DR. VIRENDRA SWARUP INSTITUTE OF VOCATIONAL STUDIES

SYLLABUS

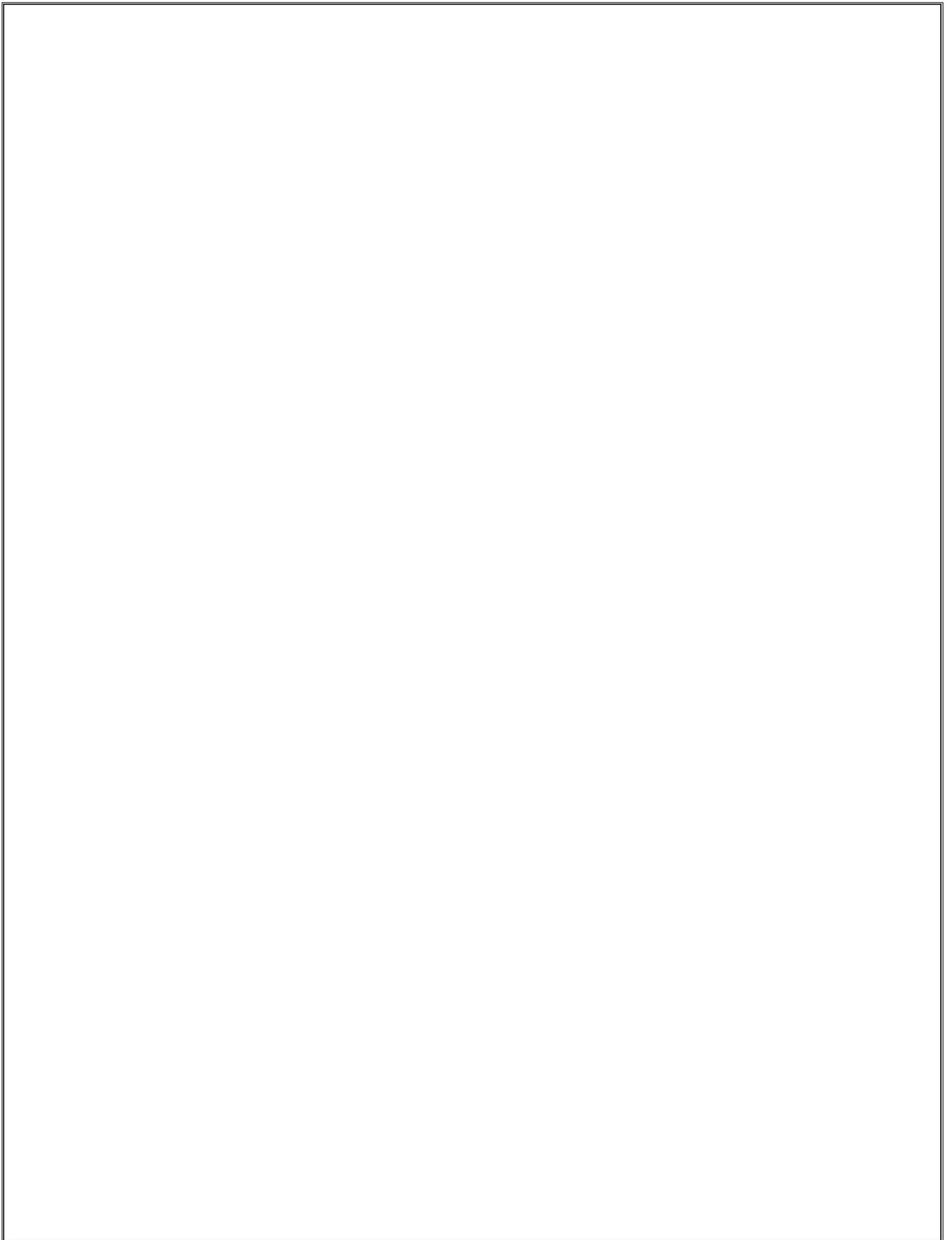### (HONOURS DIPLOMA IN COMPUTER APPLICATION)

COURSE CODE: COE17

COURSE NAME: CVESD HONOURS DIPLOMA IN COMPUTER APPLICATION

COURSE DURATION: SIX MONTHS

SESSION: 2024-25

DEPARTMENT OF COMPUTER APPLICATION

DR. VIRENDRA SWARUP INSTITUTE OF VOCATIONAL STUDIES, MC ROBERT GANJ, CIVIL LINES, KANPUR (UP) 208001

CourseCode   **CourseName**

COE17-01   **COMMUNICATIVE ENGLISH & COMUTER FUNDAMENTALS**

CO1	Inculcate Process of Communication and identify barriers in communication. Demonstrate the competency in English language through understandability and practice in four skills of language such as writing, speaking, reading and listening.
CO2	Develop skills for working in team and individually.
CO3	Inculcate soft skills and develop personality through participation in group discussion, mock interview, group and individual presentation.
CO4	Describe the usage of computers and why computers are essential components in business andsociety.
CO5	Understanding the concept of Computer memory and input/output devices of Computers and howit works and recognize the basic terminology used in computer programming.

Course Outcomes: At the end of the course, the student will be able to,

UNIT-I

The Process of Communication:

Communication, the Process of Communication, Barriers ofCommunication, Different Types of Communication, Characteristics and Conventions ofConversation, Conversational Problems of Second/Foreign Language Users, DifferenceBetween Conversation and Other Speech Events.

UNIT- II

Soft Skills Training:

Soft Skills Practice, Personality Development, Participating in Group Discussion and JobInterviews, Time Management Presentation Skills, Leadership Skills, Assertiveness, LateralThinking, Team Work and Interpersonal Skills, Emotional Intelligence, Self-Confidence andCourage, Attitude.

UNIT- III

Speaking Skills and Presentation:

Speaking and Listening, Conference Calls, Vocabulary Building, Writing, Grammar and Usage, Pronunciation, Job Applications and Interviews: Reading, Curriculum Vitae, Preparing for an Interview, Listening and Speaking in the Interviews Group Discussions: Group-Discussion, Study Skills, Language Focus, Speaking.Presentation Design and Delivery. Monologue Dialogue,Group Discussion. Effective Communication/ Mis-Communication. Interview, Public Speech.Effective Writing, Report Writing, Resume, Circular, Notice and letter Writing.

UNIT-4
Introduction to Computer: Definition - History & Generation of Computer (From First to 5th) - Applications of Computer – Advantages of Computer – Terms related to Computer - Characteristics of Computer: Speed, Storage, Versatility and Diligence – Hardware & Software. Block Diagram and Working Principle of Computer - Types of Computer: On the Basis of Working - Analog, Digital & Hybrid, On the Basis of Size - Main frame, Mini Computer, Super Computer, Work station, Micro Computer, Desktop Computer, Laptop Computer

UNIT-5
Memory: Units, Representation, Types - Primary memory: RAM, ROM, PROM, EPROM, EEPROM, DDR Secondary memory: Hard disk, CD, DVD, Blue ray Disc, Pen Drive Magnetic tape & Zip disk – **CPU:** Components of CPU - Mother board, Hard disk, RAM, ROM, Processor, SMPS & Connecting wire - Graphics Card, Sound Card, Network Card – Modem; **Input, Output devices**: Keyboard, Mouse, Scanner, Digital Camera, Joystick, Pen drive, Monitor, Printer, Plotter – Connecting port – Serial, parallel – USB port.

Referential Books:

1. Wren and Martin -English Grammar and Composition
2. B. K. Das- an Introduction to Professional English and Soft Skills
3. Barun K. Mitra- Personality Development and Soft Skills
4. Fundamental of Computers – By P.K. Sinha
5. MS-Office 2000(For Windows) – By SteveSagman

Course Code	Course Name	L	T	P

Course Code   Course Name

COE17-02   PROGRAMMING IN C & C++

L T P
3 0 0

CO1	Able to understand the basic knowledge of Computer fundamental and its application in computers.
CO2	Able to understand the basic knowledge of Computer fundamental and its application in computers.
CO3	Able to design and develop various programming problems using C programming concepts.
CO4	Able to Implement advance C programming concepts like function, pointer, structure and Union
CO5	Able to understand the file handling using C Programming language.

UNIT-1
Fundamentals of C programming and Control Structures: History, Structure of a C program, C Conventions, Character Set, Identifiers, Keywords, Simple Data types, Modifiers, Variables, Constants, Operators, Operator precedence. Input and Output operation: Single character input and output, formatted input and output. Control Structures, Conditional statement and switch statement. Goto statement. Looping statement, break and continue, nested for statement.

UNIT-2
Arrays and Functions: Introduction (One and multi-dimensional), Declaration of arrays, Initialization of arrays, processing with arrays. String manipulation, declaration of string arrays, string operations. Functions: Introduction, advantages of functions, Function definition, function call, Actual and formal arguments, local and global variables, function prototypes, types of functions, recursive functions, arrays and functions.

UNIT-III
Searching and Sorting: selection sort, bubble sort, insertion sort, quick sort, merge sort Searching: linearand binary search methods, comparison of sorting and searching methods.

UNIT-IV
Structures and Pointers: Introduction to structures, Advantages of structures, accessing elements of a structure, nested structures, array of structures, functions and structures, Pointers: Introduction, pointer variable, pointer operator, pointer arithmetic, pointers and arrays, pointers and strings, array pointers, dynamic allocation.

UNIT-V
Files, Preprocessor, standard library and header files: Files: Introduction, File data type, opening and closing a file, file functions (getc, putc, getw, putw, fscanf, fprintf, fread, fwrite, fgets, fputs, feof). Preprocessor: #define, #include, #undef, Conditional compilation directives, C standard library and header files: Header files, string functions, mathematical functions, Date and Time functions

Referential Books :
1. Let us C-Yashwant Kanetkar.
2. Programming in C++-Balguruswamy

Course Code	Course Name	L	T	P
		3	0	0
COE17-03	TALLY			

CO1	Students will gain a foundational understanding of Tally software, including its features, interface, and navigation.
CO2	Students will learn how to create and configure company profiles in Tally, including setting up financial years, taxation details, and other company-specific settings.
CO3	Students will understand how to create and manage the chart of accounts in Tally, including creating ledger accounts, groups, and subgroups for organizing financial transactions.
CO4	Students will learn how to record financial transactions in Tally using voucher entry screens for various types of transactions such as sales, purchases, payments, receipts, and journal entries.
CO5	Students will explore inventory management features in Tally, including creating stock items, units of measure, stock groups, and recording stock transactions such as stock receipts, issues, transfers, and adjustments.

UNIT-1

Introduction, features, getting started with tally ,company creation, Display/Alter. F11 features, F12 configuration, single and multiple ledger creation, Display/Alter ledger, Accounting group of ledgers -how to create, manage and operate groups, Display/Alter groups.

UNIT-2

Inventory control system: stock groups, display/alter stock groups, delete stock group, unit of measures, display/alter unit of measures, compound unit, stock item, stock category creation, display /alter stock category, delete a stock category, Godown creation.

UNIT-3

Accounting vouchers: Voucher date changing, contra voucher, payment voucher, receipt voucher, journal voucher, sales voucher, purchase voucher, post-dated voucher.

UNIT-4

Inventory vouchers: stock journal voucher, physical stock voucher- use separate discount column, zero valued entries in vouchers, Additional cost ,use different actual billed quantity, debit note, credit note, purchase order, sales order, batch wise details, bill wise details, cost centre creation, tracking number, rejection notes, reversing journal, optional voucher, Manufacturing journal, bill of material (BOM).

UNIT-5

Module 5 Reports: Day book, Trial balance, Trading and Profit and Loss account, Balance sheet, Cash/bank books, Sales register, Stock summary, Key board shortcuts.

Referential Books :
1. Prof. K. K. Tomy : Computerised Accounting TALLY-ERP9, Prakash
2. Publications (Changanacherry : 2019).
3. 2. Dr. Antony Thomas, Princy Francis: Computerised Accounting, Pratibha
4. Publications (Changanassery : 2020)

	Course Code	Course Name		L	T	P

Course Code   Course Name   L   T   P
**   3   0   0**
COE17-04   HTML

CO1	Understanding Web Fundamentals XML : Students will gain a foundational understanding of the basic concepts and technologies that underpin the World Wide Web, including the client-server model, HTTP protocol, URLs, and web browsers.
CO2	HTML Markup: Students will learn to create structured and semantic web documents using HTML (Hypertext Markup Language), including elements for text, links, images, lists, tables, forms, and semantic markup for enhanced accessibility and search engine optimization (SEO).
CO3	CSS Styling: Students will acquire skills in styling web content using CSS (Cascading Style Sheets), including techniques for applying colors, fonts, layout, and responsive design principles to enhance the visual presentation and usability of web pages.
CO4	Responsive Web Design: Students will understand the principles of responsive web design and learn techniques for creating websites that adapt and respond to different screen sizes and devices, including media queries, flexible grids, and fluid layouts.
CO5	Introduction to JavaScript: Students will be introduced to the basics of client-side scripting using JavaScript, including syntax, variables, data types, operators, control structures, functions, and event handling for interactive web experiences.

UNIT 1

Introduction to HTML: Overview of HTML and its role in web development, History and evolution of HTML, Understanding the structure of HTML documents, Setting up development environment (text editor, browser),HTML Basics: Basic syntax of HTML tags and elements, Creating HTML documents (DOCTYPE declaration, <html>, <head>, <body>).

UNIT 2

Text formatting tags (e.g., <p>, <h1> to <h6>, <strong>, <em>), Creating hyperlinks (<a>), images (<img>), and lists (<ul>, <ol>, <li>), HTML Semantic Elements: Introduction to semantic HTML. Using semantic elements for better accessibility and SEO. Semantic tags like <header>, <nav>, <main>, <section>, <article>, <footer>. Importance of semantic markup for screen readers and search engines.

UNIT 3

HTML Forms: Creating forms using <form> tag, Form input elements (text fields, password fields, radio buttons, checkboxes, etc.), Form submission methods (GET vs. POST), Form validation using HTML attributes (required, pattern, etc.), Tables in HTML: Creating tables using <table>, <tr>, <td>, and <th> tags, Adding headers, footers, and captions to tables, Styling tables with CSS (basic introduction). HTML5 Multimedia Elements: Embedding audio and video using <audio> and <video> tags. Using attributes for playback control and media source. Providing fallback content for unsupported browsers. HTML5 Structural Elements: Introduction to HTML5 structural elements. Using <header>, <nav>, <main>, <section>, <article>, <aside>, <footer> for layout. Creating responsive layouts with HTML5 structural elements. HTML5 Canvas and SVG Introduction to HTML5 Canvas for drawing graphics.

UNIT-4

HTML Metadata and SEO: Understanding HTML metadata tags (<title>, <meta>, <link>), Importance of metadata for search engine optimization (SEO), Adding metadata for social sharing (Open Graph protocol, Twitter Cards), HTML Accessibility: Importance of accessibility in web development. Writing accessible HTML code (semantic markup, alt attributes, tabindex, ARIA roles).Testing and validating HTML for accessibility compliance. HTML Best Practices and Optimization: Best practices for writing clean and maintainable HTML code.

UNIT-5

Optimizing HTML for performance (minification, reducing HTTP requests), Tools and techniques for HTML validation and debugging, Project Work and Case Studies: Applying HTML concepts to real-world projects. Building a website or web application using HTML. Analyzing and discussing case studies of HTML usage in popular websites.

UNIT-6

Project Work

RECOMMENDED BOOK
1. Robert W. Sebesta: World Wide Web, 4th Edition, Pearson education, 2008.
2. M. Deitel, P.J. Deitel Internet & World Wide Web How to Program, 3rd Edition, Pearson education, 2004.

Course Code	Course Name	L	T	P
		0	0	3
COE17-05	PRACTICAL-I			

Course Code	Course Name	L	T	P
		0	0	3
COE17-06	PRACTICAL-II			

Course Code	Course Name	L	T	P
		0	0	3
COE17-07	PRACTICAL-III			

Course Code	Course Name	L	T	P
		0	0	3
COE17-08	PRACTICAL-III			