

SCHEME OF EXAMINATION

And

SYLLABUS

For

DIPLOMA

In

WEB DESIGNING

Offered by



**J C Bose University of Science & Technology YMCA
Sector-6, Mathura Road, Faridabad, Haryana, India**

1. Introduction

All India Council for Technical Education (AICTE) Ministry of HRD, Government of India has introduced Entrepreneurship oriented Skill development courses of B.Voc/D.Voc/Skill Diploma. These courses will be run by AICTE approved institutes by using available infrastructure and facilities. In these courses the institute will conduct general education content and sector specific skills will be imparted by Skill Knowledge Providers/ Training Providers/ Industries.

1.1 Key Features: Objectives

- To provide judicious mix of skills relating to a profession and appropriate content of General Education.
- To ensure that the students have adequate knowledge and skills, so that they are work ready at each exit point of the programme.
- To provide flexibility to the students by means of pre-defined entry and multiple exit points.
- To integrate NSQF within the Diploma, undergraduate level of higher education to enhance employability of the students and meet industry requirements. Such student apart from meeting the needs of local and national industry are also expected to be equipped to become part of the global workforce.
- To provide vertical mobility to students admitted in such vocational courses.
- The certification levels will lead to Diploma/Advanced Diploma/B. Voc. Degree in Web Development and will be offered by respective affiliating University/Board of Technical Education.

Students may be awarded Level Certificate/Diploma/Advance Diploma /Degree as out-lined in the Table below:

Award	Duration	NSQF Level
Diploma	3 Years	5
Advance Diploma	2 Years	6
B.Voc Degree	1 Year	7

2. Course Objectives

After successfully completing the vocational course, the student would have acquired relevant appropriate and adequate technical knowledge together with the professional skills and competencies in the field of Web Development so that he/she is properly equipped to take up gainful employment in this Vocation. Thus he/she should have acquired: -

A. Understanding of

- (a) The relevant basic concepts and principles in basic science subjects (Physics, Chemistry and Mathematics) so that he/she is able to understand the different vocational subjects.
- (b) The basic concepts in engineering drawing.
- (c) The concepts, principles of working of basic electronic devices and circuits.

- (d) The knowledge of testing procedure of components and circuits by making use of different test instruments.
- (e) The procedure of making P.C.B.
- (f) The concepts and principles used in Radio/Audio/Video Systems and Communication devices and its maintenance.

B. Adequate Professional Skills and Competencies in

- (a) Testing different software's.
- (b) Testing the performance of electronic circuits.
- (c) Locating the fault at component level and at the stage level.

C. A Healthy and Professional Attitude so that He/She has

- (a) An analytical approach while working on a job. (b) An open mind while locating/rectifying faults. (c) Respect for working with his/her own hands.
- (d) Respect for honesty, punctuality and truthfulness

D. NSQF compliant skills in Qualification developed by sector skill council in IT/ITeS sector

3. Course Structure

The course will consist of combination of practice, theory and hands on skills in the IT/ITeS sector.

Curriculum

The curriculum in each of the years of the programme would be a suitable mix of general education and skill components.

Skill Components:

- The focus of skill components shall be to equip students with appropriate knowledge, practice and attitude, to become work ready. The skill components will be relevant to the industry as per its requirements.
- The curriculum will necessarily embed within itself, National Occupational Standards (NOSs) of specific job roles within the industry. This would enable the students to meet the learning outcomes specified in the NOSs.
- The overall design of the skill development component along with the job roles selected will be such that it leads to a comprehensive specialization in few domains.
- The curriculum will focus on work-readiness skills in each of the year of training.
- Adequate attention will be given in curriculum design to practical work, on the job training, development of student portfolios and project work.

SCHEME OF BVOC WEB DEVELOPMENT

Year	FIRST SEMESTER		SECOND SEMESTER		
	Course	Credits	Course	Credits	
I	Engineering Calculations - I	3	Web Designing	3	
	Communication Skills	3	Object Oriented language (C++)	3	
	Programming in C	3	Engineering Calculations - II	3	
	Operating System (OS)	3	Employability Skills	3	
	Web Designing Lab (HTML)	9	Computer Lab	18	
	C Programming Lab	9			
	Technical Writer (SSC/Q0505)		Web Developer (SSC/Q0503)		
	Total	30	Total	30	
	Cumulative credits = 30 (Certificate)			Cumulative credits = 60 (Diploma)	

Detailed Curriculum**J.C BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA, FARIDABAD****SUBJECT NAME: COMMUNICATION SKILLS****PAPER CODE: BSC-101**

Semester -1st

Sessional – 25 Marks

Stream–Web Development

Theory – 75 Marks

L T P Total Credits

Total: 100 Marks

3 0 0 3

Duration of Exam: 3 Hours

Course Objectives:

1. To discuss types of communication and their forms
2. To improve comprehension
3. To improve spoken English and ability to articulate ideas
4. To improve formal writing skills

Unit 1: Introduction to Communication: Meaning, Importance and Function of Communication, Types of communication, language of communication; advantages and disadvantages; Barriers to Communication; Organizational Communication

Unit 2: Grammar: Parts of speech, Articles, Tenses, Formation of Sentences, Active and Passive Voice, Direct and Indirect speech

Unit 3: Writing and Comprehension: Comprehension, Composition, Translation, Paraphrasing, Letter writing

Unit 4: 7 Cs of Communication; Grice's Cooperative Principle; Group Discussions; Public Speaking; Facing Interviews

Course Outcome:

1. To learn about communication process and ways to make communication effective by giving attention to all elements involved.
2. To improve grammar and gain confidence by enhancing their abilities to articulate their ideas.
3. To acquire better writing skills in formal communication.
4. To be able to revise documents for fruitful reading and comprehension.

Reference books:

1. Wren and Martin. *High School English Grammar and Composition*. New Delhi: RRP, 2007
2. Murphy, Raymond. *Essential English Grammar*. New Delhi: Cambridge, 2017

J.C BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA, FARIDABAD

SUBJECT NAME: ENGINEERING CALCULATIONS

PAPER CODE: BSC-102

Semester: 1st

Stream–Web Development

L T P Total Credits

3 0 0 3

Sessional – 25 Marks

Theory – 75 Marks

Total: 100 Marks

Duration of Exam: 3 Hours

Course Objectives

1. To familiarize the prospective engineers with Basics of mathematics
2. To understand fundamental arithmetical operations.
3. To learn Unit systems, Fractions and Decimals, roots, percentage.
4. To have Knowledge of differential quantities

Course Contents

Unit-I: Basic Aptitude- Fundamental Arithmetical Operation- Addition, Subtraction, Multiplication and Division. Applied Workshop Problems Involving Addition, Subtraction, Multiplication and Division, System Of Units – Definition, Different Types & System Of Units i.e.(C.G.S. & SI Units for Length, Mass, Area, Volume, Capacity, Time) HCF, LCM, Square Root Cube Root.

Unit-II: Trigonometry – Introduction, Trigonometric Identities, Quadrant Rule, Trigonometric Ratios of Some Specific Angles, Ratios of Complementary Angles, Introduction

Unit-III: Differentiation- Introduction to Derivatives, Product Rule, Quotient Rule, Chain Rule, Derivatives of Algebraic Function, Derivative of Trigonometric Functions.

Unit –IV: Integration: Concepts of integration, integration of trigonometric, exponential and logarithmic functions, integration by parts.

Unit-V: Algebra- Algebraic Expressions and Identities, Terms Coefficients and Factors, Monomials Binomials and Polynomials, Multiplication and Division of Algebraic Expressions, Standard Identities and Their Applications.

Course Outcomes:

1. To Apply the Arithmetical Operations And Conversion Of Units.
2. To Convert in Fraction And Decimals, Percentage.
3. To Solve HCF, LCM, Square Roots And Cube Roots.
4. To Deal With Differential Problems.
5. To Learn About Trigonometric Ratios.

Reference Books:

1. Mathematics Book by R.D Sharma
2. Advanced Engineering Mathematics By Jain Rk.
3. A Basic Course in Mathematics By Nabjyoti Dutta.
4. Skills in Mathematics By Amit M Aggarwal.
5. Applied Mathematics For Polytechnics By H.K. Dass.

J.C BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA, FARIDABAD
SUBJECT NAME: BASICS OF OPERATING SYSTEM
PAPER CODE: PCC-WD-101

Semester 1st
 Stream–Web Development
 L T P Total Credits
 3 0 0 3

Sessional – 25 Marks
 Theory – 75 Marks
 Total: 100 Marks
 Duration of Exam: 3 Hours

Course Objectives:

1. To learn the fundamentals of Operating Systems.
2. To learn the mechanisms of OS to handle processes.
3. To learn the mechanisms involved in memory management in contemporary OS.
4. To gain knowledge on file management aspects of Operating systems

Course Content:

Unit 1: Operating Systems: Concept of Operating Systems, Need of operating system, Types of Operating Systems, Services of operating system, Structure of an operating system, Functions of operating system.

Unit 2: Processes: Definition, Different states of a Process, Process Scheduling, Types of Schedulers, and Scheduling criteria: CPU utilization, Throughput, Turnaround Time, Waiting Time, Response Time. Scheduling algorithms, FCFS, SJF, Priority, RR, Multiprocessor scheduling.

Unit 3: Memory & File Management: Logical and Physical address space, Swapping, Contiguous Memory allocation, Virtual Memory, Paging, Segmentation. Concept of File, Access methods, Directory structure, File System structure, Allocation methods.

Unit 4: Study of various Operating Systems: Windows, Dos, Linux etc.

Key Learning Outcomes:

Candidates will be able to:

1. Create processes.
2. Develop algorithms for process scheduling for a given specification of CPU utilization, Throughput, Turnaround Time, Waiting Time, and Response Time.
3. For a given specification of memory organization, develop the techniques for optimally allocating memory to processes by increasing memory utilization and for improving the access time.
4. Design and implement file management system.

Reference Books:

1. Operating System Concepts by Silberchatz et al, 5th edition, 1998, AddisonWesley.
2. Modern Operating Systems by A. Tanenbaum, 1992, Prentice-Hall.
3. Operating Systems Internals and Design Principles by William Stallings, 4th edition, 2001, Prentice Hall.

J.C BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA, FARIDABAD

SUBJECT NAME: FUNDAMENTALS OF NETWORK AND SAFETY

PAPER CODE: PCC-WD-104

Semester 1st
Stream–Web Development
L T P Total Credits
3 0 0 3

Sessional – 25 Marks
Theory – 75 Marks
Total: 100 Marks
Duration of Exam: 3 Hours

Course Objectives:

1. To learn about computer networks and its various types.
2. To learn about underlying areas of web programming.
3. To learn about basics of internet.
4. To learn about various health and safety procedures.

Course Contents:

Unit 1 : Basics of Computer Networks : Introduction of computer network, need for networking, advantages of computer network, network topologies. Types of computer networks: LAN, MAN, WAN, (features, advantages and disadvantages), difference between LAN and WAN.

Unit 2 : Introduction to Internet : Introduction to Web browser, WWW, Searching Internet. Services of internet: E- mail, Social Internet Media and its benefits. OSI model & TCP/IP Model

Unit 3 : Web Programming : Introduction to web programming, Basics of HTML: HTML tags, page structure, lists, tables, forms.

Unit 4 : Managing Health and Safety : Importance of safety, Objectives of safety management, Hazards and its types, Health safety, Different types of breaches, Evacuation procedures, Medical assistance, Security policies and procedures. Government agencies in the areas of safety, health and security and their norms and services.

Key Learning Outcomes

Candidates will be able to:

1. Demonstrate basic computer networking concepts.
2. Operating a browser, searching the internet, managing mails and using social internet media.
3. Understand web programming.
4. Comply with organization's current health, safety and security policies and procedures.

Reference Books:

1. Sudhakshina Kundu, Fundamentals of Computer Networks.
2. Tenenbaum, Computer Networks.
3. Fundamentals of Web Development by Randy Connolly.
4. Industrial Safety Management by L.M Deshmukh, Tata Mcgraw Hill Publication.

J.C BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA, FARIDABAD

SUBJECT NAME: C PROGRAMMING LAB

PAPER CODE: PCC-WD-106

Semester 1st

Internal – 30 Marks

Stream–Web Development

External – 20 Marks

L T P Total Credits

Total: 50 Marks

0 0 9 9

Duration of Exam: 3 Hours

Course Objectives:

1. To be familiar with different data types, Operators and Expressions in C.
2. To be familiar with formatted and unformatted I/O in C with preprocessor directives.
3. To understand the programming using Loop & nested loop Statements (for, while, do-while).
4. To understand programming using different dimensions of Array.

Course Contents:

Introduction to ‘C’ Language - Character set, Variables and Identifiers, Built-in Data Types, Variable Definition, Arithmetic operators and Expressions, Constants and Literals, Simple assignment statement, Basic input/output statement, Simple ‘C’ programs.

Conditional Statements and Loops - Decision making within a program, Conditions, Relational Operators, Logical Connectives, if statement, if-else statement, Loops: while loop, do while, for loop, Nested loops, Infinite loops, Switch statement, structured Programming.

Arrays - One dimensional arrays: Array manipulation; Searching, Insertion, Deletion of an element from an array; Finding the largest/smallest element in an array; Two dimensional arrays, Addition/Multiplication of two matrices, Transpose of a square matrix; Null terminated strings as array of characters, Standard library string functions

Functions - Top-down approach of problem solving, Modular programming and functions, Standard Library of C functions, Prototype of a function: Formal parameter list, Return Type, Function call, Block structure, Passing arguments to a Function: call by reference, call by value, Recursive Functions, arrays as function arguments.

Storage Classes - Scope and extent, Storage Classes in a single source file: auto, extern and static, register, Storage Classes in a multiple source files: extern and static

Structures and Unions - Structure variables, initialization, structure assignment, nested structure, structures and functions, structures and arrays: arrays of structures, structures containing arrays, unions

Pointers - Address operators, pointer type declaration, pointer assignment, pointer initialization, pointer arithmetic, functions and pointers, Arrays and Pointers, pointer arrays, pointers and structures, dynamic memory allocation.

File Processing - Concept of Files, File opening in various modes and closing of a file, reading from a file, writing onto a file

List of Programs :

1. Write a program to display “hello world” in C.
2. Write a program to add two numbers (5&7) and display its sum.
3. Write a program to multiply two numbers (10&8) and display its product.
4. Write a program to calculate area of a circle having its radius (r=5).
5. Write a program to calculate area of an ellipse having its axes (minor=4cm, major=6cm).
6. Write a program to calculate simple interest for a given P=4000, T=2, R=5.5. ($I = P \cdot T \cdot R / 100$)
7. Write a program to declare two integer and one float variables then initialize them to 10, 15, and 12.6. Also print the variable values in the screen.
8. Write a C program to prompt the user to input 3 integer values and print these values in forward and reversed order.
9. Write a program to calculate simple and compound interest.

10. Write a program to swap two variables values with and without using third variables
11. Write a program to check odd or even number
 - (a) using modulus operator
 - (b) using bitwise operator
 - (c) without using bitwise and modulus operator
 - (d) using conditional operator.
12. Print the value of y for given x=2 & z=4 and analyze the output.
 - a. `y = x++ + ++x;`
 - b. `y= ++x + ++x;`
 - c. `y= ++x + ++x + ++x;`
 - d. `y = x>z;`
 - e. `y= x>z? x:z;`
 - f. `y = x&z;`
 - g. `y= x>>2 + z<<1;`
13. Write a program to print the size of char, float, double and long double data types in C.
14. Write a program to produce the output as shown below:

x	y	expressions	results
6	3	<code>x=y+3</code>	<code>x=6</code>
6	3	<code>x=y-2</code>	<code>x=1</code>
6	3	<code>x=y*5</code>	<code>x=15</code>
6	3	<code>x=x/y</code>	<code>x=2</code>
6	3	<code>x=x%y</code>	<code>x=0</code>
15. Demonstrate the differences among `getch()`, `getche()`, `getchar()`. Demonstrate the difference between `scanf()` & `gets()`, `printf()` & `puts()`.
16. Write a program to check whether input alphabet is vowel or not using if-else and switch statement.
17. Write a program that asks a number and test the number whether it is multiple of 5 or not.
18. Write a program to check whether the entered year is leap year or not (a year is leap if it is divisible by 4 and divisible by 100 or 400.)
19. Write a program to input two integer numbers and display the sum of even numbers between these two input numbers.
20. Write a program to find GCD (greatest common divisor or HCF) and LCM (least common multiple) of two numbers.
21. Write a program to display Fibonacci series of last term up to 300.
22. Write a program to enter 10 floating numbers in an array and display it.
23. Write a program to initialize one dimensional array of size 8 and display the sum and average of array elements.
24. Write a program to find biggest among three numbers using pointer.
25. Write a program to find the sum of all the elements of an array using pointers.
26. Write a program to swap value of two variables using pointer.
27. Write a program to read a sentence and count the number of characters & words in that sentence.
28. Write a program to copy one string to another string with and without using string handling function.
29. Write a program to concatenate two strings.
30. Write a program to compare two strings.

Reference Books:

1. [Programming in C, R.S. Salaria, Khanna Publishing House](#)
2. [Computer Concepts and Programming in C, R.S. Salaria, Khanna Publishing House](#)
3. [Test your Skills in C, R. S. Salaria, Khanna Publishing House](#)

J.C BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA, FARIDABAD

SUBJECT NAME: WEB DESIGNING LAB

PAPER CODE: PCC-WD-106

Semester 1st

Internal – 30 Marks

Stream–Web Development

External – 20 Marks

L T P Total Credits

Total: 50 Marks

0 0 9 9

Duration of Exam: 3 Hours

Course Objectives:

1. To Acquire knowledge and Skills for creation of Web Site considering both client- and server-side Programming.
2. To create Web application using tools and techniques used in industry.
3. To be well versed with XML and web services Technologies.
4. To be familiarized with open source Frameworks for web development.

Course Contents:

1. Generic awareness about Hyper Text Markup Language (HTML).
2. Designing of websites.
3. Basics of HTML tags.
4. Functional knowledge of web hosting
5. Basics of Networking

Course Outcomes:

1. Design a basic web site using HTML5 and CSS3 to demonstrate responsive web design.
2. Develop simple web application using server side PHP programming and Database Connectivity using MySQL.
3. Build well-formed XML Document and implement Web Service using Java.

J.C BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA, FARIDABAD

SUBJECT NAME: WEB DESIGNING

PAPER CODE: PCC-WD-203

Semester: 2nd

Stream: Web Development

L T P Total Credits

3 0 0 3

Sessional: 25Marks

Theory: 75 Marks

Total: 100 Marks

Duration of Exam: 3 Hours

Course Objectives:

1. Understand the principles of creating an effective web page
2. Develop skills in analyzing the usability of a web site.
3. Understand how to plan and conduct user research related to web usability.
4. Learn the language of the web: HTML and CSS.

Course Contents:

Unit-I: Web Design Principles : Basic Principles involved in developing a web site, Planning process, Five Golden rules of Web Designing, World Wide Web, Why create a web site, Web Standards

Unit-2: Introduction to HTML : What is HTML, HTML Documents, Basic structure of an HTML document, Creating an HTML document, Mark up Tags, Heading-Paragraphs, Line Breaks, HTML Tags. Elements of HTML: Introduction to elements of HTML, Working with Text, Working with Lists, Tables and Frames; Working with Hyperlinks, Images and Multimedia; Working with Forms and controls.

Unit- 4: Introduction to Cascading Style Sheets: Concept of CSS, Creating Style Sheet, CSS Properties, CSS Styling(Background, Text Format, Controlling Fonts), Working with block elements and objects, Working with Lists and Tables, CSS Id and Class, Box Model(Introduction, Border properties, Padding Properties, Margin properties), CSS Color, Creating page Layout and Site Designs.

Unit – 5 JavaScript introduction : What is JavaScript, Understanding Events, JavaScript Example, External JavaScript

Key Learning Outcomes

Candidates will be able to:

1. Discover how does web works really, what makes web sites work.
2. Employ fundamental computer theory to basic programming techniques.
3. Create an Information Architecture document for a web site.
4. How to and where to start research, planning for website
5. Use fundamental skills to maintain web server services required to host a website.

Reference Books:

1. Satish Jain, Ambrish K. Rai and M. Geetha, Web Designing and Development, BPB Publications.
2. Hirdesh Bhardwaj, Web Designing.
3. Jon Duckett, HTML & CSS: Design and Build Web Sites

J.C BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA, FARIDABAD

SUBJECT NAME: OBJECT ORIENTED PROGRAMMING USING C++

PAPER CODE: PCC-WD-205

Semester: 2nd

Stream: Web Development

L T P Total Credits

3 0 0 3

Sessional: 25Marks

Theory: 75 Marks

Total: 100 Marks

Duration of Exam: 3 Hours

Course Objectives:

1. To be familiar with the main features of the C++ language.
2. Be able to understand C++ program to solve a well specified problem.
3. Understand a C++ syntax written by someone else.

Course Contents:**Unit-1: Concepts of OOP**

Introduction OOP, Procedural Vs. Object Oriented Programming, Principles of OOP, Benefits and applications of OOP.

Unit-2: C++ Basics

Overview, Program structure, namespace, identifiers, variables, constants, enum, operators, typecasting, control structures.

Unit-3: C++ Functions

Simple functions, Call and Return by reference, Inline functions, Macro Vs. Inline functions, Overloading of functions, default arguments, friend functions, virtual functions.

Unit-4: Objects and Classes

Basics of object and class in C++, Private and public members, static data and function members, constructors and their types, destructors, operator overloading, type conversion.

Unit-5: Inheritance

Concept of Inheritance, types of inheritance: single, multiple, multilevel, hierarchical, hybrid, protected members, overriding, virtual base class.

Unit-6: Polymorphism

Pointers in C++, Pointers and Objects, this pointer, virtual and pure virtual functions, Implementing polymorphism.

Unit-7: I/O and File Management

Concept of streams, cin and cout objects, C++ stream classes, Unformatted and formatted I/O, manipulators, File stream, C++ File stream classes, File management functions, File modes, Binary and random Files.

Unit-8: Templates, Exceptions and STL

What is template? function templates and class templates, Introduction to exception, try-catch-throw, multiple catch, catch all, rethrowing exception, implementing user defined exceptions, Overview and use of Standard Template Library.

Course Outcomes:

1. Describe the important concepts of object oriented programming like object and class, Encapsulation, inheritance and polymorphism.
2. Write the skeleton of C++ program.
3. Write the simple C++ programs using the variables, operators, control structures, functions.
4. Write the simple object oriented programs in C++ using objects and classes, inheritance, file management, exceptions etc..

J.C BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA, FARIDABAD

SUBJECT NAME: COMPUTER LAB (C++ PROGRAMMING)

PAPER CODE: PCC-WD-205

Semester: 2nd

Stream: Web Development

L T P Total Credits

0 0 18 18

Internal: 30 Marks

External: 20 Marks

Total: 50 Marks

Duration of Exam: 3 Hours

Course Objectives:

1. To be familiar with the main features of the C++ language.
2. Be able to write a C++ program to solve a well specified problem.
3. Understand a C++ program written by someone else.
4. Be able to debug and test C++ programs;

Course Contents:

Basic concepts of OOPS:

1. Program to print "Hello World".
2. Program to Print Number Entered by User
3. Program to Add Two Numbers
4. Program to Find Quotient and Remainder
5. Program to Find Size of int, float, double and char in Your System
6. Program to Swap Two Numbers
7. Program to Check Whether Number is Even or Odd
8. Program to Check Whether a character is Vowel or Consonant.
9. Program to Find Largest Number Among Three Numbers
10. Program to Check Leap Year
11. Program to demonstrate the type casting
12. program to demonstrate working of enum in C++

Functions:

13. Program to add two integers. Make a function add() to add integers and display sum in main() function.
14. Program to Display Prime Numbers Between Two Intervals Using Functions
15. Program to Check Prime Number By Creating a Function
16. Program to find factorial using functions.
17. Program to find smallest number using functions

Objects & Classes:

18. program to create a simple class and object.
19. program to create a class to read and add two distance.
20. program to create a class for student to get and print details of a student.
21. program to create class to read time in seconds and convert into time in (HH:MM:SS) format.
22. program to demonstrate example of friend function with class.

Inheritance:

23. program to demonstrate example of simple inheritance.
24. program to read and print student's information using two classes and simple inheritance.
25. program to demonstrate example of multilevel inheritance.
26. program to read and print employee information using multiple inheritance.
27. program to demonstrate example of multiple inheritance.

28. program to demonstrate example of hierarchical inheritance to get square and cube of a number.

Polymorphism:

29. Program to show function overloading at compile time
30. Program to show operator overloading at compile time
31. Program to show the mechanism of function overriding
32. Program to access the base class member function after the occurrence of function overriding. (Using scope resolution operator)

I/O and File Management:

33. Program to create a file.
34. Program to read a text file.
35. Program to write and read values using variables in/from file.
36. Program to write and read text in/from file.
37. Program to write and read object using read and write function.

Templates and Exceptions:

38. Program to divide two numbers using try catch block.
39. Program to add two numbers using function template.
40. Program to use class template
41. Program to overload template function for sum of numbers
42. Program to show the use multiple catch statements

Course Outcomes

1. Understand and use the basic programming constructs of C/C++
2. Manipulate various C/C++ datatypes, such as arrays, strings, and pointers
3. Isolate and fix common errors in C++ programs
4. Use memory appropriately, including proper allocation/deallocation procedures

J.C BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA, FARIDABAD

SUBJECT NAME: EMPLOYABILITY SKILLS

PAPER CODE: BSC-206

Semester -2nd

Sessional – 25 Marks

Stream– Web Development

Theory – 75 Marks

L T P Total Credits

Total: 100 Marks

3 0 0 3

Duration of Exam: 3 Hours

Course Objectives:

1. To discuss types of communication and their forms.
2. To improve comprehension.
3. To improve spoken English and ability to articulate ideas
4. To improve formal writing skills

Course Contents:

Unit 01 Communication skill: Oral and written communication Listening skills, written communications, motivation, ethics, Time management, facing job interviews, behaviour skills, Assessing oneself.

Unit -02 English Literacy – Pronunciation, listening speaking and reading: - greetings and introductions describing people, Telephone skills, Office Hospitality, Describing things.

Unit -03 Entrepreneurship skills- 1: - Scope and advantage of self-employment, Entrepreneurial skills, values and attitudes, Characterchicts of Successful Entrepreneurs, Identification of entrepreneurs bu self-assessment, Micro, small and medium enterprises, Creativity and idea generation.

Unit -04 Entrepreneurship Skills – 2: - Understanding Consumer, Market Survey: Scope & Influence of publicity and advertisement, Accounting and analysis, Assistance provided by Central and State Govt. Organisations, Project formation, feasibility and profitability estimates, Filling up a Preliminary Project Report Proforma, Investment procedure-loan procurement.

Course Outcome:

1. To learn about communication process and ways to make communication effective by giving attention to all elements involved.
2. To improve grammar and gain confidence by enhancing their abilities to articulate their ideas.
3. To acquire better writing skills in formal communication.
4. To be able to revise documents for fruitful reading and comprehension

Reference books:

1. Wren and Martin. High School English Grammar and Composition. New Delhi: RRP, 2007
2. Murphy, Raymond. Essential English Grammar. New Delhi: Cambridge, 2017
3. Malhotra, Prerna and Halder, Deb. Communication Skills: Theory and Practice.