Dr. C V RAMAN UNIVERSITY, KOTA BILASPUR(C.G)

A) DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

There are three computer labs under the department of computer science and engineering department. The lab details are as follows:-

LAB-1

Department:	COMPUTER SCIENCE AND ENGINEERING
Lab Name:	B.E. PROJET LAB
No of Computers:	57
No Of Subject Taught:	07

Mention the Practical subject name:

AI LAB, P HP LAB, NETWORK PROGRAMING LAB, VB .NET, NETWORK SECURITY, MEJOR PROJECT LAB, MINOR PROJECT LA

Note, Recommended Spoken Tutorials:-

Practical Subject name		Spoken Tutorial Software (E-Learning Resource)
PHP LAB	→	**PHP**
MAJOR PROJECT LAB	→	**LaTeX**

LAB-2

Department:	COMPUTER SCIENCE AND ENGINEERING
Lab Name:	B.E. LAB
No of Computers:	57
No Of Subject Taught:	8

Mention the Practical subject name:

C & C++ LAB, UNIX LAB, SE LAB, JAVA LAB, VB LAB, DATA STRUCTURE, COMPUTER GRAPHICS LAB,

Practical Subject name		Spoken Tutorial Software (E-Learning Resource)
C & C++ LAB	→	**C and C++**
UNIX LAB	→	**Linux**
JAVA LAB	→	**Java**
DATA STRUCTURE	→	**C**
COMPUTER GRAPHICS LAB	→	**Inkspace**

LAB-3

Department:	COMPUTER SCIENCE AND ENGINEERING
Lab Name:	Communication Lab
No of Computers:	57
No Of Subject Taught:	2

Mention the Practical subject name:

Communication English Lab , Computer Fundamental Lab

Practical Subject name   **Spoken Tutorial Software**
                                          (E-Learning Resource)

Computer Fundamental Lab   →   **1. Scilab (Advanced Computation skills)or**
                                       2. Python (Lucrative scripting language)

LAB TIME TABLE

TIME TABLE FOR B.E.4th SEM-2015

DAY	10:45-11:35	11:35-12:25	12:25-01:15	01:15-02:00	02:00-02:45	02:45-03:30	03:30-04:15
MON						☐ C++ Lab (A)☐☐ ☐ Data Structure Lab (B)☐☐	
TUS						☐ST Lab (A)☐	
WED						☐ Data Structure Lab(A)☐☐ ☐ C++ Lab(B)☐☐	
THUS				LUNCH TIME		☐ST Lab(B)☐	
FRI						☐ C++ Lab(B)☐☐ ☐ Data Structure Lab(A)☐☐	
SAT						☐ Data Structure Lab(B)☐☐ ☐ C++ Lab (A)☐.☐	

*Spoken Tutorial Software, E-Resource for learning - www.spoken-tutorial.org

TIME TABLE FOR B.E.6th SEM-2015

DAY	10:45-11:35	11:35-12:25	12:25-01:15	01:15-02:00	02:00-02:45	02:45-03:30	03:30-04:15
MON					☐ST Lab(B)☐		
TUS						☐ CG LAB (A)☐ ☐ UNIX LAB (B)☐☐☐☐☐☐	
WED				LUNCH TIME	☐ UNIX LAB Lab(A)☐☐☐☐☐☐ ☐ CG LAB Lab(B)☐		
THUS						☐ CG LAB (A)☐ ☐ UNIX LAB (B)☐☐☐☐☐☐	
FRI					☐ ST Lab(A)☐		
SAT						☐ UNIX LAB(A) ☐☐☐☐☐☐ ☐ CG LAB Lab(B)☐	

*Spoken Tutorial Software, E-Resource for learning - www.spoken-tutorial.org

TIME TABLE FOR B.E. 8ᵗʰ SEM-2015

DAY	10:45-11:35	11:35-12:25	12:25-01:15	01:15-02:00	02:00-02:45	02:45-03:30	03:30-04:15
MON						AI Lab (A) NS Lab (B)	
TUS		MP Lab(A) ST Lab(B)		LUNCH TIME		NS Lab(A) AI Lab(B)	
WED		ST Lab (A) NS Lab (B)					
THUS		AI Lab(A) MP Lab(B)					
FRI		NS Lab(A) AI Lab(B)					
Sat		SEMINAR/PD					

Note:

Final Year practical are performed in **lab-1**

Third Year and Second Year practical are performed in **lab-2**

First Year practical are performed in **lab-3**

The proposed date of main examination Of B.E course is 15/05/2015

The syllabus or lists of practical with time table are mentioned below.

Dr. C. V. Raman University
Kargi Road, Kota, Bilaspur (C.G)

Semster : III Sem

Subject : Digital Electronics and Logic Design

Total Theory Periods : 40

Total Marks in end semester examination : 80

Minimum number of class tests to be conducted : 02

Branch : Computer science and Engineering

Code : 333312(33)

Total Tutorial Periods : 10

UNIT-I
Overview of Boolean Algebra AND Logic Gates : Number Systems and Codes, Binary Arithmatic, Boolean Algebra, Minimisation of Switching Function , Demorgan's Theorem, Karnaugh's Map Method (limited up to 4-variables), Quine McCluskey's Method , Cases with Don't care conditions and multiple output switching functions.

UNIT-II
Combinational Circuits : NAND / NOR gates , Realisation of switching functions , Half/full adders, Half / full substractors , Series and parallel additions ,BCD adders ,Look ahead carry generators ,Decoders and encoders ,BCD to 7 segment decoders, Multiplexers and Demultiplexers, Parity bit generator and detector , Error detection.

UNIT-III
Sequential Circuits : Introduction to registers and Counters : Flip-Flops and their conversion, Excitation Tables, Synchronous and Asynchronous counters and Designing of sequential circuits: code converter and counters. Mode-k and divide by K Counters, Counter Applications.

UNIT-IV
Logic Families: RTL, DTL, all types of TTL circuits, ECL, Circuit, Operation & Features of I^2 L and PMOS, NMOS and CMOS logic etc.

UNIT-V
Memories and Converters : Introduction to various semiconductor memories and designing of ROM and PLA , Introduction to analog to digital and digital to analog converters and their types (R-2R ladder network and successive approximation converters)

Name of Text Books
1. W H Gothman , " Digital Electronics" PHI
2. R. P. Jain : "Modern Digital electronics", TMH

Name of Reference Books :
1. R J Tocci, " Digital System principles and Applications"
2. Millman Taub , " Pulse , Digital and Switching Waveforms " TMH
3. M.M. Mano : "Digital logic and computer design", PHI.
4. Floyd : "Digital fundamentals", UBS.
5. B. Somanathan Nair, "Digital eletronics & Logic Design", Prentice-Hall of India

Dr. C. V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Branch: Computer Science & Engineering
Practical Code :

Semester: III
Subject: Programming with C Lab
322322(22) Total practical Periods: 36
Total Marks in End Semester Exam: 40

List of programmes to be executed (but should not be less than 10) :

1. Write a program to take the radius of a sphere as input and print the volume and surface and surface area of that sphere.
2. Write a program to take a 5-digit number as input and calculate the sum of its digits.
3. Write a program to take three sides of a triangle as input and verify whether the triangle is an isosceles, scalene or an equilateral triangle.
4. Write a program that will take 3 positive integers as input and verify whether or not they form a Pythagorean triplet or not.
5. Write a program to print all the Prime numbers between a given range.
6. Write a program to define a function that will take an integer as argument and return the sum of digits of that integer
7. Write a program to define a macro that can calculate the greater of two of its arguments. Use this macro to calculate the greatest of 4 integers.
8. Write a program to define a recursive function that will print the reverse of its integer argument.
9. Write a program to print the sum of first N even numbers using recursive function.
10. Write a program to sort an array using Bubble sort technique.
11. Write a program that will take the elements of two integer arrays of 5 element each, and insert the common elements of both the array into a third array (Set intersection)
12. Write a program to take 5 names as input and print the longest name.
13. Write a program to define a structure Student that will contain the roll number, name and total marks of a student.
    The program will ask the user to input the details of 5 students and print the details of all the students whose total marks is greater than a given value.
14. Write a program to define a union Contact that will contain the members Mobile no and E-mail id. Now define a structure Employee that will contain name, roll number, mode of contact (mob/e-mail) and a variable of type Contact as members. The program will ask the user to give the details of two Employees including mode of contact and the contact num/ E-mail. Print the details of both the Employees.
15. Write a program that will ask the user to input a file name and copy the contents of that file into another file.
16. Write a program that will take any number of integers from the command line as argument and print the sum of all those integers.
17. Write a program to process sequential file for payroll data.
18. Write a program to process random file of library data.

List of Equipments/Machine Required:
PCs, C-Compiler

Recommended Books:
Programming in ANSI C – E. Balaguruswamy   Tata Mc-Gcraw Hill

Practical Subject name

| Practical Subject name | | Spoken Tutorial (E-Learning Resource) |

Programming with C Lab   →   **C**

Dr. C.V. Raman University
Kargi Road, Kota, Bilaspur (C.G)

Semster : III Sem

Engg. Subject : Digital Electronics and Logic Design Lab

Total Lab : 36

Total Marks in end sem examinations : 40

Branch : Computer Science and

Code : 333323(33)

Experiments To Be Performed (minimum 10 experiments)

1) To study the characteristics and operations of TTL Inverters, OR, AND, NOR and NAND gate using ICs.
2) To study NAND and NOR gates as a universal logic.
3) To study and prove Demorgan's Theorem ,
4) To design Half and Full adder circuits using logic gates.
5) To design Half and full subtractor circuits using logic gates.
6) To study the binary parallel adder.
7) To design 4 bit magnitude comparator circuits.
8) To study the 7 segment decoder .
9) To design 4:16 decoder using two 3:8 decoder and four 2:4 decoder
10) To design 16: 1 Multiplexer using 4:1 Multiplexer.
11) To study various types of flip flops using logic gates and ICs.
12) To design Mode-N and divide by K counter.
13) To construct a 4 bit binary to gray converter and vice versa using IC 7486 .
14) To study Up-Down counter .
15) To study programmable shift registers.

List of Equipments /Machine Required:

1) Logic gate trainer
2) Digital ICs Trainer
3) Various ICs 7400,7402,7404,7408,7432,7486,74138,74151,74155 etc.

Recommended Books:

1) M.M. Mano : "Digital logic and computer design", PHI.
2) Floyd : "Digital fundamentals",UBS.

Dr. C.V. Raman University
Kargi Road, Kota, Bilaspur (C.G)

Semester: III

Technology Lab (HTML/DHTML)

Total practical Periods : 36

Total Marks in End Semester Exam : 40

Branch: Computer Sc. & Engg. Subject: Web

Code: 322324 (22)

EXPERIMENTS TO BE PERFORMED (minimum 10 experiments)

1. Design a HTML page describing your profile in one paragraph. Design in such a way that it has a heading, a horizontal rule, three links and your photo also write three HTML documents for the links
2. Design HTML page describing your academic career. The page will tell about the degrees, Institutions and your hobbies. Add some lists too
3. Design HTML page demonstrating Concept Of Internal Hyper-link
4. Design HTML page which gives the list of grocery Items by using Ordered List , List consist of Roman no, A,B.... and so on
5. Design HTML page which gives the list of grocery Items by using Unordered List bullets are of form disc, square and circle
6. Design a HTML page for partitioning browser window in frames display the different pages in partitioned windows
7. Design HTML page to partition window, Design in such a way that link clicked in on page can display the corresponding pages in other window
8. Design a HTML page on your native place
9. Design a HTML page on your friends. List your friends; each friends name is a link. Prepare separate HTML document on each friend and call them in appropriate link
10. Design HTML page listing popular car companies. For each company prepare a sub list showing various brands of cars it offers
11. Design a HTML page for reserving a room in a Hotel
12. Design a HTML form to reserve a Railway ticket
13. Design a HTML form to see the result for a candidate when the results are published on the web
14. Design a HTML form to find the railway fare from one place to another
15. Design a HTML form to find out the balance for a mobile phone customer as on today

List of equipments/Machine required:
Pentium 3 (min)
Windows 98 (min) with Internet Explorer
Netscape Navigator
Web Browser

Recommended Books:

1. HTML Complete Reference- Tata McGraw hill
2. HTML and XML: An Introduction NIIT, Prentice-Hall of India
3. Building Enhanced HTML Help with DHTML and CSS by Jeannine M.E.Klien. Pearson Education
4. HTML for the World Wide Web, Fifth Edition, with XHTML and CSS
5. Visual QuickStart Guide 5th Edition Elizabeth Castro, Pearson EducationSams Teach Yourself HTML & XHTML in 24 Hours 6th Edition Dick Oliver, Michael Morrison, Pearson Education

Dr.C.V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Branch: Computer Science & Engg. Subject: Data Structures Lab

Total Practical Period: 36　　　　　**Practical Code: 322421(22)**

Total Marks in End Semester Exam. : 40

1. Write a program to perform following in one dimensional array., Insertion, Deletion and Searching (Linear & Binary).
2. Write a program to implement stack and perform push pop operation.
3. Write a program to convert infix to postfix expression using stack.
4. Write a program to perform following operation in linear queue - addition, deletion, traversing
5. Write a program to perform following operation in circular queue - addition, deletion, traversing
6. Write a program to perform following operation of double ended queue - addition, deletion, traversing
7. Write a program to perform following operation in single link list.-creation, inversion, deletion
8. Write a program to perform following operation in double link list – creation, insertion, deletion.
9. Write a program to implement polynomial in link list and perform
   a. Polynomial arithmetic
      b. Evaluation of polynomial
10. Write programs to implement linked stack and linked queue
11. Write programs to perform Insertion, selection and bubble sort.
12. Write a program to perform quick sort.
13. Write a program to perform merge sort.
14. Write a program to perform heap sort
15. Write a program to create a Binary search tree and perform –insertion, deletion & traversal.
16. Write a program to traversal of graph (B.F.S, D.F.S)

Recommended Books :

1. "Data structure using C " by Samir kumar Bandyopadhyay, Kashi nath Dey
2. " C and Data structures " Ashok K Kamthane Pearson Education.
3. An Introduction to Data Structures with Application by Tremblay & Sorenson (Tata Mc)
4. Fundamentals of Data Structure by Horowitz & Sahni (Galgotia)
5. Data Structures using C by ISRD Group (Tata Mc)
6. Data Structures using C/C++ by langsam, Augenstein & Tananbaum (PHI)
7. Data Stuctures & Program Design by Robert L Kruse (PHI)

Practical Subject name　　　　　　　**Spoken Tutorial**
　　　　　　　　　　　　　　　　　　　(E-Learning Resource)

Data Structures Lab　　　→　　　　　　**C**

Dr. C.V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Semester – IV

Branch-Computer science & engineering.

Subject: Visual Basic .NET Lab

Code –322426(22)

Total Practical Periods: 36

Total Marks in End Semester Exam: 40

Practical List for Visual Basic .NET Programming:

CONSOLE PROGRAMMING

1. Visual Basic .NET – An Introduction of Console and GUI Programming technique, Explain New Project window, property Explorer, Output window, Dynamic help, Window management (Auto Hide, Dockable, Tabbed Documents, IDE navigation, favorites), win forms & webfroms
2. WAP to find the Average, Total Grade of student using if else statements (In Console).
3. WAP to input any number between (0—6) and print appropriate day, week.
4. Print the pattern Using For loop.
5. WAP to input numbers in 1D array and print in ascending & descending order.
6. WAP to input number in 2D array and perform the following operations a.   Sum of all number
   b.   Forward Diagonal & Backward diagonal c.   Print Upper & Lower triangle matrix.
7. WAP to input number in 2D array and perform the following operations a.   Sum of two matrices.
   b.   Multiplication of two matrices.
8. WAP to explain Class, Constructor & Inheritance.

GUI PROGRAMMING

1. Design simple calculation to implement Addition, Subtraction and Multiplication and Division.
2. Design the marks sheet of student. Which Display all details including the total marks of student and percentage.
3. Create a from using check box & option box to give the effect of fonts such as Bold, Italic, underline, strike through respectively for the text entered in the Rich Text Box.
4. Demonstrate use of Data Environment, add tables and queries, place field on form, report etc.
5. Create simple Notepad application, which contains menus, Rich Text Box, Common Dialogs Box, formatted text, using toolbar and Replace text, window, status bar and scroll bar.
       6. Develop three different programs which use different Data Access Components ODBC,OLE DB-ADO
7. Modify the Practical on 12 to all following Button FIND, ADD, DELETE, MODIFY, CANCEL. Give proper code to perform the activity described by the buttons.

CASE STUDY (Design the and develop one of the following three case studies)

Design a program for online Examination system, which include database and record facility. Develop a program for telephone bill generation, which include database and record facilityDevelop a program for super market, include the database and record facility.

List of Equipment/machine required:-
1. Microsoft Visual studio .NET 2003
2. MSDN Library
3. Database (Oracle/MS Access/ Sql. Server)

Text Books :-
1. Black Book (VB .NET)
2. Complete Reference (VB .NET)
3. VB .NET Microsoft Press

Dr. C.V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Semester: IV

Oriented Concepts &

Programming using C++ Lab

Branch: Computer Science & Engg. Subject: Object

Practical Code: 322423 (22)

Total Practical Period: 36

Total Marks in End Semester Exam: 40

1. Write a Program to check whether number is prime or not.
2. Write a Program to read number and to display the largest value between:
   A. Two number B. Three Numbers C. Four number by using switch-case statements.
3. Write a Program to find sum of first natural numbers : sum= 1+2+3+4+……. 100 by using a. for loop b. while loop c. do-while loop
4. Write a Program to find sum of the following series using function declaration.
   Sum= $x-(x)^3/3!+(x)^5/5!-...........(x)^n/n!$
5. Write a Program to read the element of the given two matrix & to perform the matrix multiplication.
6. Write a Program to exchange the contents of two variable by using
   (a) call by value (b) Call by reference.
7. Write a Program to perform the following arithmetic operations of a complex number using a structure (a). Addition of the two complex number (b). Subtraction of the two complex number (c). Multiplication of the two complex number (d). Division of the two complex number.
8. Write a Program to generate a series of Fibonacci Nos. using the constructor where the constructor member function had been defines (a). is the scope of class definition itself (b). out of the class definitions using the scope resolutions operator. Also make this program with the help of the copy constructor.
9. Write a Program to demonstrate how ambiguity is avoided using scope resolution operator in the following inheritance (a). Single inheritance (b). Multiple inheritance
10. Write a Program to perform the swapping of two data items of integer, floating point number and character type with the help of function overloading.
11. Write a Program to generate a Fibonacci series by overloading a. Prefix Operator b. Postfix Operator.
12. Write a Program to access the private data of a class by non-member function through friend function where the friend function is declared : (1). is the location of public category (2). is the location of private category (3). With in the scope of a class definition itself (4). Defined with inline code subtraction.
13. Write a Program to demonstrate how a pure virtual function defined declared and invoked from the object of derived class through the pointed of the base class.
14. Write a Program to Bubble Sort Using template function.
15. Write a Program for invoking for that Generate & Handle exception.

List of Equipment/Machine Required
Pentium IV machine, Turbo C++ compiler

Name of Text Books :
1. Programming with C++ : D Ravichandran
2. OOP's with C++ : E. Balaguruswamy .

Name of Reference Books:
1. Programming with C++ : Venugopal .
2. Object Oriented Programming in C++ : StroutStrups.
3. OOP with C++ : Robert Lafore
4. Let us C++ : Yaswant Kanetkar.

Practical Subject name	Spoken Tutorial (E-Learning Resource)
Concepts &Programming using C++Lab →	Basic and Advanced C++

Dr. C.V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Semester – V
Subject: **Database Management System Lab**
Total Practical Periods- 50
Total marks in end semester exam - 40
Minimum number of class tests to be conducted – 02

Branch-**Computer Science & Engineering.**
Code –**322522 (22)**

Practical List :-

Schema for table creation
Employee (person name, street, city)
Works (person Name, company name, salary)
Company (company name, city)
Manages (person name. Manager name)

1. Creating tables, Renaming tables.
2. Data constraints(Primary key, Foreign key, Not Null), Data insertion into a table.
3. Viewing data from tables.
4. Filtering table data.
5. Creating table from another table.
6. Inserting data into a table from another table.
7. Delete, alter, and update operations.
8. Grouping data, aggregate functions
9. Oracle functions (mathematical, character functions)
10. Subquieries
11. Set operations.
12. Joins.
13. PL/SQL (Anonymous block, control structure)
14. PL/SQL (Procedures)
15. Triggers
16. Cursors

Text Books:
1. SQL & PL/SQL, Ivan Bayross, SPD.
2. Database Design Fundamentals, Rishe, PHI.

Reference Books:
1. Principles of Database Systems", 2nd Edn., Ullman, J.O, Galgotia Publications.
2. Introduction to Database Systems , C.J.Date, Pearson Education.
3. Fundamentals of Database Systems , Elmasri & Navathe, Pearson Education.

Practical Subject name

**Spoken Tutorial
(E-Learning Resource)**

Database Management System Lab →   *MySQL*

Dr. C.V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Semester – V
Subject: Software Technology Lab-2 (Java)
Total Practical Periods- 50
Total marks in end semester exam – 40
Minimum number of class tests to be conducted – 02

Branch-Computer Science & Engineering.
Code –322523 (22)

List of Experiment to be performed

1. Write a program to check whether a number is a Armstrong number or not.
2. Write a program to sort a stream of Strings.
3. Write a program to perform multiplication of two matrices.
4. Write a program to find the volume of a box having its side w,h,d means width ,height and depth. Its volume is v=w*h*d and also find the surface area given by the formula s=2(wh+hd+dw).use appropriate constructors for the above.
5. Develop a program to illustrate a copy constructor so that a string may be duplicated into another variable either by assignment or copying.
6. Create a base class called shape. It contains two methods getxyvalue() and showxyvalue() for accepting co-ordinates and to display the same. Create the subclass called Rectangle which contains a method to display the length and breadth of the rectangle called showxyvalue().Use overriding concept.
7. Write a program that creates an abstract class called dimension, creates two subclasses, rectangle and triangle. Include appropriate methods for both the subclass that calculate and display the area of the rectangle and triangle.
8. Write a program which throws Arithmetic Exception. Note the output, write another class (in a different file) that handles the Exception.
9. Create a user defined Exception class which throws Exception when the user inputs the marks greater than 100.
10. Write a program in which a Mythread class is created by extending the Thread class. In another class, create objects of the Mythread class and run them. In the run method print "CSVTU" 10 times. Identify each thread by setting the name.
11. Write a program using InetAddress class and also show the utility of URL and URL Connection classes.
12. Write a program which illustrates capturing of Mouse Events. Use Applet class for this.
13. Write a program using RMI in which a simple remote method is implemented.
14. Write a servlet program using HttpServlet class. Also give the appropriate HTML file which posts data to the servlet.
15. Write a JDBC program for Student Mark List Processing.
16. Design a text editor which is having some of the features of notepad.

Reference Books:

1. Java complete reference - Naughton schildt (TMH)
2. Java programming – E Balagurusamy
3. Java 2 Black book – Steven Holzner
4. Java Examples in a nutshell – O' Reilly

Practical Subject name

Spoken Tutorial
(E-Learning Resource)

Software Technology Lab-2 (Java) → 　　*Java and Netbeans*

Dr. C. V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Semester : V
Microprocessor & Interfaces Lab
Total Practical Periods: **50**
Total Marks in End Semester Examination: **40**

Branch: **Computer Science & Engineering**. Subject:
Code: **328524 (28)**

Programmes to be executed (but should not be limited to):

1. **REVERSING AN ARRAY:** A Block of 16 bytes are residing at locations starting from BLOCK 1 WAP to transfer the block in reverse order at locations starting from BLOCK 2.

2. **SORTING IN ASCENDING ORDER:** A block (16 bytes are residing at locations starting from DATA: Write a program to arrange the word in the same location in ascending order

3. **BINARY ADDITION:** 16 bytes are residing at location starting from DATA WAP: to add all bytes and store the result location SUM and SUM + 1

4. **BCD ADDITION:** 16 BCD NUMBER are residing at location starting from DATA WAP to add all bytes and store the result location SUM and SUM + 1

5. **MULTIPLICATION:** Two bytes are residing at location DATA 1 and DATA 2 Write a program to multiply the two bytes and store the result at location PROD 1 and PROD 2 .

6. **BINARY TO BCD:** A binary number is residing at location BIN > WAP to convert the binary number in to its equivalent BCD and store the result at BCD and BCD + 1

7. **BCD TO BINARY:** A BCD number is residing at location BCD ; Write a program to convert the BCD number into its equivalent binary and store the result at BIN

8. **MULTIBYTE ADDITION:** Two 10 bytes are residing at location starting from DATA 1 and DATA 2 respectively, Write a program two add them up and store the result at location starting from RESULT (result space 11 bytes)

9. **MULTIBYTE BCD ADDTION:** Two 6 digits BCD numbers are residing at location starting from DATA 1 and DATA 2 respectively. Write a program to add them up and store the result at locations starting from RESULT (Result space 7 bytes)

10. **RST 6.5:** A block of 16 bytes is residing at location starting from ; DATA Reverse the block and store the bytes at REVERSE whenever the RST 6.5 key is pressed.

11. **EDITING OF ASCII STRING:** A string of ASCII characters is residing at locations starting from READ which contain " I $ WILL $ BE $ AN $ ENGINEER ". Edit string in such a way that it should contain " I $ will $ be $ Engineer ". Keep the edited string in the same locations. Product the string from further editing. ($ stands for a blank)

12. **SIGNED BINARY ADDITION:** A block of 16-signed binary numbers is residing at locations NUMBERS. Add them up and store the result (in signed binary) at locations from RESULT.

13. **ASCII CODE CONVERSION:** A string of 16 ASCII characters are residing at locations starting from DATA. The string consists of codes for capital letters, small letters and BCD digits (0-9) . Convert the ASCII characters. In such a way that the codes for capital letters be converted into corresponding codes for small letters, codes for small letters into that of capital letters and codes for BCD digits into that of BCD numbers and store them at the same locations.

14. **PARITY CHECK:** A block of 32 bytes is residing at DATA count the number (BCD) of times even and odd PARITY bytes are appearing consecutive memory locations. Keep the count at MATCH.

15. **SERIES GENERATION:** Two BCD numbers a and b are residing at locations DATA 1 and DATA 2 respectively. Write a program to form a series in BCD with the elements of a. a + 2b, a + 4b, a + 6b, ... Stop the generation of the series whenever any element of the series in BCD with the elements of the series exceeds (99). Store the result at locations starting from RESULT. Count the number (BCD) of elements in the series and store it at NUMBER.

List of Equipments/Machine Required:
8085 based microprocessor kit, MASM assembler, 8085 simulator, PCs.

Recommended Books:
8085 Microprocessor Programming & Interfacing – N.K. Srinath, PHI

Dr. C. V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Semester – VI
Subject: **Computer Graphics Lab**
Total Practical Periods – **40**
Total Marks in end semester examination – **40**

Branch – **Computer Science And Engineering**
Code – **322622 (22)**

1. Write a program to draw the line using DDA algorithm.
2. Write a program to draw the line using Bresenham's algorithm.
3. Write a program to draw circle using Bresenham's algorithm.
4. Write a program to draw circle using mid-point algorithm.
5. Write a program to demonstrate draw ellipse using midpoint algorithm.
6. Write a program Rotation of Triangle.
7. Write a program Translation of Line.
8. Write a program to perform scaling of line.
9. Write a program shearing of Rectangle.
10. Write a program to implement boundary –fill algorithm.
11. Write a program to implement flood –fill algorithm.
12. Write a program to implement Bezier curve using four control points.
13. Write a program to implement CohenSutherland line clipping algorithm.
14. Write a program to implement Liang Barsky line clipping algorithm.
15. Write a program to implement face of a cartoon.

Book Reference:-

1. Computer Graphics & Multimedia- G. S. Baluja -Dhanpat Rai & CO.
2. Computer Graphics Donald Hearn & M Pauline Baker-Pearson Pvt. Ltd.

Practical Subject name		**Spoken Tutorial** **(E-Learning Resource)**
Computer Graphics Lab	→	*Inkscape*
		Blender
		GIMP

Semester: B.E. VI Sem.
Subject: Software Technology Lab –3
Total Practical Periods : **50**
Total Marks in End Semester Exam. : **40**

Branch: **Computer Science & Engineering.**
Code: **322623 (22)**

NOTE for Students to Follow strictly:-

Every **two to three students** should form a group and should develop a software that could be developed with in **one month** of time.

The groups should prepare a **softcopy as well as hardcopy** of the documentation as per phases given below.

Every student in the group should have a copy of the documentation

Every student should get his own copy of the documentation properly checked from the **Teacher In- charge**, after every phase of development given below.

Before the Final Practical examinations, every individual student should submit his own hardcopy of the documentation in a **Punched Cardboard File Only.**

One **CD** of the project and its documentation (softcopy), from every group should be submitted during **final submissions**.

During **Final Submissions**, every copy of the documentation should be accompanied by a **Submission Certificate** duly signed by the **Teacher In-charge and Head of Department**.

Planning Phase

1. **Problem Statement :-**
   a. Description of the present situation.
   b. Problem constraints (Manpower, Software and Hardware).
   c. Statement and brief description of Goals (Process and Product).
   d. Statement and brief description of Requirements (Functions, Hardware, Software and User interface) of the overall product.
   e. List and Description of the users and their role, who will use the software product.

2. **Solution strategy :-**
   a. List and brief description of all possible solutions. **b.**
   List and brief description of all accepted solutions. **c.** List
   and brief description of all rejected solutions.

3. **Development process :-**
   a. Life cycle model for the project.
   b. Team structure for the project (Details of team members also needed).
   c. Software Configuration Management :-
       i. List and brief description of non-changeable objects that would contribute to the software phase wise.
       ii. List and brief description of changeable objects that would contribute to the software phase wise.
   d. Software Quality assurance :-

     i. List and brief description of quality attributed decided for evaluating the software product phase wise.

     ii. List and brief description of the validations (are we making the product right ?) and verifications (are we making the right product?) phase wise.

e. Risk management :-

     i. List and brief description of any kind of Risks that may occur phase wise.

     ii. List and brief description of any possible solutions for the above mentioned risks.

4. **Software metrics :-**

a. Deciding the complexity category of the product under development.

b. Estimating Lines of Code needed for the complete development of the product.

c. Calculating Programmer months for the project.

d. Calculating the development time for the project.

e. Calculating the Average staffing level for the project.

f. Using COCOMO model for performing cost estimation for the product.

5. **Review of the Planning Phase :-**

a. Points and brief description of the reviews conducted and report of the results obtained.

Analysis and Design Phase

1. **Analysis document for the product :-**

a. Data Dictionary :- List and brief description of all the components to be used in ERD, DFD and STD.

b. Data Object Description document :- Entity Relationship Diagram (ERD)

c. Process Specification document :- Data Flow Diagram (DFD)

d. Control Specification document:- State Transition Diagrams (STD)

2. **Creating Designs document :-**

a. Data Design :- Description of the data objects and suggested algorithm.

b. Architectural Design :- Description of how to encapsulate the data with data structures and modules.

c. Interface Design :- Description of Interfaces to be created between various modules and between user and program.

d. Procedural Design :- Using flow charts and decision tables the entire system is explained.

3. **Preliminary design review :-**

a. Statements of Reviews done on the initial designs and comments for improvement, if necessary.

4. **Test Plan document :-**

a. List and brief description of Functional Tests (Black-Box testing) to be conducted and results expected.

b. List and brief description of Structural Tests (White-Box or Glass-Box testing) to be conducted and results expected.

c. List and brief description of Performance Tests to be conducted and results expected.

d. List and brief description of Stress Tests to be conducted and results expected.

5. **Critical Design review :-**
   a. Statements of reviews done on the final designs, listing out important points, if necessary, to be remembered during the implementation phase.
6. **Milestones, Walkthroughs and Inspection document :-**
   a. Setting up Milestones for the implementation and testing phases. **b.** Setting up Walkthrough schedules for the implementation phase. **c.** Setting up Inspection schedules for the implementation phase.

Implementation Phase

1. **Coding :-** Here the actual coding is done according to the designs created and standards decided.
2. **Coding standards :-** Standards need to be followed related to the variable declarations and use.
3. **Internal documentation:-** Here small descriptions in the form of comments in the program code is used, describing the meaning of the code, modules or operations performed.
4. **Error documentation :-** List and brief description of errors displayed with their meanings and causes.
5. **Unit testing :-** Testing of individual modules and required code areas are done by using coding that would display temporary results. Those results are evaluated for correctness of code. A table is created stating the test criteria and results.
6. **Validation and Verification :-** A table is created stating the validation and verification activities performed on the code and results found.
7. **Review document :-** According to the milestones set, the reviews, walkthroughs and inspections are done and a document describing the above process and results found, is created.

Testing Phase

1. **Testing table :-** The tests decided in Test plan document are conducted and a table is created showing the details of the test performed, expected results and actual found results.
2. **Test report :-** A summary of the Test report is created and suggestions for the steps to be taken further are listed with brief description.

User Manual

1. A document is created describing from the user point of view, how to use and trouble shoot the software product.
2. Different documents should be created for different category of users of the product.
3. A document describing the installation procedures.
4. Frequently Asked Questions and answers document is created from the user point of view.
5. Do's and Don'ts for the user.
6. List and brief description of Errors displayed and their meanings.
7. Contact details for further assistance.

Dr. C.V. Raman University

Kargi Road, Kota, Bilaspur (C.G.)

Semester: **B.E. VI Sem.**
Subject: **UNIX & SHELL Programming Lab**
Total Practical Periods: **50**
Total Marks in End Semester Exam. :**40**

Branch: **Computer Science & Engineering**
Code: **322634 (22)**

1.   Write a shell script to accept three numbers and display the largest.
2.   Write a shell script to find the number of files in a directory.
3.   Write a shell script to display first ten positive numbers using until loop.
4.   Write a shell script to check if a particular user has logged in or not. If not, continue the loop till he/she logins. Once the required user logins, display a message.
5.   Write a shell script to accept the name, grade, and basic salary from the user. Write the details into a file called employee, separating the fields with a colon (,) continue the process till the user wants.
6.   Write a menu driven program to display a menu of options and depending upon the user's choice execute the associated command.
7.   Write a shell script to check whether a file is existing or not.
8.   Write a shell script to find the mode of a file in a directory.
9.   Write a shell script which will accept different numbers and find their sum.
10. Write a shell script to calculate the total salary payable to all the employees from the employee file. The salary should be taken from the 8th field of the employee file.
11. Write a shell script to copy the source file to the target file.
12. Write a shell script to print the first 10 odd numbers using the while loop.
13. Write a shell script to generate the factorial of a given number entered through keyboard.
14. A five digit number is input through the keyboard. Write a shell script to calculate the sum of its digits.
15. Write a shell script to generate the Fibonacci series.
16. Write a shell script to reverse the digits of a given number.

Reference Books:

1.   S. Prata, Advance UNIX, a Programmer's Guide, BPB Publications, New Delhi.
2.   Sumitabh Das, Unix Concepts and Applications.

Practical Subject name	Spoken Tutorial (E-Learning Resource)
UNIX & SHELL Programming Lab →	*Linux BASH*

Dr. C. V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Semester: VII
Computing Lab.
Total Practical Periods: 50
Total Marks in End Semester Exam: 40

Branch: Computer Science & Engg. Subject: Soft
Code: 322721 (22)

1. **WRITE MATLAB PROGRAM FOR FOLLOWING.**
   A) AREA = r^2 (USING ARITHMETIC OPERATOR).
   B) $e^{(150)}$ (USING EXPONENTIAL OPERATOR).
   C) $y = Sin^2 \ /3 + Cos^2 \ /3$ (USING TRIGONOMETRY OPERATOR).
   D) $y = Cos \ /4 + i Sin \ /4$ (USING COMPLEX NUMBER).
   E) $y = log_{10}(10^6)$ (USING LOGARITHMS OPERATOR).
2. Compute y- coordinates of a **STRAIGHT LINE** $y = mx + c$, where slope of line m = 0.5 , intercept c= -2 and x- coordinates : x = 0 to 10 for 0.5 increments.
3. Create following vectors t with 10 elements 1 to 10.
   a) $x = t \ sin(t)$ [A MULTIPLE VECTORS}
   b) $y = (t-1) / (t+1)$ [A DIVIDE VECTORS}
   c) $z = [sin(t^2)/ (t^2)$ [A EXPONENTIAL VECTORS}
4. PLOT $y = Sin \ x$ where 0   x   2 .
5. PLOT $y = e^{-0.4x} \ Sin \ x$ where 0   x   4 .
6. Write a script file to draw a unit circle.
7. Write a function factorial to compute the factorial n! for any integer n.
8. Write a function factorial to compute the factorial n! using RECURSION for any integer n.
9. Write a function file crossprod to compute the cross product of two vectors u and v.
10. Write a function to compute the geometric series
    $$1 + r + r^2 + r^3 + \ldots\ldots\ldots + r^n \quad \text{for given r and n.}$$
11. Write a function that outputs a conversion – table for Celsius and Fahrenheit.
12. Write a function to computes the interest on your account for a given principle amount, period and rate of interest.
13. Check following linear algebra rule for three MATRIX A,B AND C of any ranks. a) ADDITION COMMUTATIVE.
    b) ADDITION ASSOCIATIVE.
    c) MULTIPLICATION WITH A SCALAR DSTRIBUTIVE.
    d) MULTIPLICATION WITH A MATRIX DSTRIBUTIVE
    e) MATRIX ARE DIFFERENT FROM SCALAR.
14. Find the solution of following linear algebraic equtions. $x + 2 y + 3 z = 1$
    $$3x + 3 y + 4 z = 1$$
    $$2x + 3 y + 3 z = 2$$
15. Find Eigen values and eigenvector of a 3 X 3 matrix.

TEXT BOOK
1. Matlab Programming: B B Chaudhri & Singh ; Prentice Hall of India
2. Matlab- Rudrpratap
3. Matlab- Hamitre, Thompson publication

Practical Subject name   **Spoken Tutorial**
                                   (E-Learning Resource)

Soft Computing Lab   →   *Scilab*

Dr.C.V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Semester: VII
Subject: Software Technology Lab-4
Practical Code: 322723 (22)
Total Marks in End Semester Exam: 40

Branch: Computer Science & Engg. Subject: Soft

Total Practical Periods: 50

1) Write a PHP script for the following.

    a. Find the biggest of 3 numbers.

    b. Find the factorial of a number (while loop)

    c. To reverse the digit (Use do while)

2) Write a PHP script to create an associative array with book details and display.

3) Write a PHP script to create an array and try with all array functions.

4) Write a PHP script to create Cookie, store a value "Ganesh" in the cookie.

5) Write a PHP script to store, retrieve and delete data using session variables.

6). Write a PHP program to display the contents of a file using fgets, fgetc, fread functions.

7) Write a PHP program to upload a file and display the contents in server.

8) Create a registration form which contains fields name, Roll No, Gender and a submit button. All the details should be displayed in the server page when the user clicks the submit button.

9) Design a database in MYSQL using PHP. Create table in database. Store, Update, Delete and Retrieve data from the table. Display the data from the table.

10) Write a PHP script that will demonstrate POSIX regular expressions for validating

    i) Name ii) Pin Code iii) Date iv) Email-id.

11) Using PHP and MySQL, develop a program to accept book information viz. Accession number, title, authors, edition and publisher from a web page and store the information in a database and to search for a book with the title specified by the user and to display the search results with proper headings.

12) Perform select or Search statement with PHP.

13) Design any one Small website using my-sql, PHP and html.

Name of Text books:-
1. Head First PHP & MySQL by Lynn Beighley and Michael Morrison , Orelly

2. PHP Solutions: Dynamic Web Design Made Easy by David Powers ,friendsof

Name of Reference Books:-
    1. Learning PHP, MySQL, and JavaScript: A Step-by-Step Guide to Creating Dynamic by Robin Nixon , Orelly

Practical Subject name	Spoken Tutorial
	(E-Learning Resource)
Software Technology Lab-4 →	*PHP & MySQL*

Dr. C.V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Semester: VII

Subject: Minor Project

Total Theory Periods: nil

Total Marks in End Semester Exam: 100

Minimum no. Of Class test to be conducted:--

Branch: Common to all Branches

Code: 322724 (22)

Total Tutorial Period: 60

Allocation of project:

1. Information regarding broad area must be made available to the students well in advance (may be during previous semester).
2. Information must cover following parameters.
    i. **Broad area**: Subject or expertise/application area.
    ii. **Required skills**: Knowledge of subject(s), software, tools & other characteristics.
    iii. **Type of project**: Hardware, software, design, survey, study based etc.
    iv. **Guide available**: Name of Guide (S) from Department & Institute.
    v. **Other related information** depending upon specific branch & institute.
3. It is also recommended to give proper counseling to pick up suitable project.
4. Students must get chance to select projects as per their choice or decided mutually between students and department faculty (HoD) concern.
5. One project group must contain maximum four students.

Monitoring of project:

1. It is recommended to give projects as per the specializations of existing faculty of the department instead of outside person/agency.
2. Project must be allocated, developed and monitored by department / institution itself, but not by outside agencies.
3. Regular review by guide is recommended to ensure development & contribution of students.

Internal Evaluation & Submission of project:

1. Evaluation of project would be as per the examination scheme of the University, which is based on internal as well as external evaluation.
2. Internal assessment requires submission of project report for getting approved by the concern authority. However printing and binding would be as per the conventional format.
3. Evaluation will be based on Live demonstration / presentation and Viva.
4. Final submission of project is expected as,
    □□One copy to the Institution central library,
    □□One copy to the department.

External Evaluation:

External assessment of project would be like conduction of practical exams of University, and must be executed as per the norms of practical exams.

NOTE: Completion of Project outside the department/Institution should not be encouraged.

Dr. C.V. Raman University
Kargi Road, Kota, Bilaspur (C.G)

Semester: VIII
Subject: Artificial Intelligence and Expert System Lab
Total Practical Periods: 40
Total Marks in End Semester Exam: 40.

Branch: Computer Science & Engg.
Practical Code: 322821 (22)

Experiments to be performed:

(i) Write a prolog program to find the rules for parent, child, male, female, son, daughter, brother, sister, uncle, aunt, ancestor given the facts about father and wife only.

(ii) Write a program to find the length of a given list

(iii) Write a program to find the last element of a given list

(iv) Write a program to delete the first occurrence and also all occurrences of a particular element in a given list.

(v) Write a program to find union and intersection of two given sets represented as lists.

(vi) Write a program to read a list at a time and write a list at a time using the well defined read & write functions.

(vii) Write a program given the knowledge base, If
x is on the top of y, y supports x.
If x is above y and they are touching each other, x is on top of y.
A cup is above a book. The cup is touching that book. Convert the following into wffs, clausal form; Is it possible to deduce that 'The book supports the cup'.

(viii) Write a program given the knowledge base,
If Town x is connected to Town y by highway z and bikes are allowed on z, you can get to y from x by bike.
If Town x is connected to y by z then y is also connected to x by z.
If you can get to town q from p and also to town r from town q, you can get to town r from town p.
Town A is connected to Town B by Road 1.   Town B is connected to Town C by Road 2.
Town A is connected to Town C by Road 3.   Town D is connected to   Town E by Road 4.

Town D is connected to Town B by Road 5.   Bikes are allowed on roads 3, 4, 5.
Bikes are only either allowed on Road 1 or on Road 2 every day. Convert the following into wff's, clausal form and deduce that 'One can get to town B from town D'.

(ix) Solve the classical Water Jug problem of AI.

(x) Solve the classical Monkey Banana problem of AI.

(xi) Solve the classical Crypt arithmetic problems such as DONALD + GERALD = ROBERT of AI.

(xii) Solve the classical Missionary Cannibals problem of AI.

(xiii) Solve the classical Travelling Salesman Problem of AI.

(xiv) Solve the classical Blocks World Problem of AI.

(xv) Write a program to search any goal given an input graph using AO* algorithm.

List of Equipments/Machine required : (i)
PC with Wndows XP
(ii) Visual prolog compiler

Recommended Books :

(i) Ivan Bratko : Logic & prolog programming.
(ii) Carl Townsend : Introduction to Turbo Prolog, (BPB, Publication).
(iii) W.F. Clocksin & Mellish : Programming in PRLOG (Narosa Publication House)

Dr.C.V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Semester: VIII
Subject: Software Technology Lab -V
Total Practical Periods: 7 per week.
Total Marks in End Semester Exam: 100.

Branch: Computer Science & Engg.
Practical Code: 322824(22)

List of Experiments to be performed:

1. Write a program in ASP.Net using text box , control, multiline text box & password.

2. Write a program in ASP.Net using events in text box.

3. Write a program in ASP.Net using Labels,Text Box & Button Control.

4. Write a program in ASP.Net using Radiobutton

5. Write a program in ASP.Net using Checkboxlist.

6. Write a program in ASP.Net using Dropdownlist.

7. Write a program in ASP.Net using Listbox.

8. Write a program in ASP.Net using DataList controls.

9. Write a program in ASP.Net using DataList controls with styles.

10. Write a program in ASP.Net for validation in textbox.

11. Write a program in ASP.Net for insertion using ADO.NET .

12. Write a program in ASP.Net for Searching using ADO.NET.

13. Write a program in ASP.Net for Deletion using ADO.NET.

14. Write a program in ASP.Net for Updation using ADO.NET.

15. Write a program in ASP.Net using HTML Server Controls.

16. Write a program in ASP.Net using Web Server Controls.

Text/Reference Books

1) Microsoft .NET, Microsoft Press
2) ASP.NET, Techmedia

Dr.C.V. Raman University

Kargi Road, Kota, Bilaspur (C.G)

Semester: VIII
Subject: MAJOR PROJECT.
Total Practical Periods: 7 per week.
Total Marks in End Semester Exam: 100.

Branch: Computer Science & Engg.
Practical Code: 322824(22)

Allocation of project:

Guidelines

1. Information regarding broad area must be made available to the students well in advance (may be during previous semester).

2. Information must cover following parameters.

    I. **Broad area:** Subject or expertise/application area.

    II. **Required skills:** Knowledge of subject(s), software, tools & other characteristics. III. **Type of project:** Hardware, software, design, survey, study based etc.

    IV. **Guide available:** Name of Guide (S) from Department & Institute.

    V. **Other related information** depending upon specific branch & institute.

3. It is also recommended to give proper counselling to pick up suitable project.

4. Students must get chance to select projects as per their choice or decided mutually between students and department faculty (HoD) concern.

5. One project group must contain maximum four students, however students can do project individually but it should be approved by department.

6. Compiled list of projects must be submitted to the University within 25 days of start of semester.

7. Compiled list may contain following parameters.

Sr. No.	Title of Project	Name of Students	Name of Guide

Name of HoD
Signature of HoD

Signature of Principal

Monitoring of project:

1. It is recommended to give projects as per the specializations of existing faculty of the department instead of outside person/agency.

2. Project must be allocated, developed and monitored by department / institution itself, but not by outside agencies.

3. Regular review by guide is recommended to ensure development & contribution of students.

Internal Evaluation & Submission of project:

1. Evaluation of project would be as per the examination scheme of the University, which is based on internal as well as external evaluation.

2. Internal assessment requires submission of project report for getting approved by the concern authority. However printing and binding would be as per the conventional format.

3. Evaluation will be based on Live demonstration / presentation and Viva.

4. Final submission of project is expected as,

    Submission of a copy to the University,

    One copy to the Institution central library,

    One copy to the department.

External Evaluation:

External assessment of project would be like conduction of practical exams of University, and must be executed as per the norms of practical exams.

NOTE: Completion of Project outside the department/Institution should not be encouraged

B) DEPARTMENT OF MECHANICAL ENGINEERING

There is one computer labs under the department of Mechanical Engineering Department. The lab details are as follows:-

a. Department: MECHANICAL
b. Lab Name: CAD/CAM LAB
c. No of Computers: 30
d. No Of Subject Taught: 03
e. Mention the Practical subject name:
f. AUTOCAD, CAD/CAM, C++, PROJECT LAB

Practical Subject name		Spoken Tutorial (E-Learning Resource)
CAD/CAM LAB	→	QCAD
C++	→	C++

** *OpenFOAM (Works only on Linux)* Open source/ free CFD (Computational Fluid Dynamics) software available for solving and analyzing problems and to create a real world fluid flow movie. Open source equivalent to FLUENT.

TIME TABLE

DAY	10:45-11:35	11:35-12:25	12:25-01:15	01:15-02:00	02:00-02:45	02:45-03:30	03:30-04:15
MON		CAD		LUNCH TIME			
TUS					CAD		
WED							
THUS						PROJECT	
FRI					CAD	PROJECT	
SAT						CAD	

DR.C.V.RAMAN UNIVERSITY
KARGI ROAD KOTA BILASPUR (C G)

Semester: B.E. VI Sem.
Subject: Computer Aided Design Lab
Total Practical Periods: 28

Branch: Mechanical Engg.
Code: 337624 (37)

Total Marks in End Semester Exam: 40

EXPERIMENTS TO BE PERFORMED (MINIMUM TEN NUMBERS)

1. Introduction to integrated development environment of AutoCAD release 2000 or higher version
2. Basic drawing commands example: - LINE, POLYLINE, MULTILINE, POLYGON, CIRCLE, ELLIPSE, etc.
3. Basic editing commands e.g. - COPY, MOVE, ROTATE, MIRROR, CHAMFER, FILLET and array command as well as zoom and pan command.
4. Text command, TEXT, DTEXT, MTEXT.
5. Creation and insertion of blocks
6. Concept of layers and view ports
7. Creation of assembly drawing of stuffing box using above commands.
8. Dimensioning of stuffing box and showing the assembled view and its components in different view ports.
9. View port setting for 3D drawing and use of extrude command.
10. Generation of solid of revolution.
11. Conversion of assembly drawing of stuffing box from 2D to 3D.
12. Placement of 3D assembly drawing of stuffing box and placing views in different view ports

LIST OF EQUIPMENTS/MACHINES REQUIRED

P-IV (IBM) 2.6 GHz, 80 GB HDD,256/512 SD RAM(Compatible with CAD Software), 52 X CD RW, 1.44 MB FDD, 17"
Colour Monitor, Laser Scroll Mouse

Practical Subject name	Spoken Tutorial (E-Learning Resource)
Computer Aided Design Lab →	*QCAD*

DEPARTMENT OF CIVIL ENGINEERING

There is one computer labs under the department of Civil Engineering Department. The lab details are as follows:-

    a. Department: CIVIL
    b. Lab Name: AUTO CAD LAB
    c. No of Computers: 30
    d. No Of Subject Taught: 02
    e. Mention the Practical subject name:
    f. STRUCTURD ENGINEERING DESIGN II LAB

TIME TABLE

DAY	10:45-11:35	11:35-12:25	12:25-01:15	01:15-02:00	02:00-02:45	02:45-03:30	03:30-04:15
MON					SE LAB (A)		
TUS							
WED				LUNCH TIME			
THUS					SE LAB (B)		
FRI							
SAT							

Dr. C.V.Raman University,
Kargi Road Kota, Bilaspur (C.G)

Semester: 6th

Subject: Structural Engineering Lab

Total Practical Periods: 40

Total Marks in End Semester Exam: 40

Branch: Civil Engineering

Practical Code: 320621 (20)

Experiments to be performed (Min 10 experiments)

1. Introduction to latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

2. Geometrical Modelling of RCC Frame on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

3. Modelling of loads and load combinations on RCC Frame on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

4. Analysis and Interpretation of Results of Analysis of RCC Frame on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

5. Design of RCC Frame on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

6. Interpretation of Results of Design of RCC Frame on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

7. Geometrical Modelling of Steel Frame on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

8. Modelling of loads and load combinations on Steel Frame on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

9. Analysis and Interpretation of Results of Analysis of Steel Frame on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

10. Design of Steel Frame on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

11. Interpretation of Results of Design of Steel Frame on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

12. Design of R.C.C. Column on latest version of a Standard Structural Engineering Design Package such as STAAD.etc

13. Design of R.C.C. Isolated Footing on latest version of a Standard Structural Engineering Design Package such as STAAD.etc

14. Case Study of design of a RCC Multistorey Building on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

15. Case Study of design of a Steel Industrial Building on latest version of a Standard Structural Engineering Design Package such as STAAD Pro.

List of Equipments / Machine Required:

Latest Release of Software Package STAAD Pro (Research Engineers International, Kolkata) Latest Release of Software Package STAAD.etc (Research Engineers International, Kolkata)

Recommended Books:

(1) Reference Manual for Respective Software

(2) Verification Manual of Respective Software

D) DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING / DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

There is one computer labs under the department of Electrical and Electronics Engineering Department. The lab details are as follows:-

Department: ECE/EEE

Lab Name: SEMULATION LAB

No of Computers: 30

No Of Subject Taught: 03

Mention the Practical subject name:

DSP(ECE), DSP(EEE), DSP(ECE)

Practical Subject name   **Spoken Tutorial**
                                              (E-Learning Resource)

Computer Aided Design Lab →   *QCAD Scilab*

FreeEDA (Formely called as OSCAD) *Open Source EDA tool for circuit design, simulation, analysis and PCB design. It is an integrated tool built using open source software such as **KiCad**, **Ngspice** and **Scilab***

TIME TABLE

DAY	10:45-11:35	11:35-12:25	12:25-01:15	01:15-02:00	02:00-02:45	02:45-03:30	03:30-04:15
MON		DSP(EEE)				DCS(ECE)	
TUS		DSP(EEE)		LUNCH TIME	DSP(ECE)	DCS(ECE)	
WED		DCS(ECE)				DSP(ECE)	
THUS	DSP(EEE)				DSP(ECE)		
FRI		DCS(ECE)					
SAT		DSP(ECE)				DSP(EEE)	

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Dr. C.V.Raman University,
Kargi Road Kota, Bilaspur (C.G.)

Semester: VI   Branch: Electronics & Telecommunication
Subject: Digital Signal Processing Lab   Code: 328623 (28) Total
Practical Periods: 50
Total Marks in End Semester Examination: 40

Experiments to be performed:

To generate Analog Signals.

To generate discrete sequences

To sample a sinusoidal signal at Nyquist rate

To convolve two given signals

To correlate two given signals

To design LPF using recursive structures

To design HPF using recursive structure

To design BPF using recursive structure

To design BSF using recursive structure

To design LPF using non-recursive structures

To design HPF using non-recursive structure

To design BPF using non-recursive structure

To design BSF using non-recursive structure

To design a digital notch filter and embed it on a digital signal processor block

Experimentation with application of DSP in Communication/Speech Processing/Image Processing

(Institutes may append more programmes/Experiments based on the infrastructure available)

List of Equipments/Machine Required:
C++ Compiler, MATLAB with Tool boxes, DSP Processor kit, Digital Storage CRO, Spectrum Analyzer.

Recommended Books:
1.   Digital Signal Processing, Vallavaraj, Salivahanan, Gnanapriya, TMH

Practical Subject name		Spoken Tutorial (E-Learning Resource)
Digital Signal Processing Lab	→	*C++*
	→	*Scilab*

Dr. C.V.Raman University,
Kargi Road Kota, Bilaspur (C.G.)

Semester : IV
Subject: **Digital Electronic Circuits Lab**
Total Practical Periods: 36
Total Marks in End Semester Examination: 40

Branch: **Electrical & Electronics Engg.**
Code: **328422 (28)**

Experiments to be performed: (minimum 10 experiments)

1. To Verify The Properties of NOR & NAND Gates As Universal Building Block.
2. Realization of Boolean Expression Using NAND Or NOR Gates.
3. To Construct X- OR Gate Using Only NAND Or NOR Gates Only.
4. To Construct A Half Adder Circuit. And Logic Gates And Verify its Truth table.
5. To Construct A Full Adder Circuit. And Verify its truth table (Using Two X-OR And 3 NAND Gates).
6. To Construct A Half Subtractor Circuit. By Using Basic Gates And Verify its truth table.
7. To Construct A Full Subtractor Circuit By Using Basic Gates And Verify its truth table.
8. To Construct A Circuit of 4 -Bit Parity Checker & Verify its truth table.
9. To Construct A Programmable Inverter Using X-OR Gates & Verify its truth table.
10. To Design A Comparator Circuit & Verify its truth table.
11. To Construct A RS Flip Flop Using Basic & Universal Gates (NOT,NOR & NAND)
12. To Construct A J.K. Master Slave Flip Flop & Verify its truth table
13. To Verify The Operation of A Clocked S-R Flip Flop And J. K. Flip Flop
14. To Construct A T & D Flip Flop Using J. K. Flip Flop And Verify Its Operations & truth table.
15. To Verify The Operation of A Synchronous Decade Counter
16. To Verify The Operation of Various Decoding And Driving Devices
17. To perform the operation of BCD Counter Using 7490

List of Equipments/Machine Required:
Circuit components, Power supply, CRO, Function generator

Recommended Books:

Dr. C.V.Raman University,
Kargi Road Kota, Bilaspur (C.G.)
DEPARTMENT OF INFORMATION TECHNOLOGY

There are two computer labs under the department of Information Technology. The lab details are as follows:-

Lab-1

Department: IT DEPARTMENT

Lab Name: IT LAB (1)

No of Computers: 43

No Of Subject Taught: 10

Mention the Practical subject name:

JAVA, INTERNET, C++, TALLY, VB.NET, LINUX, FOXPRO, DBMS, CORAL DRAW,

PAGEMAKAR

Practical Subject name		**Spoken Tutorial**
		(E-Learning Resource)
JAVA	$\rightarrow$	Java
C++	$\rightarrow$	C++
LINUX	$\rightarrow$	Linux
DBMS	$\rightarrow$	MySQL
CORAL DRAW	$\rightarrow$	Inkscape

Lab-2

Department: IT DEPT.

Lab Name: IT LAB (2)

No of Computers: 23

No Of Subject Taught:

Mention the Practical subject name:

ONLY USED FOR ONLINE EXAM.

TIME TABLE

DAY	10:45-11:35	11:35-12:25	12:25-01:15	01:15-02:00	02:00-02:45	02:45-03:30	03:30-04:15
MON	MSC IT IV SEM	DCA II SEM (INTERNET)	PGDCA GEN II (C++) *C++		DCA (TALLY)	BCA II SEM (A)INTERNET	MSC IT II SEN VB.NET, BCA II (B) VB.NET
TUE	MSC IT IV SEM	DCA II SEM (INTERNET)	PGDCA GEN II (C++) *C++		DCA (TALLY)	BCA II SEM (A)INTERNET	MSC IT II SEN VB.NET, BCA II (B) VB.NET
WED	BCA IV SEM (A) VB.NET	DCA II SEM (VB.NET)	PGDCA GEN (VB.NET)	L U N C H T I M E	BCA IV SEM (A) (LINUX) * LINUX	BCA IV SEM (B) LINUX * LINUX	MSC IT II SEM (C++) *C++ BCA II (B) INTERNET
THUS	BCA IV SEM (A) VB.NET	DCA II SEM (VB.NET)	PGDCA GEN (VB.NET)		BCA IV SEM (A) (LINUX) * LINUX	BCA IV SEM (B) LINUX * LINUX	MSC IT II SEM (C++) *C++ BCA II (B) INTERNET
FRI	BCA II (B) C++ *C++	DCA II SEM (FOXPRO)	MSC IT II SEM PGDCA GEN. (DBMS) *MySQL		PGDCA (PRO) CORAL DRAW *Inkscape	BCA II SEM (A) C++ *C++	MSC IT II SEM (TALLY) PGDAC GEN (PRO)
SAT	BCA II (B) C++ *C++	DCA II SEM (FOXPRO)	MSC IT II SEM PGDCA GEN. (DBMS) *MySQL		PGDCA (PRO) CORAL DRAW *Inkscape	BCA II SEM (A) C++ *C++	MSC IT II SEM (TALLY) PGDAC GEN (PRO)

*Spoken Tutorial Software, E-Resource for learning - www.spoken-tutorial.org

DR.C.V.RAMAN UNIVERSITY

KARGI ROAD-KOTA, BILASPUR (C.G.)

BCA IV Sem

GUI Programming with VB.Net

Que1: Write a program to show the use of any three controls in vb.net.

Que2: Write a program to show the use of timer.

Que3: Write a program to create a procedure to calculate factorial of a number with arguments.

Que4: Write a program to show the use of ListBox, ComboBox, Checkbox and radioButton.

Que5: Write a program to to display a tree of Colors.

Que6: Write a program to Show use of ColorDialog and Font Dialog Control.

Que7: Write a program to Save the document written in richTextBox using SaveDialogControl.

Que8: Write a program to Print the document and also printPreview and PageSetup.

Que9: Write a program to Display a picture in Form.

Que10: Write a program to Show the use of Multiforms With student Registration Form.

Que11: Write a program to perform Inheritance in VB.Net.

Que12: Write a program to perform Polymorphism in Vb.Net.

Que13: Write a program to handle Constructor and Destructor in VB.net.

Que14: Write a program to Perform database connectivity with MS Access with the fields Name, EnrollNo,DOB,Class and Address.

Que15: Write a program to perform data binding with DataGrid Control.

DR.C.V.RAMAN UNIVERSITY

KARGI ROAD-KOTA, BILASPUR (C.G.)

DCA II sem

GUI Programming with VB.Net

Que1: Write a program to show the use of any three controls in vb.net.

Que2: Write a program to show the use of timer.

Que3: Write a program to create a procedure to calculate factorial of a number with arguments.

Que4: Write a program to show the use of ListBox, ComboBox, Checkbox and radioButton.

Que5: Write a program to display a tree of Colors.

Que6: Write a program to Show use of ColorDialog and Font Dialog Control.

Que7: Write a programto create menu in vb.net.

Que8: Write a program to Print the document and PageSetup.

Que9: Write a program to Display a picture in Form.

Que10: Write a program to Show the use of Multiforms With student Registration Form.

Que11: Write a program to create context menu strip.

Que12: Write a program to perform Polymorphism in Vb.Net.

Que13: Write a program to handle Constructor and Destructor in VB.net.

Que14: Write a program to Perform database connectivity with MS Access with the fields Name, EnrollNo, DOB, Class and Address.

Que15: Write a program to perform data binding with DataGrid Control.

DR.C.V.RAMAN UNIVERSITY

KARGI ROAD-KOTA, BILASPUR (C.G.)

PROGRAMMING WITH VB.NET

Msc.IT

Q1.   Write a console application and explain Data Type Conversion.

Q2.   Write a console application to display month according to the given input.

Q3.   Write a console application to print following pattern

```
1
12
123
1234
```

Q4.   Write a console application for calculating the simple interest.

Q5.   Write a console application and explain any 5 String functions.

Q6.   Write a windows application for pizza center.

Q7.   Write a windows application for treeview.

Q8.   Write a windows application to create any two dialog boxes.

Q9.   Write a console application for function overloading.

Q10.   Write a console application and explain the Math class.

Q11.   Write a console application to explain inheritance.

Q12.   Write a console application to explain how a namespace is created and imported.

Q13.   Write a windows application and explain how to create and use user control.

Q14.   Write a windows application to connect database with ole.

Q15.   Write a windows application to insert update and delete records in the database.

Linux operating system

1 Explain the various installation method of Linux.
2 Explain the procedure for partitioning a hard disk.
3 Write the commands for file and directory in Linux.
4 Which command is used to remove a job from the printer queue?
5 Which command is used to end Process?
6 What are the numerical values used in permission?
7 Explain following command with example.
   1   ls command
   2   cat command
   3   less command
8 What is kudzu? Explain it.
9 Write the step for installation of Linux operating system.
10 How can we create user manually?
11 Write print related commands used in Linux?
12 How to manage user account in Linux operating system?
13 How to getting system information in Linux?
14 Explain following command with example.
   - chmod command
   - ps
   - more
15 How can you install KDE? Explain.

Practical Subject name

Linux operating system   →

Spoken Tutorial(E-Learning Resource)

Linux

Advanced Java

1. Write a program for Arithmetic Exception...?
2. How can you check NumberFormat Exception in your java program..?
3. Write a java program for creating three child thread..?
4. Write a program to demonstrate the working of thread life Cycle?
5. How do you create join() and isAlive() method in your java program..?
6. In which manner Thread can be locked.. write a program to demonstrate that concept..?
7. How the Frame can be created in java program..?
8. Write a program for applet life cycle...?
9. How can we create graphics in applet program. demonstrate with suitable program...?
10. Write a program for key event handling.?
11. Write a program for handling mouse Event.?
12. Write a program using sub class of List Interface for storing different data elements..?
13. How can we access ArrayList data using Iterator Interface..?
14. Write a program to fetch IP address of local Host..?
15. Write a program for adding image in Frame window..?

COREL DRAW

PGDCA Pro. 2nd sem

1. Create any two objects in Corel draw.
2. How to apply colors in created objects.
3. How to use symbols in your corel draw page.
4. How to apply border color in text and objects.
5. How to transform text.
6. How to transform objects.
7. How we apply different colors in each characters of a text.
8. How can we create 3D objects.
9. How can we blend two objects with each other.
10. How can we make lens to any object.
11. How can we create multiple layers in corel draw.
12. How do we use pick tool in any object.
13. How do we use fill tool.
14. How can we create vector image in corel trace.
15. How can we create animation in corel RAVE.

Practical Subject name	Spoken Tutorial (E-Learning Resource)
COREL DRAW	→ Inkscape

Internet programming

Que1: write the step to create a Gmail account?

Que2: Write a HTML program by using following tag:

a   BODY
b   BGCOLOR
c   HEADING
d   TITLE

Que3: Write a HTML program to create nested list?

Que4: Write a HTML program to create a following table:

Red	Red again
Blue	Blue again

Que5: Write a HTML program for following:

Marital status

O   Married   O Unmarried

Que6: Write a HTML program for following:

☐   Cricket

☐   Music

☐   Travelling

Que7: Write a JavaScript program to find sum of two number?

Que8: Write a JavaScript program which display following text in browser?

I am learning JavaScript

Que9: Write a program to display use of for loop?

Que10: create a JavaScript code for creating four check box in web page?

Que 11: create a JavaScript code for creating four radio button in web page?

Que 12: create a JavaScript program for getting value from a form object?

Que13: create a JavaScript program using hidden textboxes?

Que14: create a javascript code for validating form data ?

Que15: create a javascript to display use of Date Object?

OOPS programming in c++

1. Write a program calculate the given number is prime or not.
2. Write a program to print Fibonacci series up to 100.
3. Write a program to calculate the factorial for given number.
4. Write a program for addition of two numbers by function overloading.
5. Write a program to create and use a class for students.
6. Write a program to demonstrate the use of copy constructor.
7. Write a program to demonstrate the working of multiple inheritance.
8. Write a program to demonstrate the use of friend function.
9. Write a program for unary operator overloading.
10. Write a program to demonstrate the working of hybrid inheritance.
11. Write a program to access employee record from their object.
12. Write a program to print this pattern:

```
A
AB
ABC
ABCD
```

13. Write a program to store and print the student record by using file handling.
14. Write a program for managing run time polymorphism.
15. Write a file handling program which shows the working of seek ()and ftell() method.

Practical Subject name	Spoken Tutorial(E-Learning Resource)
OOPS programming in c++ →	*C++*

PHOTOSHOP:- PGDCA Pro.

1. What's new in photoshop 7.0.
2. How to applying filters for special effects.
3. How we can use extracting objects from their background .
4. How we can work with colors.
5. How we can making color and tonal adjustment.
6. How we can use rulers, columns, measure tool.
7. How we can use reverting to a previous version of an image.
8. How we can use setting up color management.
9. How we can changing the color profile of a document.
10. How we can use extracting objects from their background.

Practical Subject name	Spoken Tutorial(E-Learning Resource)
PHOTOSHOP →	*GIMP*

Oracle:-

1.write the sql query for creating,updating and selecting student table.

2.write the sql query for altering and destroying a employee table.

3.use the logical operator and comparison operator in student table.

4.write the sql query for group function and scalar function in student table.

5.write the sql query for finding name column which name are starting from letter 's' from table student.

6.write the sql query for inner join and outer join.

7.create a view (rno,name)from table student(rno,name ,address,class).

8.write the sql query for intersect clause and minus clause.

9. In plsql I want to declare a cursor within curson.the second cursor should use a value from the first cursor in the "where clause" How can I do this.

10.write the query for creating and altering a trigger.

11 11.write a program for adding two numbers .

12 12.write a program in plsql to increase the salary of employee by using procedure.

13 13.write a program in plsql to calculate commission of employee by using function according to following condition

14 a- if salary<10000 then commission=10%

15 b-if salary>=1000 then commission=20%

16 14.write a program to print first ten natural numbers.(by for loop)

17 15.write the program to calculate factorial number.

Class- DCA
Sub- Internet & Web Technology

1. Write a process for creating your E-mail ID.
2. Write a process for creating & sending message through your E-mail ID.
3. Write a Step to search any keyword in Google search engine.
4. Write a HTML program to setting the color of body background, text and link.
5. Write the tags for ordered list and unordered list.
6. How to creating a table use to HTML.
7. Write a HTML code for creating a layout-

Table euro cup result

Game	Brazil	Germany
1	3	2
2	4	1
3	0	8
4	8	7

8. Write a HTML code to generate following output-

Registering form

User name [_____]

Password [_____]

9. Write a HTML code to generate following output-

Sales return for first quarter

	Jan	Feb	Mar	Total
Ram	$100	$200	$300	$600

10. How to links between different sections of different web pages.
11. Creating a web page illustrating text formatting.
12. Prepare a simple code to illustrate three types of lists in HTML.
13. Creating a web page to demonstrate font variations.
14. Write a HTML code to generate following output-
    A) Title should be about my collage
    B) Put the image in the background
15. Write a HTML program use to nested list.

Practical Subject name   **Spoken Tutorial (E-Learning Resource)**

Internet & Web Technology →   *PHP*

Principal

Dr. C.V. Raman Institute of
Science & Technology
Kota - Bilaspur (C.G.)