Introduction of Statics, Meaning of Data, Descript Variates, Continuous Variates, Formation of Frequency Distribution,	SSC/N9001	10 Hours
Unit -5: Measure of Central Tendency	NOS	
Arithmetic Mean, Median, Mod-Definitions & Calculations, Quartile, Deciles & Percentile, Definitions & Calculations,	SSC/N9001	10 Hours
Unit -6: Probability	NOS	
Definition, Random Experiment, Sample Space, Events, Definition of Probability, Examples on Probability	SSC/N9001	10 Hours

1. Statistical Method –S. P. Gupta 9th Edition, S. Chand Publication
2. Fundamental of Statics - S. C. Gupta, 6th Edition, Himalaya Publication.
3. Discrete Mathematical Structure- Y. N. Singh

B. Voc. in Software Development

B. Voc. F. Y. (Semester II)

BVOC.2.03 Operating System

Credit : 04

Marks : 100

Learning Objectives:

- Demonstrate a knowledge of process control, threads, concurrency, memory management Scheduling, I/O and files, distributed systems, security, networking.
- Understand the services provided by and the design of an operating system.
- Understand the structure and organization of the file system.
- Understand what a process is and how processes are synchronized and scheduled.

Course Outcomes:

After successful completion of this course, students should be able to:

- Understand and analyse theory and implementation of: processes, resource control(concurrency etc.), physical and virtual memory, scheduling, I/O and files
- Use system calls for managing processes, memory and the file system.
- describe, contrast and compare differing structures for operating systems
- Understand the data structures and algorithms used to implement an OS.

Unit I: Overview of Operating System	NOS	Hours
What is an OS, Brief history, Architecture, Goals & Structures of O.S, Basic functions, Interaction of O. S. & hardware architecture, System calls, Batch, multiprogramming. Multitasking, time sharing, parallel, distributed & real -time O.S.	SSC/ N0503	10 Hours
Unit II Process Management	NOS	
Process Concept, Process states, Process control, Threads, Uniprocessor Scheduling: Types of scheduling: Pre-emptive, Non pre-emptive, Scheduling algorithms: FCFS, SJF, RR, Priority, Thread Scheduling, Real Time Scheduling. System calls like ps, fork, join, exec family, wait.	SSC/ N0501	10 Hours
Unit III: Concurrency control	NOS	
Concurrency: Principles of Concurrency, Mutual Exclusion: S/W approaches, H/W Support, Semaphores, pipes, Message Passing, signals, Monitors, Classical Problems of Synchronization: Readers-Writers, Producer Consumer, and	SSC/ N0501	10 Hours

Dining Philosopher problem. Deadlock: Principles of deadlock, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection, System calls like signal, kill.		
Unit IV: Memory Management	NOS	
Memory Management requirements, Memory partitioning: Fixed and Variable Partitioning, Memory Allocation: Allocation Strategies (First Fit, Best Fit, and Worst Fit), Fragmentation, Swapping, and Paging. Segmentation, Demand paging Virtual Memory: Concepts, management of VM, Page Replacement Policies (FIFO, LRU, Optimal, Other Strategies), Thrashing.	SSC/ N0501	10 Hours
Unit V: I/O management & Inter Process Communication	NOS	
I/O Devices, Organization of I/O functions, Operating System Design issues, I/O Buffering, Disk Scheduling (FCFS, SCAN, C-SCAN, SSTF), RAID, Disk Cache. Basic Concepts of Concurrency, Cooperating process, Advantage of Cooperating process, Bounded- Buffer - Shared-Memory Solution, Inter-process Communication (IPC), Basic Concepts of Inter-process Communication and Synchronization	SSC/ N0501	10 Hours
Unit VI: Multi-Processor Based and Virtualization Concepts	NOS	
Virtual machines; supporting multiple operating systems simultaneously on a single hardware platform; running one operating system on top of another. Reducing the software engineering effort of developing operating systems for new hardware architectures. True or pure virtualization. Para virtualization; optimizing performance of virtualization system; hypervisor call interface. Basics of Network Operating System, Server Operating System and Real Time Operating System	SSC/ N0501	10 Hours

References:

Reference Books:

1. Operating System Concepts by Abraham Silberschatz, Peter B. Galvin, Greg Gagne.
2. Modern Operating Systems by Andrew Tanenbaum, Prentice Hall.
3. Operating Systems by William Stallings Prentice Hall
4. Fundamentals of Operating Systems by A.M. Lister, Macmillan

B. Voc. in Software Development

B. Voc. F. Y. (Semester II)

BVOC.2.04 Web Technology

Credit : 04**Marks : 100****Learning Objectives:**

- i. To impart basic Web Designing skills.
- ii. To provide the in-depth knowledge about Static and Dynamic Web Designing and make them ready for designing such websites
- iii. Develop the modern Web applications using the client and server side technologies and the web design fundamentals

Course Outcomes:

- i. Describe the concepts of WWW including browser and HTTP protocol.
- ii. List the various HTML tags and use them to develop the user friendly web pages.
- iii. Define the CSS with its types and use them to provide the styles to the web pages at various levels.
- iv. Develop the modern web pages using the HTML and CSS features with different layouts as per need of applications.
- v. Use the JavaScript to develop the dynamic web pages.
- vi. Use server side scripting with PHP to generate the web pages dynamically using the database connectivity.

Unit I: Introduction to Web Technology	NOS	Hours
Internet and WWW, HTTP Protocol : Request and Response, Web browser and Web servers, Features of Web 2.0, Concepts of effective web design, Web design issues including Browser, Bandwidth and Cache, Display resolution, Look and Feel of the Website, Page Layout and linking, User centric design, Sitemap, Planning and publishing website, Designing effective navigation	SSC/N0501	10 Hours
Unit II HTML	NOS	
Basics of HTML, formatting and fonts, commenting code, color, hyperlink, lists, tables, images, forms, XHTML, Meta tags, Character entities, frames and frame sets, Browser architecture and Web site structure. Overview and features of HTML5	SSC/N0501	10 Hours

Unit III: Style sheets	NOS	
Style sheets : Need for CSS, introduction to CSS, basic syntax and structure, using CSS, background images, colors and properties, manipulating texts, using fonts, borders and boxes, margins, padding lists, positioning using CSS, CSS2, Overview and features of CSS3	SSC/N0501	10 Hours
Unit IV: JavaScript	NOS	
Client side scripting with JavaScript, variables, functions, conditions, loops and repetition, Pop up boxes, Advance JavaScript: Javascript and objects, JavaScript own objects, the DOM and web, browser environments, Manipulation using DOM, forms and validations, DHTML : Combining HTML, CSS and Javascript, Events and buttons	SSC/N0501	10 Hours
Unit V: XML	NOS	
Introduction to XML, uses of XML, simple XML, XML key components, DTD and Schemas, Using XML with application. Transforming XML using XSL and XSLT	SSC/N0501	10 Hours
Unit VI: PHP and MySQL	NOS	
PHP : Introduction and basic syntax of PHP, decision and looping with examples, PHP and HTML, Arrays, Functions, String, Form processing, Date and Time Functions, Sending Email, Files, Cookies and Sessions, Connecting to MySQL and Selecting the Database, Executing Simple Queries, Retrieving Query Results, Ensuring Secure SQL, Counting Returned Records, Updating Records with PHP	SSC/N0501	10 Hours

References:

1. Developing Web Applications, Ralph Moseley and M. T. Savaliya, Wiley-India
2. Web Technologies, Black Book, Dreamtech Press
3. HTML 5, Black Book, Dreamtech Press
4. Web Design, Joel Sklar, Cengage Learning
5. Developing Web Applications in PHP and AJAX, Harwani, McGrawHill
6. Internet and World Wide Web How to program, P.J. Deitel & H.M. Deitel, Pearson
7. HTML The complete Reference -2nd Edition Thomas A Powel Tata McGraw Hill publication
8. The complete Reference (HTML & XHTML)-5th Edition Thomas A Powel Tata McGraw Hill publication
9. Computer Fundamental s (6th Edition) P. K. Sinha BPB Publication

B. Voc. in Software Development

B. Voc. F. Y. (Semester II)
BVOC.2.05 Graphics Design and Content Management Tools

Credit : 04

Marks : 100

Learning Objectives:

- Create, manipulate, and edit text and graphics to obtain desired graphical outcomes.
- Define a relational database management system (RDBMS) and describe its structure.
- Define data definition language (DDL) and data manipulation language (DML).
- Provide the skills to effectively create and operate WordPress sites.

Course Outcomes:

After successful completion of this course, students should be able to:

- Utilize several Flash tools and tactics learned throughout the course to produce an interactive flash based website.
- Publish flash movies in numerous formats and contexts in a professional and web friendly manner.
- Know types of databases and how to design them.
- Know advanced queries and advanced concepts in MySQL.
- Plan website by choosing colour schemes, fonts, layouts, and more.
- Select, install, and activate a theme in word press.
- Design e-commerce site using woo commerce plugin.

Unit I: Getting Started with Flash	NOS	Hours
Create Flash movie file, Draw the characters and background, Basic drawing tools i.e. Pencil, Brush, Paint Bucket, and Text tools, Previewing and Publishing Movie, Scenes, Layers, and Library Symbols, Frames, Tweening, and Onion Skinning, Creating Curves, Importing Illustrator/Photoshop Files, Understanding Blend Effects	SSC/ N0503	10 Hours
Unit II Advanced Drawing Techniques	NOS	
Animating 3D motion, Articulated Motion with Inverse Kinematics, Constraining Joints, Inverse Kinematics with Shapes, Designing a Layout, Creating Buttons and Actions, Creating Event Handlers, Using Sounds, Using Adobe Media Encoder, Playback of External Video, Working with Video and Transparency, Embedding Flash Video, Using Components, Creating Masks, Adding Metadata, Publishing Movie for theWeb	SSC/ N0503	10 Hours

Unit III: RDBMS with MySQL	NOS	
Introduction to database, Features of MySQL, Basics of Relational Databases, Creating and Selecting a Database, Creating a Table, Loading Data into a Table, Modifying and Deleting Data from Table, Retrieving Information from a Table, Selecting All Data, Selecting Particular Rows, Selecting Particular Columns, Sorting Rows, Date Calculations, Working with NULL Values, Pattern Matching, Counting Rows, Using More Than one Table, Getting Information About Databases and Tables, Creating Sequence, Database Backup and Restore	SSC/ N0501	10 Hours
Unit IV: Website Development using WordPress	NOS	
Installing WordPress, Installing Themes, Creating a Child Theme, Modifying a Theme, Setting Up a WordPress Site, Starting the MRP Theme, The WordPress Loop, Continuing with the Loop, Splitting the Page into Templates, Creating a Page for Single Posts, Creating Pages, Customizing the Navigation Menu, Customizing the Sidebar, Creating a CustomPage Template, Adding a Contact Form, Uploading a WordPress Site	SSC/ N0501	10 Hours
Unit V: Advanced WordPress Concepts	NOS	
What are plugins? Finding plugins, Installing plugins, Activating and deactivating plugins, Editing plugin settings, Deleting plugins, Adding, editing, and deleting users, User roles and permissions, Importing content from another site, Exporting your WordPress data, WordPress General settings, Changing the site title and tagline, Changing your URL, Using adifferent homepage, Updating the admin email address, Changing time zones Date/Time formats	SSC/ N0501	10 Hours
Unit VI: Woo Commerce Plugin	NOS	
Introduction to Woo Commerce, Woo Commerce installation, Convert HTML to Woo commerce using [short-code], Recent Products, Featured Products, Variable Products, Woo commerce Settings, Payment Gateway Integration, Moving woo commerce site from Local Server to Live Server	SSC/ N0501	10 Hours

References:

Reference Books:

1. Adobe Flash Professional CS6 Classroom in a Book by Adobe Creative Team
2. Exploring Adobe Flash CS4-Annesha Hartman, Cengage Learning Publication
3. MySQL Explained by Mr. Andrew Comeau, CreateSpace Independent Publishing Platform
4. Professional WordPress: Design and Development by Brad Williams, David Damstra, Hal Stern
5. WordPress To Go by Sarah McHarry.
6. WooCommerce Explained by Stephen Burge

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BVOC.2.06 Desktop Publishing

Credit : 04**Marks : 100****Learning Objectives:**

- i. To understand the fundamentals & concepts of Page Maker, Coreldraw, Photoshop
- ii. To give the students a hands on experience on Page Maker, Coreldraw, Photoshop
- iii. To give students the skills to create book works, building booklets.

Course Outcomes:

- i. Ability to learn various methods of Pagemaker, Coreldraw, Photoshop
- ii. Ability to apply various Desktop Publishing

Unit I: Page Maker: An overview	NOS	Hours
Introduction to page maker, Creating & opening publications ,using the tool box, working with Palettes,text & Graphics, Starting a publication from a template,saving & closing a publication		10 Hours
Unit II: Drawing & Shaping Objects	NOS	
Positioning ruler guides, typing text, formatting graphics, creating columns, creating styles,changing type style & alignment , rotating & moving of text block & graphics , placing text file, setting tab, indents, leaders,copying graphic between publications , positioning & resizing the logo, Setting up pages, Changing document setup,using master pages, choosing a measurement system & setting up rulers, adjusting layout, numbering pages, rearranging pages, creating running header & footers , importing text, threading text blocks,balancing columns, edit story, customizing the dictionary, hyphenation, layers, frames, locking object, wrapping text around graphics,cropping a graphic		10 Hours
UNIT-III: Working in Photoshop	NOS	
Getting Acquainted with Photoshop , Basic Image Manipulation , Color BasicsPainting Tools ,Brush Settings , Making Selections ,Filling and stroking , Layers ,Advanced Layers ,Text ,Drawing ,Using Channels and Masking ,Manipulating images ,Getting to know the work area ,Using Adobe Bridge , Basic Photo Corrections ,Retouching and Repairing.		10 Hours
UNIT-IV: Designing using Photoshop	NOS	
Working with selections , Layer Basics ,Masks and channels , Correcting and enhancing digitalphotographs , Topographic design , Vector drawing techniques , Advanced Layer techniques , Vector Composting , Creating Linkswithin an image ,Creating rollover web visuals ,Animating GIF images for the web ,Producingand printing consistent color		10 Hours

UNIT-V: Introduction to Corel Draw	NOS	
Getting started with Corel Draw, Introduction to Corel Draw, Drawing and Coloring, Mastering with Text, Text Tool Artistic and paragraph text, Applying Effects, Power of Blends Distortion,		10 Hours
UNIT-VI: Working with bitmap and webresources	NOS	
Working with Bitmap Commands, Working with Bitmaps, Editing Bitmaps, Applying effects on Bitmaps, Printing Corel Draw- Web resources, Internet Tool bar, Setting your webpage, Exporting files, Creating buttons with rollover effects		10 Hours

References:

1. Adobe PageMaker 7.0 Classroom in a Book by Adobe Creative Team (Author), ISBN-13 : 978-0201756258, Item Weight : 692 g Paperback : 336 pages ISBN-10 : 0201756250, Publisher : Adobe; Pap/Cdr edition (25 October 2001)
2. Adobe PageMaker 7.0, by Kevin Proot, ISBN-13 : 978-0619109561, Publisher : Course Technology; Illustrated edition (1 December 2002)
3. Photoshop CC in Simple Steps, by DT Editorial Services (Author), ISBN-10 : 9388425243, Publisher : Dreamtech Press (1 January 2019)
4. CorelDRAW 2018 in Simple Steps, DT Editorial Services (Author), ISBN-10 : 9388425251, Publisher : Dreamtech Press (1 January 2018)

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BVOC.2.07 Lab 1: Web Technology

Credit : 02

Lab Work/ Practical List

Marks : 50
30 Hours

HTML

1. Write a HTML page to print Hello World in bold and italic font
2. Display various text formatting methods available in HTML.(i.e.<h1>,,<u> etc...)
3. Create a HTML file using special characters.
4. Create a HTML file which displays 3 images at LEFT, RIGHT and CENTER respectively in the browser
5. Create a HTML file which contains hyperlinks

Table of Contents

Chapter 1: Introduction

Chapter 2: What is HTML?

Chapter 3: What is Javascript?

.

By clicking on the link takes to the respective topic within the same page.

6. Create a HTML page as given below

List of Subjects

1. Computer Engineering Department
 - a. Software Engineering
 - b. Information Security
 - c. Computer Graphics
2. Electrical Engineering Department
 - Electrical Machine
 - Power Electronics
 - Micro Controller
3. Computer Engineering
Is a discipline that integrates several fields required to develop computer systems.
7. Create table with ROWSPAN and COLSPAN attribute of TABLE in HTML (Prepare timetable of your class).Include CELSPACING & CELL PADDING

8. Create HTML page using Frames.

Web Technology Author: Date:	
TOC 1. Link1 2. Link2 . .	CONTENT

9. Create a simple form that will show all the INPUT METHODS available in HTML.

WEB Technology Author: Date:	
TOC 1. Link1 2. Link2 . .	CONTENT

JAVA SCRIPT

10. Create simple application that will do following
- Declare And assign variable
 - Operators and expression in JavaScript
 - Looping in JavaScript
 - Declare an Array
 - User defined functions in JavaScript
 - Built in functions in JavaScript
 - Dialog boxes
11. For the form created in HTML provide various form values checking passed by user.
12. A document contains two forms, named specifications and accessories. In the accessories form is a field named acc1(type=text). Write two different statements that set the contents of that field to "New value".

13. Create a page that includes a select object to change the background color of the current page. The property that needs to be set is bgColor, Similar things for foreground color.
14. Put a button in "MAIN HTML" page, on click of that button, execute some JavaScript code that will open one child window. In the "MAIN HTML" page there should be one text field named "location" Inside "Child Window" put one Button. When this button of "Child Window" is clicked, it will write the Location value (URL) of "MAIN WINDOW" inside the LOCATION field of "MAIN WINDOW".
15. Scroll some message in Status window of browser.
16. Write down simple JavaScript using timeout such that image will be changed after every 1 ms at a specified position.

CSS

17. Practical based on the following attributes using
CSS Color and background
Font Text Border
Margin and list
18. Practical based on use of external style sheet.

XML

19. Write an XML example of given tree that demonstrates the creation of user-designed tags and display it in a browser.
college □ employee □ fname, lname, joindate, bdate, age, salary (with atleast 3 elements)
20. Write an XSL code for the above XML file that displays the information in a table structure.
21. Write a template file for the above code.

PHP

22. Understand the PHP interface. Study PHPMyAdmin.
23. Write a PHP script to create a database StudentDB.
24. Write a PHP script to list all the databases available in mysql.
25. Write a PHP script to list all the tables available in a particular database.
26. Write a PHP script to create a table student in the database StudentDB.
27. Write a PHP script to insert a row into the table student. The values to be inserted are taken from a HTML page.
28. Write a PHP script to alter student table. For ex: modify sname by increasing its length.

29. Write a PHP script to list all the records in the student table in tabular format.
30. Write a PHP script to delete all rows from student table whose roll numbers are between 1 and 3.
31. Write a PHP script to drop the table student and drop the database StudentDB.

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BVOC.2.08 Lab 2: Graphics Design and Content Management Tools

Credit : 02

Marks : 50

Lab Work/ Practical List

30 Hours

Tasks to be completed using Macromedia Flash

Task 1 Create a movie in Flash using the concept of Masking.

Task 2: Create a movie in Flash using the concept of Motion Guide.

Task 3: Create a movie in Flash using the concept of Onion Skinning.

Task 4 Create a movie in Flash using the concept of Blinking Text.

Task 5 Create a movie in Flash using the concept of Frame by Frame animation.

Tasks to be completed using MySQL

Task 1: Write a MySQL statement to create a table named ECHARGE containing information of the customers using electricity produced by XYZ company, having the columns Customer's identification number (C_ID, distinct integer), Customer name (CNAME, Character, variable width 20, not empty), Customer's address (C_ADDR, character, variable width, 30), type of connection (TYPE, character, of width 12, containing default entry 'RESIDENTIAL' should not be empty) and units consumed (UNITS, positive integer).

Task 2: There exist a table RAILWAYS with columns for Passenger number (PNR), Passenger name (PNAME), age (AGE), sex (SEX), boarding station (BSTN), destination (DSTN) and FARE (fare). Write MySQL query to do the following.

1. Display passenger name, age, boarding station and destination station.
2. Display names of the passenger whose age is greater than or equal to 65.
3. Delete the table RAILWAYS.

Task 3: There exist a table called RAIL containing the columns station number (SNO, numeric), date (DT, date), station name (SNAME, character) and amount collected (AMT, numeric). Write MySQL statements for the following

- 1) Display the station number, station name and minimum and maximum of the amount collected of each station.
- 2) Display station name, the total and average of the amount collected of each station.

Task 4: There exists a table called ATTEND containing the columns student name (SNAME, character), class (CLASS, character), division (DIV, character) and no. of lectures attended (TOTAL_LEC, numeric).

Write MySQL statements for the following

- 1) Add a new column for roll number (ROLL, integer) as first column the table.
- 2) Display all the rows arranged in ascending order of the student's name of the table.
- 3) Delete the column SNAME from the table.
- 4) Rename the table as 'ATTD REPORT'.

Task 5: There exists a table called SALARY containing Employee number (ENO, numeric, primary key) employee name (ENAME, character), age (AGE, numeric) and basic salary (BPAY).

Write MySQL query to display employee number, employee name, age and 'Bonus' to be calculated as 10% of basic salary for those employees whose basic salary is below the average basic salary.

*Tasks to be completed using **WordPress and Woo Commerce***

Task1: Develop e-commerce web application for online shopping of Organic Vegetables using WordPress and Woo Commerce plugin.

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BVOC.2.09 Lab 3: Desktop Publishing

Credit : 02

Marks : 50
30 Hours

- 1) Using a logo provided by the teacher, measure and design it in a desktop publishing software, and then print it.
- 2) Draw a triangle with rounded corners and apply fill and stroke
- 3) Draw the following basic shapes:
 - (a). 5 cm by 7 cm rectangle.
 - (b). A circle with 6 cm radius.
 - (c). A hexagon
- 4) To Create a Label using PageMaker software.
- 5) Create a visiting card in PageMaker
- 6) Create a corner design in PageMaker
- 7) Create a border design in PageMaker
- 8) Open PageMaker and create a new magazine layout which includes the following setup options:
 - Page size - magazine narrow
 - Orientation tall
 - 4 page spread
 - Numbering - Lower Roman
 - Margins 1.25 inches- top, and .75 inches - all other sides.
- 9) Draw a floral design or a cartoon motif in CorelDraw. for a bed sheet.
- 10) Design a top for Jeans with a printed logo at the front side.
- 11) Do the following
 - i) Draw multiple Rectangles and try vertical alignment.
 - ii) Try Grouping and Ungrouping of objects.
 - iii) Try rotation and skewing of objects.
 - iv) Try duplication of objects.

- 12) Create a Visiting Card project using CorelDraw. .
- 13) Design a 3D button for a Web Page using CorelDraw. .
- 14) Create artistic text and apply a Drop Shadow and adjust the Settings using Photoshop.
- 15) Create a text design in Photoshop
- 16) Create a logo design in Photoshop
- 17) Create a t-shirt design in Photoshop
- 18) Create a banner design in Photoshop
- 19) Create a nature background design in Photoshop
- 20) Create a background design in Photoshop



Principal

Janvikas Mahavidyalaya,
Bansarola, Tq. Kalj, Dist. Beed