



SYLLABUS OF
COMPUTER TEACHERS
TRAINING COURSE
(CTTC)



Regd. by Govt.
of India &
ISO Certified

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COURSE NAME
COMPUTER TEACHERS TRAINING COURSE (CTTC)

Eligibility : Intermediate (10+2)
Duration : 12 Months

COURSE STRUCTURE OF CTTC

PAPER CODE	SUBJECT	THEORY MARKS	PRACTICAL & PROJECT MARKS	MAX. MARKS
CTTC 601	IT TOOLS	50	50	100
CTTC 602	Introduction of Graphic designing	50	50	100
CTTC 603	Tally	50	50	100
CTTC 604	Introduction of Web Designing	50	50	100
CTTC 605	Introduction of python & project work	50	50	100
	Grand Total	250	250	500

PRACTICAL

The students have to devote half of the total time allotted to each paper of the course for the practical session. Practical assignments have been worked out for each theory paper. The Practical examination will be based on the subjects of above course.

PROJECT

Project is an important component of above course as a project provides an opportunity to the student to apply his / her knowledge and skills to real life problems. The Project is carried out by the student under guidance and support of faculty.

Aim of the Project

The aim of the project is to give the students an experience in solving a real life problem by applying knowledge and skills gained on completion of course at a given Level. It provides an occasion for students to develop written and communication skills. Project also helps the students to realize the importance of resource and time management, innovation and efficiency in task management apart from presentation skills. It also provides a good opportunity for students to build, enhance and sustain high levels of professional conduct and mind in the students. Taking up the project by a student prepares him for a job in industry and elsewhere.

Project Submission

The Project should be original, of real life value and not copied from existing material from any other source and a certificate to this effect duly signed by the Supervisor will be submitted to the institute. 50 marks are assigned to the Project so, the candidates are expected to carry out a project successfully and submit certificate in the prescribed format to the head of the institute in time.

EXAMINATION PATTERN

The theory examination for each subject under the above syllabus would be for duration of three hours and the total marks for each subject would be 100. One project & practical examination of three hours duration and 200 marks will be held. The examination with the above syllabus will be held in June of the year. Dates for the various activities connected with examinations will be announced time to time. Project & Practical work will be conducted at Institute.

Pass Percentage

To in a Subject, a candidate must obtain at least 40% in each theory and practical examination. The marks will be translated into grades, while communicating results to the candidates. The gradation structure is as below:-

Pass percentage	Grade
Failed (<40)	F
40%-59%	D
60%-69%	C
70%-79%	B
80%-89%	A
90% and over	Ex

PAPER CODE CTTC-601

IT Tools

Outline of Course

Unit No.	Topic	Minimum number of hours
1.	Introduction to Computer and It	10
2.	Operating System (DOS & Windows)	20
3.	MS- Word or Libre Office Writer	10
4.	MS-Excel or Libre Office Calc	20
5.	MS-Power Point or Libre Office Impress	20

Lectures	=	40
Practical/Tutorials	=	40
Total	=	80

Detailed Syllabus

UNIT – 1 Introduction to Computer and IT

Introduction of Computer, Data, Information, Data Processing, Brief history of development of Computers. Computer System Concept, Computer System Characteristics, Capabilities and Limitations, Types of Computer-Analog, Digital, Hybrid, General, Special Purpose, Micro, Mini, Super. Generations of Computers. Types of PCL, Computer Organization and working, basic

components of a computer System, Software & Hardware Control Unit, ALU, Input / Output Functions and characteristic, Memory-RAM, ROM, EPROM, PROM and other types of Memory, Number System & devices.

UNIT – 2 Operating System (DOS & Windows)

What is Operating System, Type of Operating System, DOS, Commands, Internal Commands, directory, and External command, what is windows? Types of Windows, Features of Windows, Creating & Deleting, File, Folders, Shortcut, Readymade Icons etc. Personalize, Pop-up-menu-, Taskbar & Start Menu, Control Panel, System Tools, Application Program etc.

UNIT- 3 MS- Word or Libre Office Writer

What is MS-Office or Libre Office? Features of MS-Office or Libre Office, Application Program of MS – Office or Libre Office, Introduction to MS-Word or Libre Office Writer: Components of MS- Word or Libre Office Writer, Creating, Saving, and opening document formatting a Document. Paragraph formats, aligning text and paragraph, Borders & Shading, header & Footer, Auto formatting, Auto correct, Bullets, numbering,. Spell check, Thesaurus, find & Replace, Inserting – page Numbers, pictures, files, Auto text, Symbols etc. Creation & working with tables, Document protection, Adding Graphics, mail merge, envelopes & mailing labels. Macros etc.

UNIT- 4 MS-Excel or Libre Office Calc

Worksheet basics, creating worksheet, entering data into worksheet, heading info, Data, text, dates, alphanumeric values, saving & quitting from worksheet. Opening & Moving around in an existing worksheet. Toolbars and Menus, keyboard shortcuts. Working with Single and multiple workbooks – coping, renaming, moving, adding, and deleting, coping entries and moving between workbooks. Auto sum - Coping Formulas – Absolute & Relative addressing. Working with ranges – Creating, editing and selecting ranges. Formatting of Worksheet – Auto Format, Changing – alignment, Character Styles, Column width, date format, borders & colors, currency sign. Graphics and Charts – Using wizards, various chart type, Formatting grid lines & legends. Previewing & printing worksheet – page setting, print titles, adjustment Margins, page break, headers and footers. Functions – Date & Time, Math's for Trigonometry, Statistical, Text and Logical functions, Database. Creating and using Macros. Database – Creation, Sorting, query & filtering a database. Multiple Worksheets – Concepts, Creating & using.

UNIT - 5 MS-Power Point or Libre Office Impress

Creating a New Presentation, Working with Presentation, using wizards, Slides & its different views, Inserting, Deleting and copying of slides, working with Notes, Handouts, Adding Graphics, Working with PowerPoint objects, designing & presentation of a slide show, printing Presentations, Notes, and Handouts with print options.

PAPER CODE ADCS-602

Introduction to Graphic designing

<u>Outline of Course</u>		
Unit No.	Topic	Minimum number of hours
1.	PageMaker Feature	20
2.	Corel Draw	20
3.	Photoshop	10

Lectures	=	25
Practical/Tutorials	=	25
Total	=	50

Detailed Syllabus

UNIT-I PageMaker Feature:

File:- New, Open, Save, Save all, Revert, Export, Place, Links, Book Preference, Page Setup, Working With Tools, Print, Exit. Edit: Copy, Paste, Multiple paste, Select all, Paste Special, Insert Object, Edit Story Utilities: Aldus Assertions, Index Entry, Show Index, Create Index, Create TOC Layout: View, Guides and rules, Column guides, Go To Page, Insert Page, Remove Page, Display master items, Auto flow. Types: Font, Size, Leading, Set width, Track, Type Style, Type Space, Paragraph, Indents/tabs, Hyphenation, Alignment, Style, Define Style, Fill and link, Rounded corners, Define colors. Windows: Arrange icons, Tile, Cascade, Tool box, Style Palette, Color Palette, Library palette Help: Contents, Search, and Shortcuts, using PageMaker Help, and Learning PageMaker 5.0, About PageMaker.

UNIT-II Corel Draw

Introduction of Corel draw, component of Corel draw, working with Tool box, import, Export, New, Open, Save, Insert object, working with property bar, working with color plate, working with Zoom, working with Shapes, Move, copy, Duplicate, cloning, Resizing and the object, Drawing grids, working with Group, Ungroup and Arrange order, Setting the page setup, page background, adding , deleting and go to page and guide lines, Fills the multiple color and outline color , Formatting Text and paragraph, Using the transform Tools, Fitting text to a path, Using the envelopes, blends, Adding, Perspective, Symbols.

UNIT-III Photoshop

Introduction of Photoshop, Component of Photoshop, working with Tool box, import a file, New, Open, Save, working with property bar, working with Color and Layers, Page setup, Image size, resolution, working with selection Tools, Path, Type and Shapes Tools, working with menu and file, working with selection menu, Cutting, Copying, Cropping resizing, Canvas and Rotating a image, working with color models, working with color and image Adjustment, working with paintbrushes, Eraser and Pencil, working with foreground and background color, Water color, Oil painting, Layer palette, Formatting Character and paragraph, Creating Drop shadows, background, Bevel and Emboss effects, Lighting effects

PAPER CODE CTTC-603 TALLY

Outline of Course

Unit No.	Topic	Minimum number of hours
1.	Working with Company in Tally	12
2.	Working with Ledger	12
3.	Working with Inventory	12
4.	Working with Voucher	12

5. Accounting with GST

12

Lectures	=	30
Practical/Tutorials	=	30
Total	=	60

Detailed Syllabus

UNIT-I WORKING WITH COMPANY IN TALLY

Introduction & Features of Tally, Computerized Accounting, Component of Tally, Using and Quitting Tally Menu, Create Company, selection of company, alter a company, shut company, Delete Company, Backup a company and restore company.

UNIT-II WORKING WITH LEDGER

Creation of a Ledger Accounts, Ledger Display, Ledger Alternation/Deletion, Additional Features, Due Date, Inventory values affected, Percentage of Tax, Method of Calculation, Calculate Tax on current sub-total, Specifying closing stock values, Credit Limits, Multiple Ledgers, ledger creation of taxation.

UNIT-III WORKING WITH INVENTORY

Creation of Go down or location, What is Stock Groups?, Creating a Stock Group, Display or Alter a Stock Group, Delete a Stock Group, Creation of Unit of Measures, Display and Altering Units for Measures, Creating, deleting & Altering, What is Stock Items?, Creating a Stock Item, Display & Alter a Stock Item, Delete a Stock Items, Inventory Features, General, Invoicing— Allow Invoicing, Debit Note / Credit Note. Maintain the Stock.

UNIT-IV WORKING WITH VOUCHER

What is Voucher? Types of Vouchers- Accounting Voucher, Inventory Voucher. **Types of Accounting Voucher** (Contra Voucher, Payment Voucher, Receipt Voucher, Journal Voucher, Sales Voucher, Purchase Voucher, Debit Note, Credit Note) Entering Vouchers, Special Keys for Voucher Narration field, **Inventory Voucher** – Purchase order, Receipt Note Voucher.

PAPER CODE CTTC-604 **INTRODUCTION to WEB DESIGNING**

Outline of Course

Unit No.	Topic	Minimum number of hours
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Detailed Syllabus

(i) **Introduction to Web Design Introduction of Internet,**

WWW, Website, Working of Websites, Webpages, Front End, Back End, Client and Server Scripting Languages, Responsive Web Designing, Types of Websites (Static and Dynamic Websites).

(ii) **Editors Downloading**

free Editors like Notepad++, Sublime Text Editor, Making use of Editors, File creation and editing, saving.

(iii) **HTML Basics**

HTML: Introduction, Basic Structure of HTML, Head Section and Elements of Head Section, Formatting Tags: Bold, Italic, Underline, Strikethrough, Div., Pre Tag Anchor links and Named Anchors Image Tag, Paragraphs, Comments, Tables: Attributes – (Border, Cell padding, Cell spacing , height , width), TR, TH, TD, Row span, Colspan Lists : Ordered List , Unordered List , Definition List, Forms, Form Elements, Input types, Input Attributes, Text Input Text Area, Dropdown, Radio buttons , Check boxes, Submit and Reset Buttons Frames: Frameset, nested Frames. HTML 5 Introduction, HTML5 New Elements: Section, Nav, Article, Aside, Audio Tag, Video Tag, HTML5 Form Validations: Require Attribute, Pattern National Institute of Electronics and Information Technology ‘O’ Level (IT) Course under DOEACC Scheme -Revision V Syllabus Revision V for ‘O’ Level (IT) Under DOEACC Scheme Page No. 23 Attribute, Autofocus Attribute, email, number type, date type, Range type, HTML embed multimedia, HTML Layout, HTML I frame

(iv) **(CSS Introduction to CSS,**

Types of CSS, CSS Selectors: Universal Selector, ID selector, Tag Selector, Class Selector, Sub Selector, Attribute Selector, Group Selector, CSS Properties: Back Ground properties, Block Properties, Box properties, List properties, Border Properties, Positioning Properties, CSS Lists CSS Tables, CSS Menu Design CSS Image Gallery,

(v) **CSS Framework**

Web Site Development using W3.CSS Framework, W3.CSS Intro, W3.CSS Colors, W3.CSS Containers, W3.CSS Panels, W3.CSSBorders, W3.CSSFonts, W3.CSS Text, W3.CSS Tables, W3.CSS List, W3.CSSImages, W3.CSS Grid

(vi) **JavaScript and Angular JS**

Introduction to Client Side Scripting Language, Variables in Java Script, Operators in JS, Conditions Statements, JS Popup Boxes, JS Events, Basic Form Validations in JavaScript. Introduction to Angular JS: Expressions, Modules and Directives.

(vii) **Photo Editor**

Features of Photo Editing: Tools: Selection Tools, Paint Tools, Transform Tools, Text Tool, Layers, Brightness/ Contrast, Improve Colors and tone, filters.

PAPER CODE CTTC-605
Introduction to Python Language & Project Work
Outline of Course

Detailed Syllabus

(i) **Introduction to Programming**

The basic Model of computation, algorithms, flowcharts, Programming Languages, compilation, testing & debugging and documentation.

(ii) **Algorithms and Flowcharts to Solve Problems**

Flow Chart Symbols, Basic algorithms/flowcharts for sequential processing, decision based processing and iterative processing. Some examples like: Exchanging values of two variables, summation of a set of numbers, Decimal Base to Binary Base conversion, Reversing digits of an integer, GCD (Greatest Common Divisor) of two numbers, Test whether a number is prime, factorial computation, Fibonacci sequence, Evaluate 'sin x' as sum of a series, Reverse order of elements of an array, Find largest number in an array, Print elements of upper triangular matrix, etc.

(iii) **Introduction to Python Python Introduction,**

Technical Strength of Python, Introduction to Python Interpreter and program execution, Using Comments, Literals, Constants, Python's Built-in Data types, Numbers (Integers, Floats, Complex Numbers, Real, Sets), Strings (Slicing, Indexing, Concatenation, other operations on National Institute of Electronics and Information Technology 'O' Level (IT) Course under DOEACC Scheme -Revision V Syllabus Revision V for 'O' Level (IT) Under DOEACC Scheme Page No. 27 Strings), Accepting input from Console, printing statements, Simple 'Python' programs.

(iv) **Operators, Expressions and Python Statements**

Assignment statement, expressions, Arithmetic, Relational, Logical, Bitwise operators and their precedence, Conditional statements: if, if-else, if-elif-else; simple programs, Notion of iterative computation and control flow –range function, While Statement, For loop, break statement, Continue Statement, Pass statement, else, assert.

(v) **Sequence Data Types**

Lists, tuples and dictionary, (Slicing, Indexing, Concatenation, other operations on Sequence data type), concept of mutability, Examples to include finding the maximum, minimum, mean; linear search on list/tuple of numbers, and counting the frequency of elements in a list using a dictionary.

(vi) **Functions**

Top-down approach of problem solving, Modular programming and functions, Function parameters, Local variables, the Return statement, DocStrings, global

statement, Default argument values, keyword arguments, VarArgs parameters. Library function-input(), eval(), print(), String Functions: count(), find(), rfind(), capitalize(), title(), lower(), upper(), swapcase(), islower(), isupper(), istitle(), replace(), strip(), lstrip(),rstrip(), aplit(), partition(), join(), isspace(), isalpha(), isdigit(), isalnum(), startswith(), endswith(), encode(), decode(), String: Slicing, Membership, Pattern Matching, Numeric Functions: eval(), max(), min(), pow(), round(), int(), random(), ceil(), floor(), sqrt(), Date & Time Functions, Recursion.

(vii) **File Processing**

Concept of Files, File opening in various modes and closing of a file, Reading from a file, Writing onto a file, File functions-open(), close(), read(), readline(), readlines(), write(), writelines(), tell(), seek(), Command Line arguments.