COMPUTER FUNDAMENTALS AND OFFICE TOOLS

Semester	Course Code	Course Title	Hours	Credits
I	C1	COMPUTER FUNDAMENTALS AND OFFICE TOOLS	60	3

Course Objectives:

To introduce the fundamental concepts of Computers, Hardware, Software and able to interact with documentation, Powerpoint, and Spreadsheet.

Course Outcomes:

1. To learn about Basics of Computers
2. To learn about basics of Hardware Components
3. To learn about basics of Operating System Software
4. To learn about basics of Application System Software
5. To practice handful exercises on Documentation, Spreadsheet, Presentation

Unit-I: Basics of Computers : Definition of a Computer - Characteristics and Applications of Computers – Block Diagram of a Digital Computer – Classification of Computers based on size and working – Central Processing Unit – I/O Devices.

Unit-II: Primary, Auxiliary and Cache Memory – Memory Devices. Software, Hardware, Firmware and People ware – Definition and Types of Operating System – Functions of an Operating System – MS-DOS – MS Windows – Desktop, Computer, Documents, Pictures, Music, Videos, Recycle Bin, Task Bar – Control Panel.

Unit-III: MS-Word: Features of MS-Word – MS-Word Window Components – Creating, Editing, Formatting and Printing of Documents – Headers and Footers – Insert/Draw Tables, Table Auto format – Page Borders and Shading – Inserting Symbols, Shapes, Word Art, Page Numbers, Equations – Spelling and Grammar – Thesaurus – Mail Merge.

Unit-IV: MS-PowerPoint: Features of PowerPoint – Creating a Blank Presentation - Creating a Presentation using a Template - Inserting and Deleting Slides in a Presentation – Adding Clip Art/Pictures -Inserting Other Objects, Audio, Video - Resizing and Scaling of an Object – Slide Transition – Custom Animation.

Unit-V: MS-Excel: Overview of Excel features – Creating a new worksheet, Selecting cells, Entering and editing Text, Numbers, Formulae, Referencing cells – Inserting Rows/Columns –Changing column widths and row heights, auto format, changing font sizes, colors, shading.

Prescribed Book:

1.Fundamentals of Computers by Reema Thareja, Second Edition, Publishers :
2.Oxford University Press,India, ISBN: 9780199499274

References:

1. Fundamentals of Information Technology Including Lab Work by Vinod Babu Bandari, Publishers : Pearson
2. Fundamentals of Computers by V.Raja Raman, Publishers : PHI
3. Microsoft Office 2010 Bible by John Walkenbach, Herb Tyson, Michael R.Groh andFaitheWempen, Publishers : Wiley

RECOMMENDED CO-CURRICULAR ACTIVITIES:

(Co-curricular activities shall not promote copying from textbook or from others work and shall encourage self/independent and group learning)

A. Measurable

1. Assignments (in writing and doing forms on the aspects of syllabus content and outside the syllabus content. Shall be individual and challenging)
2. Student seminars (on topics of the syllabus and related aspects (individual activity))
3. Quiz (on topics where the content can be compiled by smaller aspects and data (Individuals or groups as teams))
4. Study projects (by very small groups of students on selected local real-time problems pertaining to syllabus or related areas. The individual participation and contribution of students shall be ensured (team activity

B. General

1. Group Discussion
2. Try to solve MCQ's available online.
3. Others

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted;

1. The oral and written examinations (Scheduled and surprise tests),
2. Closed-book and open-book tests,
3. Problem-solving exercises,
4. Practical assignments and laboratory reports,
5. Observation of practical skills,
6. Individual and group project reports like "Creating Text Editor in C".
7. Efficient delivery using seminar presentations,
8. Viva voce interviews.
9. Computerized adaptive testing, literature surveys and evaluations,
10. Peers and self-assessment, outputs form individual and collaborative work

COMPUTER FUNDAMENTALS AND OFFICE TOOLS LAB

Semester	Course Code	Course Title	Hours	Credits
I	**C1-P**	**COMPUTER FUNDAMENTALS AND OFFICE TOOLS LAB**	**60**	**3**

Lab List

Word

1. Create curriculum vitae of a graduate
2. Design a visiting card for an Organization
3. Create a letter as the main document and create 5 records for the 5 persons use mail merge to create letter for selected persons among 5.
4. Macro's concept implementation.

Spreadsheet

1. Students Marks, Result, Grade & Rank Calculation

2. Number conversions:
Decimal to Octal, Hexa, Decimal, Binary conversion
Binary to decimal, octal, hexa decimal conversion

Octal to decimal, hexa decimal, binary conversion

Hexa decimal to decimal, octal, binary conversion

3. Column Chart

Bar Chart

Pie Chart

Powerpoint

1. Make a Power point presentation about Social Network.
2. Make a Power point presentation about College.
3. Make a Powerpoint presentation about the given topic.

Programming in C

Semester	Course Code	Course Title	Hours	Credits
II	**C2**	**Programming in C**	**60**	**3**

Course Objective:

This course aims to provide exposure to problem-solving through programming. It introduces the concepts of the C Programming language.

Course Learning Outcomes:

On completing the subject, students will be able to:

1. Analyze a given problem and develop an algorithm to solve the problem.
2. Understand tokens and control structures in C.
3. Understand arrays and strings and implement them.
4. Understand the right way of using functions, pointers, structures and unions in C
5. Develop and test programs written in C .

UNIT - I: **12 Hrs**

Introduction to Algorithms : Algorithm - Key features of Algorithms - examples of Algorithms , Flow Charts.

Introduction to C : Structure of C Program, Writing the first C Program , Files used in C Program , Compiling and Executing C Programs , Using Comments, Keywords, Identifiers , Basic Data Types in C, Variables , Constants, I/O Statements in C , Operators in C , Type Conversion and Type Casting.

UNIT - II: **16 Hrs**

Decision Control and Looping Statements: Introduction to Decision Control Statements , Conditional Branching Statements, Iterative Statements , Nested Loops , Break and Continue Statement, Goto Statement.

Functions : Introduction, using functions – Function declaration/ prototype – Function definition function call – return statement – Passing parameters , Recursive functions .

UNIT - III: **16 Hrs**

Arrays: Introduction, Declaration of Arrays , Accessing elements of the Array – Storing Values in Array, One dimensional array -declaration,initialization,Accessing one dimensional array, Passing one dimensional array to function, Two dimensional Arrays-declaration, initialization, Accessing two dimensional arrays, passing two dimensional arrays to functions.

Strings: Introduction , String and Character functions**,** String Operations using String functions- strcat() , strcmp() , strcpy() , strlen().

UNIT - IV: **8 Hrs**

Pointers: declaring Pointer Variable, Pointer Expressions and Pointer Arithmetic , Passing Arguments to Functions using Pointers, Memory Allocation in C Programs, Drawbacks of Pointers.

UNIT – V: **8 Hrs**

Structures: Introduction to structures, Arrays of Structures, Nested Structures .
Union, and Enumerated Data Types: Introduction to Union – accessing union elements **,** Enumerated Data Types.

TEXT BOOKS:

1. Computer Fundamentals and Programming in C by REEMA THAREJA from OXFORD UNIVERSITY PRESS

REFERENCE BOOKS:

1. E Balagurusamy— Programming in ANSI C Tata McGraw-Hill publications.
2. Brain W Kernighan and Dennis M Ritchie - The 'C' Programming language" - Pearson publications.
3. Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson Edition Publications.
4. YashavantKanetkar - Let Us 'C' BPB Publications.

RECOMMENDED CO-CURRICULAR ACTIVITIES:

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B. General

1. Group Discussion

2. Try to solve MCQ's available online.

3. Others

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted;

1. The oral and written examinations (Scheduled and surprise tests),

2. Closed-book and open-book tests,

3. Problem-solving exercises,

4. Practical assignments and laboratory reports,

5. Observation of practical skills,

6. Individual and group project reports like "Creating Text Editor in C".

7. Efficient delivery using seminar presentations,

8. Viva voce interviews.

9. Computerized adaptive testing, literature surveys and evaluations,

10. Peers and self-assessment, outputs form individual and collaborative work

Programming in C lab

Semester	Course Code	Course Title	Hours	Credits
II	**C2-P**	**Programming in C lab**	**30**	**2**

List Of Experiments

1. Write a C program to calculate the expression: ((a*b)/c)+(a+b-c)
2. Write a C program to calculate $(a+b+c)^3$.
3. Write a C Program to convert temperature from
    a. Celsius to Fahrenheit.
    b. Fahrenheit to Celsius.
4. Write a C program to find roots of quadratic equation.
5. Write a C Program to convert Hours into seconds.
6. Write a C program to Find Biggest of Three numbers.
7. Write a C program to read student marks in five subjects and calculate the Total, Average and Grade according to the following conditions:
    i. If average >=75 grade is _A‘.
    ii. If average >=60 and <75 grade is _B‘.
    iii. If average >=50 and <60 grade is _C‘.
    iv. Otherwise grade is _D‘.
    v. Check that marks in each subject >= 35.

8. Write a C Program to display number of days in given month using Switch – -Case.
9. Write a C Program to check whether a given number is perfect or Not.
10. Write a C program to check whether the given number is Prime or Not.
11. Write a C program to Check whether given number is Palindrome or Not.
12. Write a C Program to check whether a given number is Armstrong or Not.
13. Write a C program to print Fibonacci Series.
14. Write a C program to print multiplication tables up to given range.
15. Write a C program to perform i) Matrix addition ii) Matrix Multiplication.
16. Write a C program to find largest number in the array.
17. Write a C Program to find factorial of a given number using functions.
18. Write a C Program to accept and display Student Details using Structures.
19. Write a C Program to swap two numbers using different parameter passing techniques.

DATABASE MANAGEMENT SYSTEMS

Semester	Course Code	Course Title	Hours	Credits
III	C3	DATABASE MANAGEMENT SYSTEMS	60	3

Course Objective:

1. To educate student regarding databases and how to manage databases.
2. To provide knowledge about creating relationships.
3. To provide knowledge about dependencies and relational constraints.
4. To enable student to write various types of queries for handling data.

Course Learning Outcomes:

On completing the subject, students will be able to:

1. Gain knowledge of Database and DBMS.
2. Understand the fundamental concepts of DBMS with special emphasis on relational data model.
3. Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database
4. Model database using ER Diagrams and design database schemas based on the model.
5. Create a small database using SQL.

UNIT I **12Hrs**

Introduction: Data and Information**, Characteristics of the Database Approach:** Self-Describing Nature of the a Database System, Insulation between Programs and Data, Data Abstraction, Support of Multiple Views of the data, Sharing of Data and multiuser Transaction Processing, **Actors on the Scene:** Database Administrators, Database Designers, End Users, System Analysts and Application, Advantages of DBMS, **Data Models, Schemas and Instances:** Categories of Data Models, Schemas, Instances, and Database State**, DBMS Architecture and Data Independence:** The Three-Schema Architecture, Data Independence**,**

UNIT II **12 Hrs**

Entity Relationship Model:

Introduction, Entity types, Entity sets, Attributes and Keys, Entities and Attributes, Entity Types, Entity Sets, Keys and Value Sets, Relationships, Relationship types, Roles, and Structural Constraints, Relationship Types, Sets and Instances, Relationship Degree, Role Names, and Recursive Relationships, Constraints on Relationship Types, Attributes of Relationship Types, Weak Entity Types, ER Diagrams, Naming Conventions, and Design Issues

Enhanced Entity-Relationship:

Subclasses, super classes, and inheritance, Specialization and Generalization, Constraints and characteristics of Specialization and Generalization.

UNIT III **12 Hrs**

The relational data model, Relational Constraints:

Introduction, Relational Model Concepts, Domains, Attributes, Tuples and Relations, Characteristics of Relations, Relational Model Notation Relational Constraints and Relational **Database Schemas:**

Domain Constraints, Key Constraints and Constraints on Null, Relational Databases and Relational Database Schemas, Entity Integrity, Referential Integrity and Foreign Keys

Functional Dependencies and normalization for Relational Databases:

Functional Dependencies, Definition of Functional Dependency, Inference Rules for Functional Dependencies, Equivalence of sets of Functional Dependencies, Minimal Sets of Functional Dependencies

Normal forms based on primary keys:

Introduction to Normalization, First Normal Form, Second Normal Form, Third Normal Form

UNIT IV **12 Hrs**

The Relational Algebra:

Basic Relational Algebra Operation, The SELECT Operation, The PROJECT operation, Sequences of Operations and the, RENAME Operation, Set Theoretic Operations, The JOIN Operation, A Complete Set of Relational Algebra Operations, The DIVISION Operation

Additional Relational Operations:

Aggregate Functions and Grouping, Recursive Closure Operations, OUTER JOIN and OUTER UNION Operations

UNIT V **12 Hrs**

SQL (STRUCTURED QUERY LANGUAGE)

Data Definition, Constraints and Schema changes in SQL, The CREATE TABLE Command and SQL Data Types and Constraints, The DROP SCHEMA and DROP TABLE Command, The ALTER TABLE Command, The SELECT-FROM-WHERE Structure of SQL Queries WHERE-Clause , Aggregate Functions and Grouping, Insert, Delete, and Update Statements in SQL, The INSERT Command, The DELETE Command

Prescribed Books:

1. "Fundamentals of Database Systems" by R.Elmasri and S.Navathe
2. "Introduction to Database Management System" Atul Kahate PEARSON EDUCATION *ISBN*: 9789332505537
3. "Database System Concepts" by Abraham Silberschatz, Henry Korth, and S. Sudarshan, McGrawhill, 2010.

Reference Books:

1. "Database Management Systems" by Raghu Ramakrishnan, NcGrawhill,2002
2. "Prinicples of Database Systems" by J.D.Ullman
3. "An Introduction to Database Systems" by Bipin C Desai
4. "Fundamentals of Relational Database Management Systems" by S.Sumathi, S. Esakkirajan, Springer Publications

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B. General

1. Group Discussion
2. Try to solve MCQ's available

online. 3. Others

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted:

1. The oral and written examinations (Scheduled and surprise tests),
2. Closed-book and open-book tests,
3. Practical assignments and laboratory

reports, 4. Observation of practical skills

5. Individual and group project reports like Create your college database for placement
   purpose.
6. Efficient delivery using seminar

presentations,

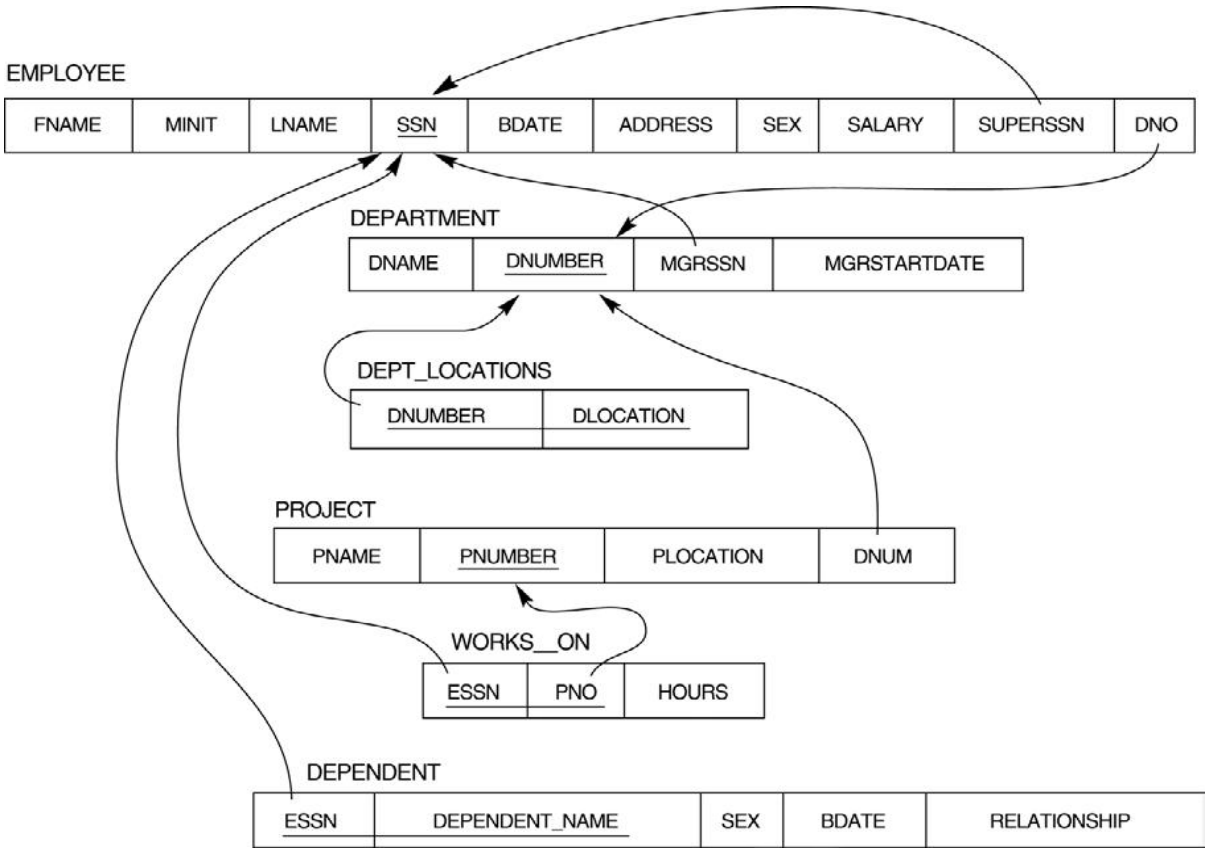
7. Viva voce interviews.
8. Computerized adaptive testing, literature surveys and evaluations,
9. Peers and self-assessment, outputs form individual and collaborative work

DATABASE MANAGEMENT SYSTEMS LAB

Semester	Course Code	Course Title	Hours	Credits
III	C3-P	DATABASE MANAGEMENT SYSTEMS LAB	30	2

1. Draw ER diagram for hospital administration
2. Creation of college database and establish relationships between tables
3. Relational database schema of a company is given in the following figure.

Relational Database Schema - COMPANY



Questions to be performed on above schema

1. Create above tables with relevant ***Primary Key, Foreign Key and other constraints*** 2. Populate the tables with data
3. Display all the details of all employees working in the company.
4. Display ***ssn, lname, fname, address*** of employees who work in department no 7.

5. Retrieve the ***Birthdate and Address*** of the employee whose name is 'Franklin T. Wong'
6. Retrieve the name and salary of every

employee 7. Retrieve all distinct salary values

8. Retrieve all employee names whose address is in

'Bellaire' 9. Retrieve all employees who were born during

the 1950s

10. Retrieve all employees in department 5 whose salary is between 50,000 and 60,000(inclusive)
11. Retrieve the names of all employees who do not have

supervisors 12. Retrieve SSN and department name for all

employees

13. Retrieve the name and address of all employees who work for the 'Research' department
14. For every project located in 'Stafford', list the project number, the controlling department number, and the department manager's last name, address, and birth date.
15. For each employee, retrieve the employee's name, and the name of his or her immediate supervisor.
16. Retrieve all combinations of Employee Name and Department Name
17. Make a list of all project numbers for projects that involve an employee whose last name is 'Narayan' either as a worker or as a manager of the department that controls the project.
18. Increase the salary of all employees working on the 'ProductX' project by 15%. Retrieve employee name and increased salary of these employees.
19. Retrieve a list of employees and the project name each works in, ordered by the employee's department, and within each department ordered alphabetically by employee first name.
20. Select the names of employees whose salary does not match with salary of any employee in department 10.

Object Oriented Programming using Java

Semester	Course Code	Course Title	Hours	Credits
IV	C4	Object Oriented Programming using Java	60	3

Course Objective:

To introduce the fundamental concepts of Object-Oriented programming and to design & implement object oriented programming concepts in Java.

Course Learning Outcomes:

On completing the subject, students will be able to:

1. Understand the concept and underlying principles of Object-Oriented Programming, Understand how object-oriented concepts are incorporated into the Java programming language.
2. Implement Object Oriented Programming Concepts (class, constructor, overloading, inheritance, overriding) in java.
3. Create and use interfaces in a Java.
4. Implement Multithreading, exception handling in Java.
5. Create and use packages and applets.

UNIT-1

13 hours

FUNDAMENTALS OF OBJECT – ORIENTED PROGRAMMING : Introduction**,** Object Oriented paradigm**,** Basic Concepts of OOP**,** Benefits of OOP**,** Applications of OOP**,** Java features.

OVERVIEW OF JAVA LANGUAGE: Simple Java program structure, Java tokens, Implementing a Java Program, Java Virtual Machine, Command line arguments.

CONSTANTS, VARIABLES & DATATYPES: Constants, Variables, Data Types, Declaration of Variables, Giving Value to Variables, Getting Value of Variables, Operators in Java.

UNIT-II

12 hours

DECISION MAKING & BRANCHING :

Decision making with if statement- Simple if statement**,** If - Else statement**,** Nesting of if- else statements, The else if ladder**,** The switch statement**,** The conditional operator.

LOOPING: The While statement, The do-while statement, The for statement.

CLASSES, OBJECTS & METHODS: Defining a class, Adding variables, Adding methods, Creating objects, Accessing class members, Constructors, Method overloading, Static members.

UNIT-III

12 hours

INHERITANCE: Extending a class, Overriding methods, Final variables and methods, Final classes, Abstract methods and classes.

ARRAYS, STRINGS : Arrays, One-dimensional arrays, Two – dimensional arrays, Strings.

INTERFACES: Introduction to multiple inheritance, Defining interfaces, Extending interfaces, Implementing interfaces.

UNIT-IV

10 hours

MULTITHREADED PROGRAMMING: Creating Threads, Extending the Threads, Stopping and Blocking a Thread, Lifecycle of a Thread, Using Thread Methods.

MANAGING ERRORS AND EXCEPTIONS: Types of errors, Compile-time errors, Run-time errors, Exceptions, Exception handling, Multiple Catch Statements, Using finally statement.

UNIT – V

13 hours

APPLET PROGRAMMING: Local and remote applets, Applets and Applications, Building Applet code, Applet Life cycle:-Initialization state, Running state, Idle or stopped state, Dead state, Display state.

PACKAGES: Java API Packages, Creating Packages, Accessing a Package, Using a Package.

Text Books:

1. E.Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGraw-Hill Company.

Reference Books:

1. Core Java: An Integrated Approach, Authored by Dr. R. Nageswara Rao &Kogent Learning Solutions Inc.
2. John R. Hubbard, Programming with Java, Second Edition, Schaum's outline Series, TATA McGraw-Hill Company.
3. Deitel &Deitel. Java TM: How to Program, PHI (2007)
4. Object Oriented Programming Through Java by P. Radha Krishna, Universities Press (2008)

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6. Individual and group project reports like "Creating Text Editor in C".

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Object Oriented Programming through Java lab

Semester	Course Code	Course Title	Hours	Credits
IV	C4-P	Object Oriented Programming through Java lab	30	2

List Of Experiments

1. Java program to generate Harmonic Series(1/1+1/2+….+1/n).
2. Java program to display even, odd numbers and their sum upto given number n.
3. Java program to find a sub string in the given string.
4. Java program to arrange the given strings in Alphabetic Order.
5. Java program to implement Addition and multiplication of two Matrices.
6. Java program to demonstrate the use of Constructor.
7. Java program to implement method overloading.
8. Java program to demonstrate Method overriding.
9. Java program for single Inheritance.
10. Java program for implementing Interface.
11. Java program on Multiple Inheritance.
12. Java program to implement Threads.
13. Java program to demonstrate Exception handling.
14. Java program to demonstrate Applets.

WEB DESIGNING

Semester	Course Code	Course Title	Hours	Credits
IV	C5	WEB DESIGNING	60	3

Course Objectives:

To introduce the fundamental concepts of HTML, PHP, MySQL and able to design the web pages using scripting languages.

Course Outcomes:

6. To learn about Basic tags in Html and CSS
7. To learn about the Building Blocks of php, functions.
8. To learn about Different types of Arrays.
9. To learn about working with Forms, Sessions, Cookies.
10. To learn about Interacting with MySQL using PHP.

Unit –I: **Introduction to HTML:** **10 hours**

Introduction to HTML, Basic html, Document body text, Hyperlinks, Adding more formatting Lists, Tables, Images, Multimedia Objects, Frames, Forms.

Unit-II: Building blocks of PHP: **10 hours**

Variables, Data Types, Operators and Expressions, Constants. Flow Control Functions in PHP: Switching Flow, Loops, Code Blocks and Browser Output. Working with Functions: Defining Functions, Calling functions, returning the values from User Defined Functions, Variable Scope, Saving State between Function calls with the Static statement, more about arguments.

Unit-III: Working with Arrays: **13 hours**

Arrays, Creating Arrays, some Array-Related Functions, Working with Objects: Creating Objects, Object Instance. Working with Strings, Dates and Time: Formatting Strings with PHP, Investigating Strings with PHP, Manipulating Strings with PHP, Using Date and Time Functions in PHP

Unit-IV: Working with Forms: **14 hours**

Creating Forms, Accessing Form - Input with User defined Arrays, Combining HTML and PHP code on a single Page, Redirecting the user, Sending Mail on Form Submission, Working with File Uploads. Working with Cookies and User Sessions: Introducing Cookies, Setting a Cookie

with PHP, Session Function Overview, Starting a Session, Working with session variables, passing session IDs in the Query String, Destroying Sessions and Unsettling Variables, Using Sessions in an Environment with Registered Users.

Unit-V: Interacting with MySQL using PHP: 13 hours

MySQL Versus MySQL Function, Connecting to MySQL with PHP, Working with MySQL Data. Creating Database Tables, Creating Menu, Creating Record Addition Mechanism, Viewing Records, Creating the Record Deletion Mechanism, Adding Sub-entities to a Record.

Prescribed Books:

1. Chris Bates, Web Programming Building Internet Application, Second Edition, Wiley (2007)
2. Head First Servlets and JSP 2nd Edition, Bryan Basham, Kathy Sierra 3. Uttam Kumar Roy, Web Technologies from Oxford University Press
3. Julie C. Meloni, PHP MySQL and Apache, SAMS Teach yourself, Pearson Education (2007).
4. Xue Bai Michael Ekedahl, The web warrior guide to Web Programming, Thomson (2006).

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3. Others

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8. Viva voce interviews.
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WEB DESIGNING LAB

Semester	Course Code	Course Title	Hours	Credits
IV	C5-P	WEB DESIGNING LAB	60	3

Lab list

HTML

1. Write an HTML program to demonstrate text formatting, working with image and hyper links
2. Write an HTML program to create Student Marks sheet preparation.
3. Write an HTML program to explain String manipulation-using functions.
4. Write an HTML program to explain <form> events
5. Write an HTML program to perform all arithmetic operations using java script.
6. Develop a HTML Form, which accepts any Mathematical expression.

PHP Programs

7. Introduction To PHP programming, XAMPP Tool and Dreamweaver Editor Write a Simple Hello Program in PHP by Installing & Configuring XAMPP with Dreamweaver
8. Study Of Basic Building Blocks In PHP Write a Program in PHP for type Casting Of a Variables
9. Study Of Control Structure & Loops In PHP Write a Program In PHP to Display Multiplication Table Using Nested For Loop
10. Study Of Array and Function In PHP Write a program In PHP to Sort an array using function (Bubble Sort)
11. Study Of Form handling In PHP Design a personal Information form , then Submit & Retrieve the Form Data Using $_GET(), $_POST() and $_REQUEST() Variables
12. Study Of Server Side Validation and Page Redirection In PHP Design A Login Form and Validate that Form using PHP Programming
13. Study Of Cookies And Sessions In PHP Create Admin Login, Logout form using session variables.
14. Write a PHP application to add new Rows in a Table.
15. Write a PHP application to modify the Rows in a Table.
16. Write a PHP application to delete the Rows from a Table.
17. Write a PHP application to fetch the Rows in a Table.

MySQL Lab Cycle

Cycle -1

An Enterprise wishes to maintain the details about his suppliers and other corresponding details. For that he uses the following details.
Suppliers (sid: Integer, sname: string, address:
string) Parts (pid: Integer, pname: string, color:

string) Catalog (sid: integer, pid: integer, cost:
real)

The catalog relation lists the prices charged for parts by suppliers.

Write the following queries in SQL:

1. Find the pnames of parts for which there is some
supplier.
2. Find the snames of suppliers who supply every part.
3. Find the snames of supplier who supply every red part.
4. Find the pnames of parts supplied by London Supplier abd by no one else.
5. Find the sid‟s of suppliers who charge more for some part than the average cost
of that part.
6. For each part, find the sname of the supplier who charges the most for
that part.
7. Find the sid‟s of suppliers who supply only red parts.
8. Find the sid‟s of suppliers who supply a red and a
green part.
9. Find the sid‟s of suppliers who supply a red or green
part.
10. Find the total amount has to pay for that suppler by part located from London.

Cycle – 2

An organisation wishes to maintain the status about the working hours made by his employees. For that he uses the following tables.

Emp (eid: integer, ename: string, age: integer,
salary: real) Works (eid: integer, did: integer,
pct_time: integer)
Dept (did: integer, budget: real, managerid: integer)
An employee can work in more than one department; the pct_time field of the works relation shows the percentage of time that a given employee works in a given department.

Resolve the following queries.

11. Print the names and ages of each employee who works in both
Hardware and Software departments.
12. For each department with more than 20 full time equivalent employees
(i.e., where the part-time and full-time employees add up to at least that many full-time employees), print the did‟s together with the number of employees that work in that department.

13. Print the name of each employee whose salary exceeds the budget of
all of the departments that he or she work in.
14. Find the managerid‟s of managers who manage only departments with
budgets greater than 1,000,000.

15. Find the enames of managers who manage the departments with largest budget.

16. If a manager manages more than one department, he or she controls the sum of all the budgets for those departments. Find the managerid‟s of managers who control more than 5,000,000.

17. Find the managerid‟s of managers who control the highest amount
Find the average manager salary.