DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Surnar S.B **Department: Software Development**

Program: B.voc FY **Subject**: **Software Development** **Course Code**: BVL101

Paper Title: COMMUNICATION & SOFT SKILL

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	LANGUAGE AND COMMUNICATION	Definition of Language, nature of language, Characteristics of Human Language, Varieties of English Language: British, American, Indian, Australian etc. English for specific and special purposes.Importance of communication; Animal and human communication; Methods of communication (Verbal & Non-Verbal); Barriers of communication	Information for over all communication and language
2	BASIC ENGLISH	Introduction to English Language- Alphabets: Types, Explanations, Examples, Exercise- Introduction to Phonetics- Application of Phonetics-	Introduction to Grammar

		Silent Consonants, Rules to identify the silent consonants in a want- Conversion of mother tongue to English language- Direct translation of words and essential phrases to English language- Short conversations. Introduction to Grammar – Sentences: Types, Examples, And Exercise- Nouns: Noun Gender, Types, Examples, And Exercise – Pronouns: Types, Examples, And Exercise – Verb: Types, Examples, And Exercise – Adjectives: Types, Examples, And Exercise – Adverb: Types, Examples, Exercise – Preposition – Conjunction – Interjection – Articles.	
3	TENSES	Introduction to tenses – Types of tenses – Framing sentences using tenses – Application of tenses – Active voice and passive voice – Direct speech and indirect speech – Idioms and Phrases – Frequently used Phrasal Verbs	Introduction to tenses Types of tenses
4	WRITTEN COMMUNICATION	Sending Messages – General formats of writing a letter – Telegraphic Messages – Writing for occasions – Types of letters: Personal, Business, Proposal, Applications, Thanks, Invitation,	To improve writing skills and all type letter writing.

		Condolence, Requisition, and Complaint	
5	ORAL COMMUNICATION	Basic skills of communication, Listening with Understanding), Extended natural speech in business situations, both face to face and on the telephone. Understanding standard American, British and Indian accents. Speaking with correct Pronunciation, English Consonants, English Vowels, Speaking with right accent	To improve oral communication
6	SOFT SKILL	Behavioural Skills, Business Communication, Spoken English, Text Writing, Group Dynamics, Presentation skills Planning and preparing to speak, Strategies for making powerful openings in presentations. Body Language, Voice Modulations	To improve soft skill

Specify Course Outcome: To provide judicious mix of skills relating to a software development profession andappropriate content of General Computer Education.
To ensure that the students have adequate knowledge and skills required for software industries, so that they are work ready at each exit point of the programme.
To provide flexibility to the students by means of pre-defined entry and multiple exit Points.

Specify Program Outcome: Static or semi dynamic web site developer
2. PC Maintenance
3. Network administrator/monitor.
4. DATA ENTRY OPERATOR.
5. DTP operator.
6. Assistant Programmer (C Language)

Signature of Teacher

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mr. Kuptekar Sawankumar Vijay **Department:** Computer Science

Program: B.Voc (SD) FY **Subject**: Software Development **Course Code**: BVL102

Paper Title: INTRODUCTION TO COMPUTER

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	COMPUTER SYSTEM CHARACTERSTICS AND CAPABILITY	Basic structure, ALU, memory, CPU, I/O devices, Development of computers, Classification of computers	Know the basic structure of computer
II	DATA REPRESENTATION WITH IN COMPUTER	BIT, BYTE, WORD, ASCII, EBCDIC, BCD Code, Introduction to Number system: Binary, Octal, Decimal and Hexadecimal., Conversation from one number system to another number system., Introduction to Basic Gates.	Understand data representation and number system in computer.
III	INPUT DEVICES	Keyboard, Direct Entry: Card readers, scanning devices (BAR CODE, OMR, MICR),Voice input devices, Light pen, Mouse, Touch Screen, Digitizer, Scanner.	Able to know input devices of computer.

IV	OUTPUT DEVICES	Printers: Impact and Non-impact printers, CRT, LCD, CD-WRITTER, ZIP DRIVE, DVD Introduction to Web Camera, modem	Knowing about output devices of computer.
V	MEMORY	RAM, ROM, PROM, EPROM, EEPROM, Base memory, extended memory, expanded memory, Cache memory, Storage devices Tape, FDD, HDD, CDROM, Pen Drive.	Able to know memory of computer

Specify Course Outcome:

To learn Basic Function of Devices like I/O, HDD etc. To Understand the Fundamental of Software and Hardware. Understand the Concept of Operating System and Network.

Specify Program Outcome:

Signature of Teacher

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College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Deshmukh G.V. **Department:** Computer Science

Program: B.Voc. FY(I-Sem) **Subject**: Software Development **Course Code**: BVL103

Paper Title: DISCREATEMATHEMATICS- I

Unit Number	**Unit Name**	**Topics**	**Unit-wise Outcome**
1	INTRODUCTION	Definition of Statistics	Use of data collection and statistics. Study frequency distribution and various diagrammatic presentation.
		Scope and importance of Statistics & Mathematics	
		Primary and Secondary data	
		Types of data: qualitative, quantitative	
		Graphical presentation: Histogram, frequency polygon, frequency, Curves	
		Diagrammatic presentation: Bar diagrams, Pie Diagram	
		Classification of data: Discrete and continuous frequency	
2	MEASURES OF CENTRAL TENDENCY	Concept of central tendency - For group and ungroup data	Study of measure of central
		Arithmetic mean (A.M.) :Merits and demerits of A.M., Computation of A.M. for grouped and ungrouped data	
		Mode: Computation of mode, Merits and demerits of mode.	
		Median: Computation for grouped andungrouped data. Merits & demerits of median. Numerical problems	
3	MEASURES OF DISPERSIONS	Concept of Dispersion and measures of Dispersion	Study of measure of variations.
		Range (definitions and problems)	
		Quartile Deviation (definitions and problems)	

		Mean Deviation (definitions and problems)	
		Standard Deviation (definitions and problems)	
		Variance, Numerical problems	
4	THEORY OF PROBABILTY	Introduction, Permutation & Combinations	Use of various measures in statistics in real world problems.
		Classical definition of Probability	
		Axiomatic Approach to probability	
		Theorems of Probability.	
		Numerical problems	
5	SET THEORY	Introduction Set Notation and Description	Study of sets and its operations, venn diagrams, relation and its types, and function and its types.
		Subsets, Venn diagram, Set Operations: Cartesian product	
		Relations, types of relations: Equivalence, Partial ordering relations.	
		Function; Domain, Range, Types of Function: One-One, On-To, In-To, One to One.	
6	GRAPHS	Introduction, Definition & Elementary results	Become skilled at graphs and its concepts.
		Isomorphism	
		Types of Graph: Connected, Disconnected Graph	
		Edge, Sequence, Path, Circuit Vertex and Edge Connectivity	
		Eulerian graph, Hamiltonian graph.	

Specify Course Outcome:

- Explain the use of data collection & statistics.
- Recognize, examine & interact the basic principles of describing and presenting data.
- Recognize sets, its diagrammatic representation, functions and relations.
- Gain knowledge of graphs and use it.

Specify Program Outcome:

- Describe statistics, different types of data collection.
- Recognize basic principles of statistics for describing and presenting data.
- Use appropriate formulas for solving real world problems.
- Select suitable graphical representation for presenting results.
- Also describe sets with its concepts and graph in detail.

Signature of Teacher

Deshmukh G.V.

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D. **Department: Computer Science**

Program: BVOC FY **Subject:** Software Development **Course Code**: BVL104

Paper Title: PROBLEM SOLVING TECHNIQUES

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	PROGRAMMING TECHNIQUES	Steps Involved in Computer Programming – Problem Definition – Outlining The Solution – Flow Chart – Developing Algorithms – Efficiency of Algorithms - Analysis of Algorithms, Introduction to Programming, Types of Programming languages, Translators, Compiler and Interpreter.	**Understand algoritm**
II	FUNDAMENTAL ALGORITHMS	Exchanging the Values – Counting – Summation of Set of Number – Factorial Computation – Sine Computation – Fibonacci Sequence – Reversing the Digits of an Integer – Base Conversion – Character to Number Conversion.	**Design algorithm**
III	FACTORING METHODS	Finding the Square Root of a Number – Smallest Divisor of an Integer – GCD of Two Integers – Generating Prime Numbers – Computing the Prime Factors of an Integer – Generation of Pseudo-Random Numbers –	**Design algorithm**

		Raising a Number to a Large Power – Computing the Nth Fibonacci Number.	
IV	ARRAY TECHNIQUES	Array Order Reversal – Array Counting or Histogramming – Finding the Maximum Number in a Set – Removal of Duplicates from an Ordered Array – Partitioning an Array – Finding the k_{th} Smallest Element – Longest Monotone Subsequence.	**Design algorithm**
V	MERGING, SORTING AND SEARCHING	Two Way Merge - Sorting by Selection, Exchange, Insertion, and Partitioning - Binary Search – Hash Searching.	**Design algorithm**

Specify Course Outcome:

1. Student will be able to design algorithms to solve different problems
2. Student will understand how to solve problems using computers

Specify Program Outcome:

1. To develop understanding of problem solving using computers
2. To develop understanding of basic data structures such as arrays
3. To solve problems using data structures such as linear lists, stacks, queues, hash tables, binary trees, heaps, binary search trees, and graphs and writing programs for these solutions.

Signature of Teacher

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College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Shaikh Khaja Jamil Mohiuddin **Department: Computer Science**

Program: B.Voc Fy **Subject**: Software Development **Course Code**: BVL105

Paper Title: Programming in C - I

Unit Number	Unit Name	Topics	Unit-wise Outcome
UNIT – I	**Introduction**	Introduction to C, History Structure of a C program, Functions as building blocks, Application Areas, C Program, Development life cycle	**Understanding basic concepts of Coding**
UNIT – II	**Tokens and Operators**	Tokens, Keywords, Identifiers, Variables, Constants – character, integer, float, string, escape sequences, Data types – built-in and user defined, Operators and Expressions, Operator types (arithmetic, relational, logical, assignment, bitwise, conditional, other operators), precedence and associativity rules.,	**Understanding Rules which is used in programming languages**
UNIT – III	**Input / Output**	Input and Output, Character input and output, String input and output, Formatted input and output,	**Using input and output function, user can manage data from users and printing on screen.**

UNIT - IV	**Decision Making Structure**	If, if-else, switch, Loop Control structures, While, do-while, for, Nested structures break and continue, Control Structures Functions in C What is a function, Advantages of Functions, Standard library functions, User defined functions, Declaration, definition, function call, parameter passing, return keyword, Scope of variables, storage classes, Recursion,	**Using decision making statements and control statements we can control the flow of program**
UNIT – V	**Array and Pointer**	Arrays, Array declaration, initialization, Types – one, two and multidimensional, Passing arrays to functions, Introduction to Pointers, Pointer declaration, initialization, Dereferencing pointers, Pointer arithmetic, Pointer to pointer, Arrays and pointers, Functions and pointers – passing pointers to functions, function returning pointers, pointer to function, Dynamic memory allocation	**Design, implement, test and debug programs that use arrays, pointer and memory allocation**
UNIT – VI	**Strings**	Strings, Declaration and initialization, Standard library functions, Strings and pointers, Array of strings.	**Through String concepts we can handle textual information.**

Specify Course Outcome: Create algorithms to solve simple programming problems. Design, implement, test and debug programs that use calculation and selections.

Specify Program Outcome: Through this entire program students can be able to improve his logical and technical ability.

Signature of Teacher

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mr. Kuptekar Sawankumar Vijay **Department: Computer Science**

Program: B.Voc (SD) FY **Subject**: Software Development **Course Code**: BVP102

Paper Title: HTML & JAVA SCRIPT

Unit Number	Topics	Unit-wise Outcome
I	WAP in htmlto implement different html tags	Understand the basics about html & java script
II	WAP in html to implement different hyperlink	
II	WAP in html to implement insert image	
IV	WAP in html to insert table	
V	WAP in html to insert frame	
VI	WAP in html to insert video	
VII	WAP in js for odd even number	
VIII	WAP in JS for sum of digit	
IX	WAP in html for insert audio	
X	WAP in js for airthematic operation	

Specify Course Outcome: Understand the basics about the html and java script.

Specify Program Outcome: Understand how web page is build using html and java script.

Signature of Teacher

Mr. Kuptekar S.V

Dnyanopasak Shikshan Mandal's

College of Arts ,Commerce and Science ,Parbhani

Pro-forma for program and course outcomes(2.6.1)

Name of Teacher: Taur M.A. **Department:** Computer Science

Program: B.VOC FY **Subject**: Software Development **CourseCode**: BVP103

Paper Title: LAB3 – MS OFFICE AND OPEN OFFICE

Unit Number	Topics	Unit-wise Outcome
1	Implementation of home menu in word	Student will be able to understand the computer software, hardware, made available to simplify and automate variety of office operations such as data processing
2	Implementation of insert menu in word	
3	Implementation of view menu in word	
4	Implementation of Page Layout menu in word	
5	Implementation of design menu in excel	
6	Implementation of home menu in exce1	
7	Implementation of insert menu in excel	
8	Implementation of view menu in excel	

9	Implementation of Page Layout menu in excel	
10	Implementation of design menu in excel	
11	Preparation of sample presentation using MS PowerPoint	
12	Adding Contacts, tasks in MS Outlook	
13	Managing An e-mail account using MS Outlook	

Specify Course Outcome: After completion of this course student will be able to understand the computer software, hardware, made available to simplify and automate a variety of office operations such as data processing, data manipulating and data presentation with various application those are presents in Microsoft office tools packages..

Specify Program Outcome Office Automation is to enhance and upgrade the existing system by increasing its efficiency and effectiveness.

Signature of Teacher

Taur M.A.

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Shaikh Khaja Jamil Mohiuddin **Department: Computer Science**

Program: BVOC FY **Subject**: Software Developement **Course Code**: BVP104

Paper Title: LAB4 – PROGRAMMING in C

Unit Number	Topics	Unit-wise Outcome
	Program to demonstrate arithmetic operation. Program to demonstrate fibonacci sequence. Program to demonstrate factorial number. Program to demonstrate descision making statement. Program to demonstrate looping statement. Program to demonstrate maximum of three number. Program to demonstrate reverse digit number. Program to demonstrate sum of digit number Program to demonstrate matrix addition. Program to demonstrate structure and union Program to demonstrate even and odd number Program to demonstrate function.	**Understanding core programming in C**

Specify Course Outcome: Learn Fundamental of programming.

Specify Program Outcome: Prepare Algorithms, solve different problem and improve logic using programming languages.

Signature of Teacher

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mr. Kuptekar Sawankumar Vijay **Department: Computer Science**

Program: B.Voc (SD)FY **Subject**: Software Development **Course Code**: BVL201

Paper Title: INTRODUCTION TO OPERATING SYSTEMS

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	Disk operating system	Introduction of DOS, History, Files and Directory, Types of files, Configuration of DOS (config.sys), Booting Procedure of DOS	Know about disk operating system
2	Study of commands	Internal commands:- Append, cls, ver, vol, date, time, type, md, cd,comp, rd, edit, rename, dir, copy, copy con External commands:–attrib, diskcopy, scandisk, format, deltree, xcopy,disccomp, edit, erase, help, backup, chkdsk, deltree. Batch file concept & study ofAutoexec.bat file.	Understand commands in disk operating system.
3	Introduction to windows operating system	Introduction of Windows O.S.,History, files and Folders, Architecture of windows O.S., Study of windows directories.Basics of windows: Desktop, My computer,	Able to understand windows operating system

		Recycle bin, my networkplaces, Quick launch tool bar.	
4	Features of ms-windows	GUI, Multitasking, multi-user, network etc.Important files of windows and their locations (For e.g. DLL, INI etc.)	Acknowledge the features of windows operating system
5	Windows explorer	Opening windows explorer, Copying, pasting, moving, deleting, send to files, Controlling and customizing the toolbars,Use of address bar, history listWorking with files and folders	Know how to work with windows operating system.
6	Windows accessory	Calculator,Character map,Notepad, WordPad,Paint, System tools and minor troubleshooting using different .ini files,Windows registry files	Know more about the accesaries present in windows operating system.
7	Using local networks	What is network, E-mail?, Finding computers and files on network, Sharing and managing files, folders and printers, Adding and sharing Internet connection	Able to know network types
8	Installation of windows		Know installation of windows operating system.

Specify Course Outcome: Student will be able to know operating system its types and installation prcess in details.

Specify Program Outcome: Introduce students to computer operating system.

Signature of Teacher:- Kuptekar S.V

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Pattewar D.D. **Department:** Computers cience

Program: B.voc F.Y. **Subject**: Computer science **Course Code**: BVL202

Paper Title: LINUX OPERATING SYSTEM

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	Introduction	History of Linux UNIX Bell labs. GNU and LINUX	Understand the linux operating system
2	Structure and features of Linux	Kernel and Shell, Multiuser user systems, Multitasking system	Understand the features of linux operating system
3	Working with a Linux machine	Linux booting process, Two user interfaces(GUI and CUI), Account and password Commands , Internal and external commands, Example commands – date, clear, echo etc., Linux Graphical Environments, X window system, Desktop Environment – GNOME , KDE	Easy to understand GUI and commands of operating system
4	Files	Files Files, File names, File types and directories Directory Hierarchy Directory Hierarchy, Single rooted inverted tree structure	Understand the Directory ,hierarchy or files of operating system

5	commands for managing Files and directories	Listing and changing directories, Home directory, Pathnames, Creating files and directories Copying files and directories, Renaming file, Removing files and directories, Viewing a file (page wise), Locating files	Understand the directories structure
6	**Commands**	Three modes of vi Command, Input, Ex, Saving, Aborting, Repeat factor, Deletion, Navigation, Pattern search Repeating last command, Undo operation, d, c, y, ! operators Simple filters cat, wcetc, head, tail, cut, paste, sort, uniq, tr	Understand the commands of linux operating system

Specify Course Outcome: understand the linux operating system to know the commands and file structure of given system

Specify Program Outcome: understand the linux operating system to know the commands and file structure of given system the understand GUI of linux operating system

Signature of Teacher

Pattewar D.D.

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D. **Department: Computer Science**

Program: BVOC FY **Subject**: Software Development **Course Code**: BVL203

Paper Title: DATA STRUCTURES-I

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	**Introductions and Overview**	Introduction,Basic technology, elementary data organization, Data structure, Data structure operation,Notation and Concept of algorithm, Complexity, time space tradeoff	**Understand Data Structure**
II	**Array, Records And Pointers**	Introduction,Linear array,Representation of linear array in memory, Traversing linear array ,Inserting and Deleting, Searching methods (Binary and linear search)	**Understand Array**
III	**Sorting**	Selection sort, bubble sort, insertion sort	**Understand Sort**
IV	**Linked List**	Introduction, Linked list, Representation of Linked list in memory, Searching a linked list, Memory allocation, Garbage collection, Insertion and deletion in linked list	**Understand Linked List**

V	**Stacks, Queues, Recursion**	Introduction, Stacks,Array representation of stacks, Arithmetic expression, Recursion, Queues :Memory Representation, Insertion, Deletion, Deques, priorityqueue	**Understand Stack & Queue**
VI	**Tree**	Introduction, Terminology of Binary tree, Types of Binary tree, Traversing of binary tree, Header Nodes, Threads, General Tree Introduction	**Understand Tree**

Specify Course Outcome:

1. To develop application using data structures.
2. Students develop knowledge of applications of data structures including the ability to implement algorithms for the creation, insertion, deletion, searching etc.

Specify Program Outcome:

1. To develop understanding of problem solving using computers
2. To develop understanding of basic data structures such as arrays
3. To solve problems using data structures such as linear lists, stacks, queues, hash tables, binary trees, heaps, binary search trees, and graphs and writing programs for these solutions.

Signature of Teacher

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Taur M.A. **Department:** Computer Science

Program: B.VOC FY **Subject**: Software Development

Course Code: BVL204 **Paper Title:** DISCRETE MATHEMATICS- II

Unit Number	Unit Name	Topics	Unit-wise Outcome
Unit 1	Introductions to Numbers and Sequences	Natural Numbers, whole numbers, integers, rational numbers, irrational numbers, real	Represent numbers in various numeration system
Unit 2	Mathematical Logic	Propositions, Logical connectives and compound statements, Truth values and truth table,	Simplify and evaluate basic logic statements
Unit 3	Matrices and Determinants	Definition and types of matrices, Equality of Matrices and transpose of matrices, Algebra	Perform basic matrix operation
Unit 4	Co-ordinate Geometry	Introduction, Co-ordinates of a points and Quadrants, Distance between two points,	Plot point on the plane
Unit 5	Relations and Functions of Two Variables	Cartesian product, Relation, Function, domain, range, Types of function: into, onto, One-one,	Analyze the growth of elementary function and determine their values
Unit 6	Induction and Recursion	Mathematical Induction, Smallest Counter-Examples, The Principle of Mathematical	Analyze the growth of elementary function and determine their values

Specify Course Outcome: have substantial experience to comprehend formal logical arguments

Specify Program Outcome : Acquire ability to describe computer programs in a formal mathematical mannar.

Signature of Teacher

Taur M.A.

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Shaikh Khaja Jamil Mohiuddin **Department: Computer Science**

Program: B.Voc Fy **Subject**: Software Development **Course Code**: BVL105

Paper Title: Programming in C - I

Unit Number	Unit Name	Topics	Unit-wise Outcome
UNIT – I	**Introduction**	Introduction to C, History Structure of a C program, Functions as building blocks, Application Areas, C Program, Development life cycle	Understanding basic concepts of Coding
UNIT – II	**Tokens and Operators**	Tokens, Keywords, Identifiers, Variables, Constants – character, integer, float, string, escape sequences, Data types – built-in and user defined, Operators and Expressions, Operator types (arithmetic, relational, logical, assignment, bitwise, conditional, other operators), precedence and associativity rules.,	Understanding Rules which is used in programming languages
UNIT – III	**Input / Output**	Input and Output, Character input and output, String input and output, Formatted input and output,	Using input and output function, user can manage data from users and printing on screen.

UNIT - IV	**Decision Making Structure**	If, if-else, switch, Loop Control structures, While, do-while, for, Nested structures break and continue, Control Structures Functions in C What is a function, Advantages of Functions, Standard library functions, User defined functions, Declaration, definition, function call, parameter passing, return keyword, Scope of variables, storage classes, Recursion,	Using decision making statements and control statements we can control the flow of program
UNIT – V	**Array and Pointer**	Arrays, Array declaration, initialization, Types – one, two and multidimensional, Passing arrays to functions, Introduction to Pointers, Pointer declaration, initialization, Dereferencing pointers, Pointer arithmetic, Pointer to pointer, Arrays and pointers, Functions and pointers – passing pointers to functions, function returning pointers, pointer to function, Dynamic memory allocation	Design, implement, test and debug programs that use arrays, pointer and memory allocation
UNIT – VI	**Strings**	Strings, Declaration and initialization, Standard library functions, Strings and pointers, Array of strings.	Through String concepts we can handle textual information.

Specify Course Outcome: Create algorithms to solve simple programming problems. Design, implement, test and debug programs that use calculation and selections.

Specify Program Outcome: Through this entire program students can be able to improve his logical and technical ability.

Signature of Teacher

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Pattewar D.D. **Department:** Computers cience

Program: B.VOC F.Y. **Subject**: Computer science

Course Code: BVP201 **Paper Title:** LAB 6 - LINUX

Unit Number	Topics	Unit-wise Outcome
1	Linux installation	Easy to installation for linux operating system
2	disc portioning	Understand the storage of operating system
3	Linux commands	Easy to understand GUI and commands of operating system
4	vim editor	Understand the program execution in linux operating system

Specify Course Outcome: understand the linux operating system to know the commands and file structure of given system

Specify Program Outcome: understand the linux operating system to know the commands and file structure of given system the understand GUI of linux operating system

Signature of Teacher

Pattewar D.D.

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Kausadikar J.N. **Department: Comp. Sci**

Program: B.Voc FY **Subject**: Software Development **Course Code**: **BVP202 LAB7**

Paper Title: DATA STRUCTURE USING C

no.	**Program**	**Unit-wise Outcome**
1	Write a program traversing the array.	To understand concepts about searching and sorting techniques. To understanding about writing algorithms and step by step approach in solving problems with the help of fundamental data structures.
2	Write a program to insert the element into array at given position.	
3	Write a program to delete the element from array	
4	Write program to search an element from array.	
5	Write a program to find element in the array using binary search.	
6	Write a program to sort the array using for bubble sort.	
7	Write a program to perform insertion sort on array.	
8	Write a program to implement the selection sort on array.	
9	Write a program to implement stack using linked list.	
10	Write a program to implement stack using array.	
11	Write a program to perform push & pop operations on stack.	
12	Write a program to convert an infix expression into postfix expression.	

13	Write a program to evaluation of postfix expression using stack.	
14	Write a program to implement queue using linked list.	
15	Write a program to implement queue using array.	
16	Write a program to create a linked list & performing traversing operation.	
17	Write a program to perform queue operation.	
18	Write a program for insertion & deletion of linked list.	
19	Write a program to simulate tree traversing techniques.	
20	Write a program for quick sort using array.	

Specify Course Outcome: To Understand basic concepts about stacks, queues, lists, trees and graphs. Ability to analyze algorithms and algorithm correctness.

Specify Program Outcome: Ability to summarize searching and sorting techniques. Ability to describe stack, queue and linked list operation. Ability to have knowledge of treeand graphs concepts.

Signature of Teacher

Kausdikar J.N

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mr. Kuptekar Sawankumar Vijay **Department: Computer Science**

Program: B.Voc (SD) FY/SY/TY **Subject**: Software Development **Course Code**: BVP203:

Paper Title: Computer Hardware and Networking, Part-2

Unit Number	Topics	Unit-wise Outcome
	Simple Trouble shooting, Disk management, Disk clean up, creating users, granting permissions, firewall setting, creating back up and restore point, managing services, installing and un installing software, disk defragmentation, task scheduling, cleaning history and cookies.	Able to understand about networking and hardware

Specify Course Outcome: Understand computer and its peripherals.

Specify Program Outcome: Student will be able to know computer hardware and networking

Signature of Teacher

Kuptekar S.V

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mr. Kuptekar Sawankumar Vijay **Department:** Computer Science

Program: B.Voc (SD) SY **Subject**: Software Development **Course Code**: BVL301

Paper Title: MANAGEMENT INFORMATION SYSTEMS

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Introduction	An introduction to information systems, Information systems in organizations, Information Technology Concepts, The IS Revolution; Information requirement for the different levels lf management, transaction processing system, Management information system, Decision support system. Strategic Role of Information Systems. Business Processes; Information management, and Decision Making. Computers and Information Processing;	Know basic about management information system
II	Transaction processing system	Transaction processing system; hardware and software requirements, tools used, case studies, merits and demerits of transaction processing system.	Understand the transections involved in management information system

III	Managerial control	Managerial control, Information and tools required difference between transactional system and managerial system. Frequency of taking outputs, Need for interconnected system, common database, Redundancy control, case studies. Decision support system, concept and tools, case studies, virtual organizations, strategic decisions-unstructured approach, cost and values of unstructured information.	Know how management play the role in management information system.
IV	Optimization techniques	Optimization techniques, difference between optimization tools and DSS tools expert system, difference between expert system and management information system. Role of chief Information officer.	Know about optimizations with in management information system.

Specify Course Outcome: Understand how management information system works.

Specify Program Outcome: Understand the working of management information system in industry.

Signature of Teacher

Kuptekar S.V

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Kausadikar J.N. **Department: Comp. Sci**

Program: B.Voc SY **Subject**: Software Development **Course Code**: **BVL302**

Paper Title: DATABASE MANAGEMENT SYSTEM

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	**File Structure and Organization**	Logical and Physical Files, Basic File Operations, File Organization, Types of file organization, Overview of Indexes	File is a collection of records. File organization defines how file records are mapped onto disk blocks.
2	**Tree Structured Indexing**	Index Sequential Access Method (ISAM), B+ Tree: A Dynamic Index Structure	This techniques support both range searches & equality searches. The data entries are arranged in sorted order.
3	**Database Management System**	Definition of DBMS, File processing system Vs DBMS, Advantages and Disadvantages of DBMS, Users of DBMS, Capabilities of good DBMS, Overall System structure	DBMS is a software package designed to define, manipulate, retrieve & manage data in a database.
4	**Data Models**	Data Models: 1) Object Based Logical Model, 2) Record Based Logical Model	data models define how data is connected to each other & how they are

		i) Relational Model ii) Network Model iii) Hierarchical Model 3) Entity Relationship Model	processed & stored inside the system.
5	**Relational Databases**	Relation, Tuple, Attribute, Cardinality, Degree, Domain Keys: Super Key, Candidate Key, Primary Key, Foreign Key Relational Algebric Operations: Select, Project, Union, Difference, Intersection, Cartesian product, Natural Join	Relational database is a set of formally described tables from which data can be accessed or reassembled in many different ways without having to reorganize the database tables.
6	**Relational Database Design**	Anomalies of un normalized database Normalization Normal Form: 1NF, 2NF, 3NF	The design of a relational database is composed of four stages, where the data are modeled into a set of related tables.

Specify Course Outcome: The various data model used in database design ER modelling concepts & architecture use & design queries using SQL.

Specify Program Outcome: DBMS is a software system for creating, organizing & managing the database. It provides an environment to the user to perform operations on the database for creation, insertion, deletion, updating & retrieval of data

Signature of Teacher

Kausadikar J.N

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mr. Kuptekar Sawankumar Vijay **Department: Computer Science**

Program: B.Voc (SD) SY **Subject**: Software Development **Course Code**: BVP302

Paper Title: SQL SERVER

Unit Number	Topics	Unit-wise Outcome
I	Installation of MS SQL Server 2005	Understand the working of SQL SERVER
II	Commands used in SQL Server	
III	Oracle Implementation of instance & database	
IV	SQL Server's implementation of instance & database	
V	Storage Architecture	
VI	Database Mappling	
VII	Backup and Recovery	
VIII	Logical backup	
IX	Incremental Backups	

Specify Course Outcome: Student will able to develop the software development skills.

Specify Program Outcome: The concept of Sql server is to be detailed understand

Signature of Teacher

Kuptekar S.V

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: khairajani S.U **Department: Computer science**

Program: B.voc sy **Subject**: computer science **Course Code**: BVP 304

Paper Title: WINDOWS 7 ADMINSTRATIO

no	Program	pro Outcome
1	Introduction to window 7	Identify The Windows 7
2	Introduction to window 7	
3	Anotoany of window 7	
4	Undersytanding windows 7	
5	View install program	
6	Installing a program	
7	Uninstalling a program	
8	Understanding data storage in window 7	
9	Vewing network correction	
10	Understanding folder hierarchy	
11	Understanding files	
12	Understand libraries	
13	Printing in windows 7	

14	User account	
15	Security and protection	

Specify Course Outcome: Easy understanding to windows 7 and user friendly to user

Specify Program Outcome: Introduction to windows 7

Signature of Teacher

Khairajani S.U

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mr. Kuptekar Sawankumar Vijay **Department: Computer Science**

Program: B.Voc (SD) FY/SY/TY **Subject**: Software Development **Course Code**:

Paper Title: Software Engineering

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	The Software and software Engineering:	The Nature Of Software: Define Software, Software Applications, Legacy software Software Engineering, The Software Process, Software Myths	Know about software and software engineering.
2	The software Process and Process Models	A Generic Software Process Model Process Assessment and improvement Prescriptive Process Models: The Waterfall Model, Incremental Process Model, Evolutionary Process Model, Concurrent Model Specialized Process Models Personal and Team Process Model	Understand the software process with process models used.
3	Agile Development	Introduction to Agility Agile Process Extreme Programming(XP) Other Agile Process Model: Adaptive Software, Development(ASD), Scrum, Dynamic System Development	Able to know agile development.

		Method(DSDM), Crystal, Feature Driven Development(FDD), Lean Software Development(LSD), Agile Modeling(AM), Agile Unified Process(AUP)	
4	Understanding Requirements	Requirement Engineering Establishing Groundwork Eliciting Requirements Developing Use Cases Building The requirement Model	Acknowledge the requirements in software development**.**
5	Design Concepts	The Design Process Design Concepts	Know design concept in software development.
6	Quality Assurances	Quality Concepts Software Quality Assurance	Know how quality is given to the software

Specify Course Outcome: Understand the process of software engineering.

Specify Program Outcome: Understand how software engineering is implemented in software industry.

Signature of Teacher

Mr. Kuptekar S.V

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Sardeshmukh R.P. **Department:**Computer Science

Program: B.Voc Sy **Subject**: Computer Science

Course Code: BVP403

Paper Title: Advanced Java

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	User Interface Components with AWT and Swing	What AWT ? What is Swing? Difference between AWT and Swing. The MVC Architecture and Swing Layout Manager and Layouts, The JComponent class Components - Buttons and Labels (JButton, JLabel), Checkboxes and Radio Buttons (JCheckBox and JRadioButton), Lists and Combo Boxes (JList and JCombo) along with the JScrollPane Class, Menus – Jmenu and the JPopupMenu Class, JMenuItem and JCheckBoxMenuItem, Scrollbars and Sliders(JScrollBar and JSlider), Dialogs (Message, confirmation, input (like file selection) and	Apply event handling on AWT and Swing components. create a full set of UI widgets and other components, including windows, menus,buttons,checkboxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings.

		Working with 2D Basic Shapes, Using Color, Using Font, Displaying Images	
2	Multithreading	What are threads,Running and starting thread,Running multiple threads, The Runnable interface, Thread priorities, Synchronization and interthread communication	make a resusable software component, using Java Bean.
3	Database Programming	The design of jdbc, jdbc configuration, Types of drivers, Executing sql statements, query execution, Scrollable and updatable result sets, rowset ,Metadata, transactions	learn to access database through Java programs, using Java Data Base Connectivity (JDBC)
4	Collections	Collections, Introduction to the Collection framework (Interfaces, Implementation and algorithms), Interfaces, collection classes : Set, List, Queue and Map Set : HashSet, TreeSet, and LinkedHashSet Interfaces such as Lists, Set, Vectors, LinkedList, Comparator, Iterator, hash tables	understand the multi-tier architecture of web-based enterprise applications using Enterprise JavaBeans (EJB).
5	Servlet	Introduction to Servlet(HTTP Servlet) Life Cycle of servlet Handing get and post request(HTTP) Data handling using servlet Creating and cookies Session tracking using HTTP servlet	Students should be able to learn the Internet Programming, using Java Applets
6	JSP	Getting Familiar with JSP Server First JSP Adding Dynamic contents via expressions Scriptlets, Mixing Scriptlets and HTML Directives, Declaration, Tags and Session	create dynamic web pages, using Servlets and JSP.

Specify Course Outcome: Students will design and implement programs in the Java programming language that make strong use of classes and objects.

Specify Program Outcome: Students will develop sophisticated, interactive user interfaces using the Java Swing class and appropriate layout managers.

Signature of Teacher:

Sardeshmukh R.P.

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Taur M.A. **Department:** Computer Science

Program: B.VOC SY **Subject**: Software Development

Course Code: BVP 404 **Paper Title:** ENVIRONMENTAL STUDIES

Unit Number	Unit Name	Topics	Unit-wise Outcome
Unit 1	The Multi-disciplinary Nature of Environmental Studies	Definition, scope and importance, Need for Public Awareness, Ecology and Ecosystems: Definition of Ecology, Structure and function of an ecosystem, Producers, Consumers and Decomposers, Energy flow in the ecosystem, Ecological succession, Food chains, food webs and ecological pyramids, Introduction, types, characteristics features and function of – forest ecosystem, grassland ecosystem, desert ecosystem, aquatic ecosystem(ponds, streams, lakes, rivers, oceans, estuaries)	Conceptualize the processes and various factors involved in formation of environment .
Unit 2	Biodiversity and its conservation	Introduction, genetic, species and eco system diversity definition, value of biodiversity, biodiversity at global, national and local levels, India as a mega diversity nation, hot spots of biodiversity, threats to biodiversity – , poaching of wild life, man wild life conflicts, endangered and endemic species of India, conservation of bio diversity in in-situ EX-situ	Use scientific reasoning to identify and understand environment problems and evaluate potential solutions.

Unit 3	Natural Resources	Air resources-features, composition, structure, air quality management, forest resources-, water resources, mineral resources, food resources, energy resources, land resources, Environmental pollution: definition, air pollution, water pollution marine pollution, thermal pollution, soil pollution, noise pollution, nuclear hazards, waste management, cleaner technologies, reuse and recycling, solid waste management, role of individuals to prevent pollution, pollution case studies, disaster management – floods, earthquake, cyclone and landslides	Recognize the importance of environment and the sustainable of natural resources.

Unit 4	Social issues and the environment	From unsustainable to sustain able development, urban problems related to energy, water conservation, rain water harvesting ,water shed management, resettlement and rehabilitation of people- its problems and concerns, case studies, environmental ethics-environmental value relationships, environmental ethics and species preservation, climate change, global warming, acid rain, Ozone layer depletion, nuclear accidents and holocaust, case studies, waste land reclamation, consumerism and waste products, legislation to protect the environment, environmental protection act, dir(prevention and control of pollution) act, water(prevention and control of pollution) act, wild life protection act, forest conservation act, environmental management systems(EMS), environmental information systems(EIS), P.I.L public hearing and role of NGOS, ISO 9000 and 14000, issues involved in enforcement of environment legislation, public awareness, environmental economics environment and standard of living	Analyze interaction between social and environmental processes .

Specify Course Outcome: Appreciate key concept from economic ,political and social analysis as they pertain to the design and evaluation of environmental policies and institutions .

Specify Program Outcome : classify the transnational character of environmental problems and ways of addressing them ,including interaction across local to global scales.

Signature of Teacher

Taur M.A.

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Kausadikar J.N. **Department: Comp. Sci**

Program: B.Voc SY **Subject**: Software Development

Course Code: **BVL405**

Paper Title: Oracle 10G DBA

Unit Number	**Unit Name**	**Topics**	**Unit-wise Outcome**
1	**Basic of the DBA**	Installing ORACLE 10g, Functions of DBA, Oracle Instance, Starting & Stopping Instance , Memory Architectures, Oracle 9i Memory Structure, Oracle 10g Memory Structure Physical Database structure, Control Files, Data files On line Redo log Files, Archive Files Trace & Alert log files, Parameter file & SPFILE, Password File, Database Creation using DBCA, Manual Database Creation	Database administrators (DBAs) use specialized software to store and organize data. The role may include capacity planning, installation, configuration, database design, migration, performance monitoring, security, troubleshooting, as well as backup and data recovery.
2	**Tablespaces, Datafiles, and Control Files.**	Introduction to Tablespaces, Datafiles, and Control Files, Overview of Tablespaces, SYSTEM Tablespace, SYSAUX Tablespace,	DATABASES's data are stored in logical storage units called TABLESPACES. Each tablespace

		Bigfile Tablespaces, Undo Tablespaces, Default Temporary Tablespace, Using Multiple Tablespaces, Managing Space in Tablespaces, Online and Offline Tablespaces, Read-Only Tablespaces, Working with tablespaces, Creating Tablespaces Altering Tablspaces, Modifying Tablespaces, Types of tablespaces, Dictionary Managed Locally Managed Tablespaces, Oracle Managed Files, Overview of Control Files, Control File contents, Multiplexed Control Files	in an Oracle database consists of one or more files called data files. A control file is a small binary file that records the physical structure of the database and includes: The database name. Names and locations of associated datafiles and online redo log files
3	**Physical Database Layouts & Storage Management**	Traditional Disk space Storage ,Resizing Tablespaces & datafiles, Moving Datfiles, Moving Online Redo log files, Moving Control files, Automatic Storage Management, ASM Architecture Creating ASM Instance, ASM Instance Components, ASM Dynamic Performance View	Physical and logical database structures. A database is a collection of physical operating system files. The files that make up a database are redo logfiles, datafiles, control files, and temporary files. A logical database structure consists of tablespaces.
4	**Managing Transactions with Undo Tablespaces 6Hrs.**	Transaction Basics, Undo Basics, Rollback, Read Consistency, Database recovery, Flashback Operations, Managing Undo tablespaces, Creating Undo Tablespaces, Undo tablespace Dynamic Performance View, Undo tablespace Initialization Parameters, Multiple Undo Tablespaces	Every oracle databas e must have a method of maintaining information that is used to roll back, or undo, changes to the database. Such information consists of records of the actions of transactions, primarily before they are committed. These records are

			collectively referred to as undo.
5	**Backup & Recovery Options**	Capabilities, Logical Backups, The Data Pump Export/Import Process, Physical Backups Offline Backup, Online Backup, Using Data Pump Export & Import, Creating a Directory Data Pump Export Options, Starting Data Pump Export Job, Using Flash Recovery Area What is Flash Recovery Area, Sizing the Flash Recovery Area Creating a Flash Recovery Area Default File Location & the Flash Recovery Area Managing Flash Recovery Area Using Incremental Backups,Recovering with Incrementally Updated Backups, Fast Incremental Backup	A backup is a safeguard against unexpected data loss and application errors. Recovery Manager is an Oracle utility that can back up, restore, and recover database files.
6	**Database Tuning**	Tuning Application Design, Effective Table Design, Distribution of CPU Requirements Effective Application Design, Tuning SQL, Impact of Order of Load Rates, Additional Indexing Options, Generating Explain Plans, Tuning Memory Usage, Specifying the size of the SGA Using cost based Optimizer, Tuning Data Access, Locally Managed Tablespaces Indentifying chained Rows, Increasing the Oracle Block Size, Tuning Data Manipulation Bulk Inserts, Bulk Data Moves, Bulk Deletes	Database tuning aims to maximize use of system resources to perform work as efficiently and rapidly as possible.

Specify Course Outcome: Establish and in depth understanding of Database Administration using the DBMS Interfaces.

Specify Program Outcome: Understand and apply database statistics in relation to performance and integrity of the database.

Signature of Teacher

Name of Teacher: Deshmukh G.V. **Department:** Computer Science

Program: B.Voc. SY(IV-Sem) **Subject**: Software Development

Course Code: **BVP401** **Paper Title: LAB16 –C#.NET**

Topics	**Unit-wise Outcome**
At least 30 Applications based C#.net syllabus	Understanding DOTNET framework and various characteristics of C#. Understanding of various Windows controls. Use of DOTNET framework for developing console nd Windows applications

Specify Course Outcome:

- Expertise in windows programming.
- Develop applications using ADO.NET.

Specify Program Outcome:

- Understand the DOTNET framework
- Familiarity in the concept of developing window application.
- Develop background knowledge as well as core expertise in C#.
- Builda consoleand windows application.
- Develop applications using ADO.Net.

Signature of Teacher

Deshmukh G.V.

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Sardeshmukh R.P. **Department:**Computer Science

Program: BVoc Sy **Subject**: Computer Science **Course Code**: BVP402

Paper Title: LAB17 – ADVANCED JAVA

Unit Number	**Topics**	**Unit-wise Outcome**
1	Write an application of Calculator using Swing and also add image on Button	Programming in the Java programming language. Knowledge of object-oriented paradigm in the Java programming language. The use of Java in a variety of technologies and on different platforms.
2	Write a Database application that allows user to Insert, Update, Delete values in a Table and manages appropriate exception Handling when wrong values are entered.	
3	WAJP that implements a simple client/server application.The client sends data to a server the server receives the data,uses it to produce a result and then sends the result back to the client.The client displays the result on the console. For ex the data send from the client is a numbers and the result produce by the server is the addition of that number	
4	Write RMI application where client supplies data to withdraw and server response with new account balance. Provide your custom security policy for this application	

5	Write an HTML page which inputs the below mentioned fields and invoke the java servlet program which enters the fields in the database table Fields: Roll_ no ,Name , Department , Email_ id. Implement a servlet which counts the no. of Hits	
6	Write a Servlet that take First_ Name & Last_ Name from the user & generate login-id such that two characters are from First_ Name & four characters are from Last_ Name. Display the generated login-id.	
7	Write one HTML page that will ask user for login.When user submit this HTML ,run JSP on server which will make query in database to check whether username & password are correct or not .If user is valid create one session for this user & put one link in JSP1,that if click will execute JSP2 on server	
8	In JSP2,print what is the content of session that was established in JSP1	
9	Develop an application of online songs library through which user can make search of a song by different category like movie name, singer name, actor, actress, year etc… Make suitable assumption in design with brief description .Develop using JSP	
10	Implement a servlet which counts the no. of Hits.	

Specify Course Outcome: To ensure that the students have adequate knowledge and skills, so that they are work ready at each exit point of the programme.

Specify Program Outcome: Students will develop sophisticated, interactive user interfaces using the Java Swing class and appropriate layout managers.

Signature of Teacher:

Sardeshmukh R.P.

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Kausadikar J.N. **Department: Comp. Sci**

Program: B.Voc SY **Subject**: Software Development

Course Code: **BVP403 LAB18**

Paper Title: ORACLE 10G DBA

no.	**Program**	**Unit-wise Outcome**
1	Creation of database using dbca	Understand and apply database statistics in relation to performance and integrity of the database. Understand the functions of the Oracle Database Server and Oracle Database Client. Create, maintain and manipulate an Oracle Database. Understand and apply the Data Dictionary.
2	Manual database creation	
3	Starting and stoping database	
4	Examining the status of memory structure in oracle	
5	Examining the status of all physical database file.	
6	Creating tablespace in oracle	
7	Creation of undotablespace in oracle	
8	Creation of temporary tablespace in oracle.	
9	Resizing tablespace and datafile in oracle.	
10	Moving datafile in oracle.	
11	Moving control file in oracle.	

12	Online / offline / read only tablespace in oracle.	
13	Creating Dictionary manage and Locally manage tablespace	
14	Make database in archive log mode.	
15	Creating ASM instance.	

Specify Course Outcome: Understand and apply database statistics in relation to performance and integrity of the database. Create and understand the application of user rolls, privileges, and the security of the database. Discuss and understand the concepts of Backup and Recovery Procedures.

Specify Program Outcome: Apply the Relational Database Model to understand the Logical and Physical aspects of the DBMS architecture. Establish and in depth understanding of Database Administration using the DBMS Interfaces.

Signature of Teacher

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Siddqui Uzma **Department:** Computer Science

Program: Bvoc/ BSc/MSc FY/SY/TY **Subject**: Software development

Course Code: BVL501

Paper Title: Research Methodology

Unit Number	Unit Name	Topics	Unit-wise Outcome
Unit 1	Introduction to RM	Meaning and definition of Research,Characteristics of Research,Objectives of research,Types of research Process and steps of research	Research idea and definition
Unit 2	Process of Selection and formulation of Research Problem	Problem Selection/Identification of the problem,Sources of research problems,Criteria of good research problem,Principles of research problem	Selection process
Unit 3	Data Collection and Analysis	Main forms of Data Collection Responses,Methods of data collection,Analysis of data,Types of analysis,Statistical tools and analysis	Methods, analysis , tyoes and tools

Unit 4	Concept of Project Management	Meaning of project,Characteristics of a project,Project levels,Types of projects,Project cycle	characterstics
Unit 5	Project Formulation	Feasibility analysis,Technical analysis,Profitability analysis and financial analysis-cost of project	Analysis of project
Unit 6	Introduction to Software Project Management	The nature of software production,Key objectives of effective management,Quality, productivity, risk reduction,The role of the software project manager	Software Project Management overview

Specify Course Outcome: Intelligent Agents, Solving Problems by Searching , Informed Search Methods Game Playing Planning Practical Planning Planning and Acting

Specify Program Outcome: The process used to collect information and data for the purpose of making business decisions. The **methodology** may include publication **research**, interviews, surveys and other **research** techniques, and could include both present and historical information.

Signature of Teacher

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Kausadikar J.N. **Department: Comp. Sci**

Program: B.Voc TY **Subject**: Software Development

Course Code: **BVL502**

Paper Title: ASP.NET through C#.net

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	**INTRODUCTION**	What is ASP.NET? ASP.NET Web Forms Model The ASP.NET Component Model Components of .Net Framework 3.5.	Asp.net is an open source server side web application framework designed for web development to produce dynamic web pages developed by Microsoft to allow programmers to build dynamic websites, applications & services.
2	**ENVIRONMENT SETUP**	The Visual Studio IDE Working with Views and Windows Adding Folders and Files to your wWebsite Projects and Solutions Building and Running a Project	It provides an abstraction layer on top of HTTP on which the web applications are built. It provides high level entities such as classes & components within an object oriented paradigm.
3	**LIFE CYCLE**	ASP.NET Application Life Cycle ASP.NET Page Life	When an ASP.NET page runs, the page goes through a life cycle in

		Cycle ASP.NET Page Life Cycle Events	which it performs a series of processing steps.
4	**EVENT HANDLING**	Event Arguments Application and Session Events Page and Control Events Event Handling Using Controls Default Events	The server has a subroutine describing what to do when the event is raised.
5	**SERVER SIDE & CONTROLS**	Server Object Request Object Response Object Properties of the Server Controls Methods of the Server Controls	These controls for developing web applications.
6	**VALIDATORS**	BaseValidator Class RequiredFieldValidator Control RangeValidator Control CompareValidator Control RegularExpressionValidator CustomValidator	ASP.NET validation controls validate the user input data to ensure that useless, unauthenticated or contradictory data don't get stored.

Specify Course Outcome: Develop dynamic web applications, create and consume web services.

Specify Program Outcome: Use appropriate data sources & data bindings in ASP.NET web applications. Create & modify simple web services.

Signature of Teacher

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mr. Kuptekar Sawankumar Vijay **Department: Computer Science**

Program: B.Voc (SD) TY **Subject**: Software Development **Course Code**: BVL503

Paper Title: Computer System Security

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Security polices, Standrds& Guideline	Different Types of polices, standards & guidelines, Common Elements, Policy Standrds & Guide, development, Policy Creation, Regulatory Considerations	Know about security policies
II	Security Attacks, Services &Mechanisms	Attacks Services & Mechanisms, Security Attacks, Security Services, A model for internet work security	Understand attacks in computers.
III	Conventional Encryption	Conventional Encryption, Techniques, Steganography Classical Encryption techniques	Understand encryption technique
IV	Intruders, Viruses & Worms	Intruders, Viruses & Related Threats	Know about viruses
V	Firewalls	Firewalls Design Principles, Trusted Systems	Understand firewall

VI	Advanced Encryption Standard	Evaluation Criteria for AES, The Origin of AES, AES evaluation, AES Cipher.	Understand advanced encryption

Specify Course Outcome: able to know about the computer system security

Specify Program Outcome: How security threat and security is worked.

Signature of Teacher

Mr. Kuptekar S.V

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Kausadikar J.N. **Department: Comp. Sci**

Program: B.Voc TY **Subject**: Software Development

Course Code: **BVL504**

Paper Title: PL/SQL PART - I

Unit Number	**Unit Name**	**Topics**	**Unit-wise Outcome**
1	**Introduction to RDBMS**	Feature of RDBMS Advantages of RDBMS over FMS ad DBMS The 12 rules (E.F Codd's Rules –RDBMS) Need for Database Design Support of Normalization Process for Data Management Client server Technology Oracle Corporation Products Oracle Versions About SQL&SQL*PLUS	The data is stored in lots of tables or relations. These tables are divided into rows (records) & columns(fields).
2	**Sub Language Commands**	Data Definition Language, Data Retrieval Language, Data Manipulation Language, Transaction Control Language, Database Security and Privileges	Sub languages learn about types of statements used in SQL & their classification with explanation.

3	**Introduction to SQL Database Object**	Oracle Pre Defined Data types DDL Commands DML,DQL, WHERE clause Comparison and Conditional Operators, Arithmetic and Logical Operators Set Operators (UNION, UNION ALL, INTERSECT, MINUS)Special Operators – IN (NOT IN), BETWEEN (NOT BETWEEN), LIKE (NOTLIKE), IS NULL (IS NOT NULL) Working with DML, DRL Commands Operators Support	SQL statements are used to perform tasks such as update data on a database, or retrieve data from a database.
4	**Built in Functions& Grouping the Result of a Query**	Arithmetic Functions, Character Functions, Date Functions, Conversion Functions Aggregate Functions, OLAP Functions & General Functions Using Group by and Having Clause of DRL Statement Using Order by clause	Built in functions are used in SQL SELECT expressions to calculate values & manipulate data. Common uses of functions include to change a name to all upper case.
5	**Working with Integrity Constraints**	Importance of Data Integrity Support of Integrity Constraints for Relating Table in RDBMS NOT NULL constraint UNIQUE constraint PRIMARY KEY constraint FOREIGN KEY constraint CHECK constraint Working with different types of integrity Constraints	Integrity constraints are used to apply business rules for database tables. Constraints can be specified immediately after the column definition.
6	**Querying Multiple Tables (Joins)**	Equi Join/Inner Join/Simple Join Cartesian Join Non-Equi Join Outer Joins Self Join	A join locates related column values in the two tables. A query contain zero, one, or multiple join operations.

Specify Course Outcome: List the relational database models basic components. Use SQL commands to enter & edit data in a table

Specify Program Outcome: Describe the relationship between fields, records and tables. Work with

your database using the MYSQL query browser.

Signature of Teacher

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: khairajani S.U

Department: Computer science

Program: b.voc ty

Subject: computer science

Course Code: BVL505

Paper Title: Mobile Programming using Android –I

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	Introduction to Android	Overview of Android,Java Editions and comparison with Android, Android Apps –Design, Vendor, Behavioral Classification	classify the android
2	Android Architecture Overview	AndroidArchitecture,Application Frameworks, Android Libraries, Android Runtime, Dalvik Virtual Machine	Describe the architecture of android
3	Setup of Android Development Environment	System Requirements,Java, Eclipse and Android SDK Installation,Android SDK & ToolsAndroid Virtual Devices & Device Definitions	Classify download and setup the android studio
4	Your First Android Application	Creating Android Application ,CreatingConfigurations,Testing the app : AVD, Active device,	Build Android application

		Android Project Structure, Android Manifest file8	
5	Publishing to the Play Store	Release process & Release build of Android ApplicationSigning the .apk filePreparing the Store Listing pageContent RatingDistributing the ApplicationMerchant Registration for Paid Applications	Build to publish to play store
6	Activities	About XML –approach to design layouts, Views and Layouts, View properties, Linear Layout vs. Relative Layout vs. Frame Layout vs. Absolute Layout, Localization of UI, Best practices for targeting various form factors: phone, tablet, TV, Best practices when working designing Android UI	Classify activity creation and Android UI designing

Specify Course Outcome: Understand the Android application architecture, including the roles of the task stack, activities, & services.Build user interfaces with fragments, views, form widgets, text input, lists, tables, and more.

Specify Program Outcome: Creating android app

Signature of Teacher

Khairajani S.U

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Kausadikar J.N. **Department: Comp. Sci**

Program: B.Voc TY **Subject**: Software Development

Course Code: BVP502

Paper Title: LAB 22-ASP.NET through C#.net

no	program	Unit-wise Outcome
1	Create a ASP.NET application to demonstrate Hello World	Visual basic language essentials: Creating web forms with server controls. Separate page code
2	Create a ASP.NET application to demonstrate comparing to two numbers	
3	Create a ASP.NET application to demonstrate for login window	
4	Create a ASP.NET application to demonstrate ViewState, SessionState and ApplicationState in asp.net	
5	Create a ASP.NET application to demonstrate arithmetic operations.	
6	Create a ASP.NET application to demonstrate Server control events	
7	Create a ASP.NET application to demonstrate IsPostBack in asp.net	

8	IIS Internet Information Services and ASP.NET	from content by using code behind pages, page controls and components.
9	Create a ASP.NET application to demonstrateData Access from MS-Access	
10	Create a ASP.NET application to demonstrate TextBox Control	
11	Create a ASP.NET application to demonstrate Radio Button control	
12	Create a ASP.NET application to demonstrate CheckBox Control	
13	Create a ASP.NET application to demonstrate Hyperlink control	
14	Create a ASP.NET application to demonstrate Ad rotator control	
15	Create a ASP.NET application to demonstrate validators	

Specify Course Outcome: Working with microsoft asp.net**,** visual basic language essentials-introducing asp.net, creating web forms, adding asp.net code to a page, handling page events.

Specify Program Outcome: Requirements of a web application, using web controls.

Signature of Teacher

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Kausadikar J.N. **Department: Comp. Sci**

Program: B.Voc TY **Subject**: Software Development

Course Code: BVP503

Paper Title: LAB 23 -PL/SQLPART –I

No.	Program	Unit-wise Outcome
1	Introduction to SQL.	Enhance the knowledge and understanding of Database analysis and design.
2	To study Basic SQL commands (create database, create table, use , drop, insert) and execute the following queries using these commands:	
3	To study the viewing commands (select , update) and execute the following queries using these commands	
4	To study the commands to modify the structure of table (alter, delete) and execute the following queries using these commands	
5	To study the commands that involve compound conditions (and, or, in , not in, between , not between ,like , not like) and execute the following queries using these commands:	

6	To study the aggregate functions (sum, count, max, min, average) and execute the following queries using these commands:	
7	To study the grouping commands (group by, order by) and execute the following queries using these commands	
8	To study the commands involving data constraints and execute the following queries using these commands	
9	To study the commands for aliasing and renaming and execute the following queries using these commands:	
10	To study the commands for joins (cross join, inner join, outer join) and execute the following queries using these commands:	
11	To study the various set operations and execute the following queries using these commands	
12	To study the various scalar functions and string functions (power, square, substring, reverse, upper, lower, concatenation) and execute the following queries using these commands	
13	To study the commands for views and execute the following queries using these commands	
14	To study the commands involving indexes and execute the following queries	
15	To study the commands of indexes	

Specify Course Outcome: Enhance Programming and Software Engineering skills and techniques using SQL and PL/SQL.

Specify Program Outcome: Enhance the knowledge of the processes of Database Development and Administration using SQL and PL/SQL.

Signature of Teacher

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mr. Kuptekar Sawankumar Vijay **Department:** Computer Science

Program: B.Voc (SD) TY **Subject**: Software Development **Course Code**: BVP504

Paper Title: Web page designing using css

Unit Number	Topics	Unit-wise Outcome
I	CSS Program for Font family	Know about cascading style sheet & how it different from html
II	CSS Program for Font style	
III	CSS Program for Font weight	
IV	CSS Program for colour name	
V	CSS Program for colour using RGB values	
VI	CSS Program for colour using hexadecimal value	
VII	CSS Program for inline style	
VIII	CSS Program for box model	
IX	CSS Program for inline block	
X	CSS Program for absolute fixposition	

XI	CSS Program for cursor property	
XII	CSS Program for relative position	
XIII	CSS Program for vertical menu	
XIV	CSS Program for horizontal menu	
XV	CSS Program for nice button	
XVI	CSS Program for web forms	

Specify Course Outcome: Able to know how web page is developed using css.

Specify Program Outcome: Develop a web page designing environment.

Signature of Teacher

Mr. Kuptekar S.V

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mr. Kuptekar Sawankumar Vijay **Department: Computer Science**

Program: B.Voc (SD) TY **Subject**: Software Development **Course Code**: BVL601

Paper Title: Mobile Communication

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	Wireless Transmission	History and application of wireless communication Frequencies for Radio Transmission Signals Antennas Signal Propagation Multiplexing Modulation Spread Spectrum.	Know basics about wireless transmission
2	Medium access control	Motivation for a specialized MAC, SDMA, FDMA, TDMA, CDMA, Comparison of SDMA/TDMA/FDMA/CDMA	Able to understand the mediums used in wireless transmission
3	Telecommunication System	GSM, DECT, TETRA, UMTS and IMT-2000	Acknowledge the telecommunication system in details.
4	Satellite System	History, Application, Basics, Routing, Localization, Handover	Introduced satellite system.

5	Broadcast System	Overview, Cyclical Repetition of data, Digital audio broadcasting, Digital Video broadcasting, Convergence of broadcasting and mobile Communications	Know broadcast system.
6	Wireless LAN	Infra red vs radio transmission, Infrastructure and ad-hoc network, IEEE 802.11, HYPERLAN, Bluetooth	Understand the wireless network working with the protocols.

Specify Course Outcome: Able to know the mobile communication with details working of wireless structure and protocol

Specify Program Outcome: Able to develop the software development skill.

Signature of Teacher

Mr. Kuptekar S.V

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Taur M.A. **Department:** Computer Science

Program: B.VOC TY **Subject**: Software Development

Course Code: BVP 602 **Paper Title:** Servlets & JSP

Unit Number	Unit Name	Topics	Unit-wise Outcome
Unit 1	An Overview of Servlets and JSP terminology	A Servlets jobs Why build web pages dynamically? Advantages of Servlets over traditional CGI The Role of JSP Installing & Configuring the JDK & Apache Tomcat Testing your setup Web application – A Preview	Take a part in servlets ,its feature and advantages.
Unit 2	Servlet Basics	Basic Servlet structure A Servlet that generate plain text A Servlet that generate HTML text A Servlet package The Servlet life cycle The Single Thread model interface Servlet debugging	Elaborate dynamic web pages using servlet
Unit 3	Handling Client Request: Form DATA	Reading Form Data from Servlet Example: Reading three parameter Example: Reading all parameter Filtering String for HTML – specific character	Web development process and various sever side technologies .

Unit 4	Handling cookies and session tracking	Benefits of cookies Some problem with cookies Sending and receiving cookies Using cooking to detect first time visitors Using cookies attributes The need for session tracking Session tracking basics Session tracking API Browser session Vs server sessions A Servlets that shows per client access counts	Session authentication using cookies we learned in servlet
Unit 5	JSP Technology: Overview of JSP technology	The Need for JSP Benefits of JSP Installation of JSP Basic syntax	Take a part in JSP technologies ,its feature and advantages.
Unit 6	Invoking Java code with JSP scripting elements & The JSP page directives	Invoking Java code from JSP Limiting the amount of java code in JSP pages Using JSP Expression Using Script lets to make parts of the JSP page conditional The *Import* attribute The *content Type* and *page Encoding* attribute	Shape up JSP application using JSP tags ,JSP Scriptlets

Specify Course Outcome: This course provides the necessary knowledge to design and develop dynamic ,database –driven application.

Specify Program Outcome : After the completion of this course ,the student will be able to develop a small project independently

Signature of Teacher

Taur M.A.

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Kausadikar J.N. **Department: Comp. Sci**

Program: B.Voc TY **Subject**: Software Development

Course Code: **BVL603**

Paper Title: PL/SQL PART - II

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	**Working with Sub Queries**	Understanding the practical approach to Sub Queries/Nested Select/Sub Select/Inner Select/Outer Select What is the purpose of a Sub Query? Sub Query Principle and Usage Type of Sub Queries Single Row Multiple Row Multiple Column Applying Group Functions in Sub Queries The impact of Having Clause in Sub Queries IN, ANY/SOME, ALL Operators in Sub Queries PAIR WISE and NON PAIR WISE Comparison in Sub Queries Be Aware of NULLs Correlated Sub Queries	The subquery generally executes first, and its output is used to complete the query condition for the main or outer query.Subquery must be enclosed in parentheses.

		Handling Data Retrieval with EXISTS and NOT EXISTS Operators	
2	**Working with DCL, TCL Commands**	Grant, Revoke Commit, Rollback, Savepoint SQL Editor Commands SQL Environment settings	DCL is used to create roles, permissions, and referential integrity as well it is used to control access to database by securing it.TCL is used to manage different transactions occurring within a database.
3	**Maintaining Database Objects VIEWS in Oracle**	Understanding the Standards of VIEWS in Oracle Types of VIEWS Relational Views Object Views Prerequisites to work with views Practical approach of SIMPLE VIEWS and COMPLEX VIEWS Column definitions in VIEWS Using VIEWS for DML Operations In-Line View Forced Views Putting CHECK Constraint upon VIEWS Creation of READ ONLY VIEWS Understanding the IN LINE VIEWS About Materialized Views View Triggers	A database object is any defined object in a database that is used to store or reference data. Some examples of database objects include tables, views, clusters, sequences, indexes, and synonyms.
4	**Locks**	Row level Locks Table Level Locks Shared Lock Exclusive Lock Dead Lock	Oracle Database automatically obtains necessary locks when executing SQL statements.
5	**PL-SQL (Procedure Language – SQL)**	Introduction to PL/SQL The Advantages of PL/SQL PL/SQL Architecture PL/SQL Data types Variable and Constants Using Built in Functions Conditional and Unconditional Statements Simple if, if… else, nested if..else, if..else Ladder	PL/SQL allows the programmer to write code in a procedural format.

		Selection Case, Simple Case, GOTO Label and EXIT Iterations in PL/SQL Simple LOOP,WHILE LOOP,FOR LOOP and NESTED LOOPS SQL within PL/SQL Composite Data types (Complete) Cursor Management in PL/SQL Implicit Cursors Explicit Cursors Cursor Attributes Cursor with Parameters Cursors with LOOPs Nested Cursors Cursors with Sub Queries Ref. Cursors Record and PL/SQL Table Types	
6	**EXCEPTIONS in PL/SQL** **Types of exceptions**	User Defined Exceptions Pre Defined Exceptions RAISE_APPLICATION_ERROR PRAGMA_AUTONOMOUS_TRANSACTION SQL Error Code Values	PL/SQL provides us the exception block which raises the exception thus helping the programmer to find out the fault and resolve it.

Specify Course Outcome: Enhance the knowledge of the processes of Database Development and Administration using SQL and PL/SQL

Specify Program Outcome: Enhance the knowledge and understanding of Database analysis and design.

Signature of Teacher

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Pattewar D.D. **Department:** Computers cience

Program: B.VOC T.Y. **Subject**: Computer science

Course Code: BVL604 **Paper Title:** Artificial Intelligence

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	INTRODUCTION	Intelligent Agents Agents and environments Good behavior The nature of environments Structure of agents Problem Solving Problem solving agents Example problems	Understand the environments of artificial intelligence
2	SEARCHING TECHNIQUES	Informed search and exploration Informed search strategies Heuristic function Local search algorithms and optimistic problems Local search in continuous spaces Online search agents and unknown environments Constraint satisfaction problems (CSP) Backtracking search and Local search for CSP Structure of problems Adversarial Search	Understand the searching techniques of artificial intelligence
3	KNOWLEDGE REPRESENTATION	First order logic Representation revisited Syntax and semantics for first order logic Using first	Understand the KNOWLEDGE

		order logic Knowledge engineering in first order logic Inference in First order logic Prepositional versus first order logic Unification and lifting Forward chaining Backward chaining	REPRESENTATION of artificial intelligence
4	LEARNING	Learning from observations - forms of learning Inductive learning - Learning decision trees Ensemble learning - Knowledge in learning – Logical formulation of learning Explanation based learning Learning using relevant information Inductive logic programming Statistical learning methods Learning with complete data Learning with hidden variable	Understand the LEARNING of artificial intelligence
5	APPLICATIONS	Communication – Communication as action Formal grammar for a fragment of English Syntactic analysis – Augmented grammars Semantic interpretation – Ambiguity and disambiguation	Understand the APPLICATIONS of artificial intelligence
6	ADVANCED APPLICATIONS	Discourse understanding – Grammar induction Probabilistic language processing Probabilistic language models – Information retrieval – Information Extraction Machine translation.	Understand the ADVANCED APPLICATIONS of artificial intelligence

Specify Course Outcome: understand the artificial intelligence to know the introduction and SEARCHING TECHNIQUES applications.

Specify Program Outcome understand the artificial intelligence to know the introduction and SEARCHING TECHNIQUES applications.

Signature of Teacher

Pattewar D.D.

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: khairajani S.U **Department: Computer Science**

ProgramB.voc TY **Subject**: Computer Application
Course Code: BVL605

Paper Title: Mobile Programming using Android – II

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	Android Testing	Android Testing	Describing the android testing in syllabus
		Working with Test Packages	
		Writing test cases	
2	Fragments	Designing fragments	Classify the fragments in android application
		Fragments lifecycle.	
		Fragment management and integration	
3	User Interfaces	Creating the Activity	Describing the user interface in application
		XML versus Java UI	
		Selection Widgets, Using fonts	
		Common UI components	
		Handling UI events: a bit about listener	

4	Advanced UI	Adapters	Applying components in the application
		Complex UI components	
		Menus and Dialogs	
		Tabbed Activities	
		Navigation Drawer. Animations Create activity layouts programmatically Testing and optimizing UI	
5	Android Material Design	What is material?, Material properties, Material Styling / Animations, Material Patterns 7 6 SQLite Database	Classify the android design inapplication
6	SQLite Database	Introducing SQLite, SQLiteOpenHelper and creating a database , Opening and closing a database, Working with cursors, Inserts, updates, and deletes	Describing the Sql database

Specify Course Outcome:

- Build the android application using the components and designing and interface with user
- UI design widgets and layout ,UI events

Specify Program Outcome:

Android platform and the android studio IDE

Android components, activity and their life cycle

Signature of Teacher

Khairajani S.U

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: khairajani S.U **Department: Computer Science**

Program: B.voc TY **Subject**: Computer Application
Course Code: BVP601

Paper Title: LAB 26 - Mobile Programming using Android – II

No.	Topics	Outcome
1	Android WebView Example	Build the android application with using the components and user interface
2	Fragments in Android - Part 1 ,Part 2	
3	Android AutoCompleteTextView Control	
4	Android TimePicker	
5	Android TimePicker Dialog (TimePickerDialog)	
6	Android DatePicker Dialog (DatePickerDialog)	
7	Showing Notifications and using NotificationManager	
8	Action Bar (ActionBar) # Overflow Menu Items and Icons	
9	. Add Up Button for Low-level Activities to Action Bar	
10	. Explicit and Implicit Intents in Android	
11	Introduction to Services and Creating Started Service	
12	Service and Thread in Android	

13	Creating Service Using IntentService	
14	Applying Styles on Components	
15	Style inheritance in Android &How to Save a File on Internal Storage	

Specify Course Outcome:

- Build the android application using the components and designing and interface with user
- UI design widgets and layout ,UI events

Specify Program Outcome:

Android platform and the android studio IDE

Android components, activity and their life cycle

Signature of Teacher

Khairajani S.U

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Taur M.A. **Department:** Computer Science

Program: B.VOC TY **Subject**: Software Development

Course Code: BVP 602 **Paper Title:** Servlets & JSP

Unit Number	Unit Name	Topics	Unit-wise Outcome
Unit 1	An Overview of Servlets and JSP terminology	A Servlets jobs Why build web pages dynamically? Advantages of Servlets over traditional CGI The Role of JSP Installing & Configuring the JDK & Apache Tomcat Testing your setup Web application – A Preview	Take a part in servlets ,its feature and advantages.
Unit 2	Servlet Basics	Basic Servlet structure A Servlet that generate plain text A Servlet that generate HTML text A Servlet package The Servlet life cycle The Single Thread model interface Servlet debugging	Elaborate dynamic web pages using servlet
Unit 3	Handling Client Request: Form DATA	Reading Form Data from Servlet Example: Reading three parameter Example: Reading all parameter Filtering String for HTML – specific character	Web development process and various sever side technologies .

Unit 4	Handling cookies and session tracking	Benefits of cookies Some problem with cookies Sending and receiving cookies Using cooking to detect first time visitors Using cookies attributes The need for session tracking Session tracking basics Session tracking API Browser session Vs server sessions A Servlets that shows per client access counts	Session authentication using cookies we learned in servlet
Unit 5	JSP Technology: Overview of JSP technology	The Need for JSP Benefits of JSP Installation of JSP Basic syntax	Take a part in JSP technologies ,its feature and advantages.
Unit 6	Invoking Java code with JSP scripting elements & The JSP page directives	Invoking Java code from JSP Limiting the amount of java code in JSP pages Using JSP Expression Using Script lets to make parts of the JSP page conditional The *Import* attribute The *content Type* and *page Encoding* attribute	Shape up JSP application using JSP tags ,JSP Scriptlets

Specify Course Outcome: This course provides the necessary knowledge to design and develop dynamic ,database –driven application.

Specify Program Outcome : After the completion of this course ,the student will be able to develop a small project independently

Signature of Teacher

Taur M.A.

Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Kausadikar J.N. **Department: Comp. Sci**

Program: B.Voc TY **Subject**: Software Development

Course Code: **BVP603 LAB 28**

Paper Title: PL/SQL PART - II

no.	**Program**	**Unit-wise Outcome**
1	Introduction to PL-SQL.	Design and implement advanced queries using Structured Query Language. To study the usages and applications of Object Oriented database.
2	To study the conditional controls and case statement in PL-SQL and execute the following queries: □ Calculate the average salary from table „Emp‟ and print increase the salary if the average salary is less that 10,000. □ Print the deptno from the employee table using the case statement if the deptname is „Technical‟ then deptno is 1, if the deptname is „HR‟ then the deptno is 2 else deptno is 3.	
3	To study procedures and triggers in PL-SQL and execute the following queries: □ Create a procedure on table employee to display the details of employee to display the details of employees by providing them value of salaries during execution. □ Create a trigger on table company for deletion where the whole table is	

	displayed when delete operation is performed.
4	Write a PL/SQL code block to calculate the area of a circle for a value of radius varying from 3 to 7.Store the radius and the corresponding values of calculated area in an empty table named Areas.
5	Write a PL/SQL Block of code for inverting a number 5639 to 9365.
6	Write a PL/SQL Block of code that will merge the data available in the newly created table NEW_BRANCHES with the data available in the table BRANCH_MSTR .if data in the first table already exist in the second table then that data should be skipped.
7	Create a function that accepts a client_no and checks if the client_no exits in the table CLIENT_MASTER.if the client_No exits, display a message valid client and if the Client_No does not exits then display an appropriate error message.
8	Write a PL/SQL block to display whether the given number is Odd or Even.
9	Write a PL/SQL block to display LJIET 10 times using for loop.
10	Write a PL/SQL block using cursor to update salary of a given programmer by 25%.
11	Write a PL/SQL Block to print the sum of numbers from 1 to 50.
12	Write a PL/SQL block to display the detail about given employee from

	EMP table	
13	Write a PL/SQL block to find the salary of a given employee and raise his salary by 20%.	
14	Create a cursor emp_cur,fetch record from emp table and check whether sal>10000 then update Grade = „A“ else if sal = > 5000 and sal<= 10000 then update Grade = „B.	
15	Write a PL/SQL block to calculate factorial of given number.	

Specify Course Outcome: Demonstrate the knowledge of Key-Value databases, Document based Databases, Column based Databases and Graph Databases.

Specify Program Outcome: the basics of SQL and construct queries using Pl/SQL efficiently and apply object oriented features for developing database applications

Signature of Teacher

DnyanopasakShikshanMandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Pattewar D.D. **Department:** Computers cience

Program: B.VOC T.Y. **Subject**: Computer science

Course Code: BVLP604 **Paper Title:** LAB 29 - Configuring and Troubleshooting Windows Server 2008 Terminal Services

Unit Number	Topics	Unit-wise Outcome
1	Install and configure the TS role.	Windows Server 2008 provides a solution to this security problem terminal services gateway Troubleshooting the problem
2	Configure TS settings	
3	Identify the appropriate licensing scope and configure forest, domain, and workgroup Licensing	
4	Identify when to use the per-user and per-device licensing modes with complete data Learning with hidden variable	
5	Install the TS Licensing Role.	

6	.Configure TS licensing for per-user and device licenses.	
7	Manage the licensing lifecycle.	
8	Configure TS connection properties using TS console and Group Policy.	
9	Troubleshoot TS connection properties for a single user and multiple users.	
10	.Identify the considerations for the types of applications that can be installed in a TS Environment.	
11	.Install applications on TS.	
12	Configure TS Web Access to make TS RemoteApp programs available through a Web Site	
13	Configure TS Easy Print.	

14	Install and configure TS Web Access role service	
15	Configure a TS session broker for a load-balanced TS farm.	

Specify Course Outcome: understand the artificial intelligence to know the introduction and SEARCHING TECHNIQUES applications.
Specify Program Outcome understand the artificial intelligence to know the introduction and SEARCHING TECHNIQUES applications.

Signature of Teacher

Pattewar D.D.