



**GOVERNMENT OF TAMIL NADU
DIRECTORATE OF TECHNICAL EDUCATION
GOVERNMENT TECHNICAL EXAMINATIONS**

**CERTIFICATE COURSE
IN
COMPUTER ON OFFICE AUTOMATION**

SYLLABUS

**CERTIFICATE COURSE IN COMPUTER ON OFFICE AUTOMATION
SYLLABUS**

- UNIT 1: BASICS OF COMPUTER**
- UNIT 2: OPERATING SYSTEMS
 MS-WINDOWS & LINUX**
- UNIT 3: OFFICE APPLICATIONS – I
 MS OFFICE: MS-WORD
 OPEN OFFICE: WRITER**
- UNIT 4: OFFICE APPLICATIONS - II
 MS OFFICE: MS-EXCEL
 OPEN OFFICE: CALC & MATH**
- UNIT 5: OFFICE APPLICATIONS - III
 MS OFFICE: MS-ACCESS
 OPEN OFFICE: BASE**
- UNIT 6: OFFICE APPLICATIONS - IV
 MS OFFICE: MS-POWER POINT
 OPEN OFFICE: IMPRESS**
- UNIT 7: INTERNET & ADVANCED COMMUNICATION**

Note:

1. A candidate has to complete a minimum of 120 hrs. of training.
2. MS-OFFICE 2007, Linux EduBoss-3.0 and OPEN OFFICE 3.2 to be followed for Theory and Practical Examinations.
3. No Course Material will be prepared and supplied by DOTE
4. The weightage for Theory and Practical Examinations as follows.
 - a. MS WINDOWS and MS OFFICE - 70%
 - b. LINUX and OPEN OFFICE - 30%

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DETAILED SYLLABUS – THEORY

UNIT 1:

BASICS OF COMPUTER

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, Palmtop Computer; On the basis of Processor – XT, AT & Pentium(i3, i5, i7); **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.

Computer Networks: Data Communications –Types of Computer Networks – Local Area Networks & Wide Area Networks.

UNIT 2

OPERATING SYSTEMS

Windows:

Definition of Operating System - Functions of OS - Types of OS: Single user, Multi-User, multi-task, RTOS, Single-user, Multi-tasking – **Windows Desk top** - **GUI:** Definition, Standards, Cursors/Pointers, Icons, GUI Menus, GUI-Share Data – **Desktop icons and their functions:** My computer, My documents, Network neighbourhood, Recycle Bin, Quick launch tool bar, System tray, Start menu, Task bar – **Dialog Boxes:** List Box, Spin Control Box, Slide, Drop-down list, Radio button, Check box, Text box, **Task Bar** - System Tray - Quick launch tool bar - Start button - **Parts of Windows** -Title bar-Menu bar - Scroll bar- Status bar, Maximize, Minimize, close and Resize & Moving a Window – **Windows** - Start Menu –Help Menu- Preview Menu; **Logoff & Shutdown** – **Keyboard Accelerators:** Key board short keys or hotkeys – **Working with Notepad & Wordpad:** Opening & Saving files, Formatting, Printing, Inserting objects, Finding & replacing text, Creating & Editing Images with Microsoft paint, using the Calculator – Personalising Windows.

Linux:

Linux Programming & Administration: Introduction to Linux – Features of Linux – Components of Linux – Linux process and Thread Management – File Management System; **Linux Commands and Utilities** – cat, tail, cmp, diff, wc, sort, mkdir, cd, rmdir, pwd, cp, more, passwd, who, whoami, mv, chmod, kill, write, wall, merge, mail, news – pipes, filters and redirection utilities; **System Administration:** Installing Linux – Booting the system – Maintaining user accounts – File systems and special files – Backups and restoration.

UNIT 3

OFFICE APPLICATIONS - I

Introduction to MS Office - MS Word and Open Office – Writer:

MS Word - Working with Documents -Opening & Saving files, Editing text documents, Inserting, Deleting, Cut, Copy, Paste, Undo, Redo, Find, Search, Replace, Formatting page & setting Margins, Converting files to different formats, Importing & Exporting documents, Sending files to others, Using Tool bars, Ruler, Using Icons, using help, **Formatting Documents** - Setting Font styles, Font selection- style, size, colour etc, Type face - Bold, Italic, Underline, Case settings, Highlighting, Special symbols, Setting Paragraph style, Alignments, Indents, Line Space, Margins, Bullets & Numbering. **Setting Page style** - Formatting Page, Page tab, Margins, Layout settings, Paper tray, Border & Shading, Columns, Header & footer, Setting Footnotes & end notes – Shortcut Keys; Inserting manual page break, Column break and line break, Creating sections & frames, Anchoring & Wrapping, Setting Document styles, Table of Contents, Index, Page Numbering, date & Time, Author etc., Creating Master Documents, Web page. **Creating Tables**- Table settings, Borders, Alignments, Insertion, deletion, Merging, Splitting, Sorting, and Formula, **Drawing** - Inserting ClipArts, Pictures/Files etc., **Tools** – Word Completion, Spell Checks, Mail merge, Templates, Creating contents for books, Creating Letter/Faxes, Creating Web pages, Using Wizards, Tracking Changes, Security, Digital Signature. **Printing Documents** – Shortcut keys.

Free Open Source Software:

OPEN OFFICE - WRITER: Introduction to Open Office Suite - Selecting the application package, Working with Documents- Formatting Documents - Setting Page style- Creating Tables - Drawing- Tools - Printing Documents - Operating with MS Word documents.

UNIT 4

OFFICE APPLICATIONS - II

Introduction to MS Office – MS Excel and Open Office – Calc:

MS Excel: Spread Sheet & its Applications, Opening Spreadsheet, Menus - main menu, Formula Editing, Formatting, Toolbars, Using Icons, Using help, Shortcuts, Spreadsheet types. Working with Spreadsheets- opening, Saving files, setting Margins, Converting files to different formats (importing, exporting, sending files to others), Spread sheet addressing - Rows, Columns & Cells, Referring Cells & Selecting Cells – Shortcut Keys. **Entering & Deleting Data-** Entering data, Cut, Copy, Paste, Undo, Redo, Filling Continuous rows, columns, Highlighting values, Find, Search & replace, Inserting Data, Insert Cells, Column, rows & sheets, Symbols, Data from external files, Frames, Clipart, Pictures, Files etc, Inserting Functions, Manual breaks, **Setting Formula** - finding total in a column or row, Mathematical operations (Addition, Subtraction, Multiplication, Division, Exponentiation), Using other Formulae. **Formatting Spreadsheets-** Labelling columns & rows, Formatting- Cell, row, column & Sheet, Category - Alignment, Font, Border & Shading, Hiding/ Locking Cells, Anchoring objects, Formatting layout for Graphics, Clipart etc., Worksheet Row & Column Headers, Sheet Name, Row height & Column width, Visibility - Row, Column, Sheet, Security, Sheet Formatting & style, Sheet background, Colour etc, Borders & Shading – Shortcut keys. **Working with sheets** – Sorting, Filtering, Validation, Consolidation, and Subtotal. **Creating Charts** - Drawing. **Printing, Using Tools** – Error checking, Spell Checks, Formula Auditing, Creating & Using Templates, Pivot Tables, Tracking Changes, Security, Customization.

OpenOffice-Calc - Introduction – Introduction to Spreadsheets, Overview of a Worksheet, Creating Worksheet & Workbooks, Organizing files, Managing files & workbooks, Functions & Formulas, Working with Multiple sheets, Creating Charts & Printing Charts – Operating with MS Excel documents, which are already created and saved in MS Excel.

UNIT 5

OFFICE APPLICATIONS - III

Introduction to MS Office-MS Access and Open Office-Base:

MS Access: Introduction, Planning a Database, Starting Access, Access Screen, Creating a New Database, Creating Tables, Working with Forms, Creating queries, Finding Information in Databases, Creating Reports, Types of Reports, Printing & Print Preview – Importing data from other databases viz. MS Excel etc.

OpenOffice-Base – Introduction- Database Concepts – Creating a New Database, Creating Tables, Working with Forms, Creating queries, Finding Information in Databases, Creating Reports, Types of Reports, Printing and Printing preview – Operating with other databases i.e. MS Access etc.

UNIT 6

OFFICE APPLICATIONS - IV

Introduction to MS Office-MS Power Point and Open Office-Impress:

MS Power point: Introduction to presentation – Opening new presentation, Different presentation templates, Setting backgrounds, Selecting presentation layouts. **Creating a presentation** - Setting Presentation style, Adding text to the Presentation. **Formatting a Presentation** - Adding style, Colour, gradient fills, Arranging objects, Adding Header & Footer, Slide Background, Slide layout. Adding Graphics to the Presentation- Inserting pictures, movies, tables etc into presentation, Drawing Pictures using Draw. **Adding Effects to the Presentation-** Setting Animation & transition effect. **Printing Handouts,** Generating Standalone Presentation viewer.

OpenOffice-Impress - Introduction – Creating Presentation, Saving Presentation Files, Master Templates & Re-usability, Slide Transition, Making Presentation CDs, Printing Handouts – Operating with MS Power Point files / slides.

UNIT 7

INTERNET & ADVANCED COMMUNICATION

Internet and Web Browsers: Definition & History of Internet - Uses of Internet - Definition of Web-Addressing-URL-Different types of Internet Connections; Dial up connection, Broad band (ISDN, DSL, Cable), Wireless (Wi-Fi, WiMax, Satellite, Mobile) naming convention, browsers and its types, internet browsing, searching - Search Engines - Portals - Social Networking sites- Blogs - viewing a webpage, downloading and uploading the website; Creating an email-ID, e-mail reading, saving, printing, forwarding and deleting the mails, checking the mails, viewing and running file attachments, addressing with cc and bcc.

Introduction to various devices & Applications: Other than the computers, (electronic gadgets), which are widely using by executives in the Offices – Tablet, Smart Phone – concept of mobile phone and Tablet and their uses – Various applications using by Tablets and Smart Phones such as UC browser, WhatsApp, Maps, Skype.

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SYLLABUS – PRACTICAL

SUGGESTED HANDS ON EXERCISES

OPERATING SYSTEM

1. Starting the Windows
Starting a program, running a program
Running multiple programs and switching between windows
Customizing the Task bar
Recycle bin, restoring the deleted files
2. Creating and removing folders
Making the taskbar wider, arranging icons on the Desktop
Displaying and hiding the taskbar clock
Controlling the size of start menu options
Creating Shortcuts.
3. Installing a screen saver
Assigning a wallpaper to Desktop
Adding a program to the start menu
Adding a program shortcut in the Desktop
Customizing the mouse settings
4. Expanding and collapsing a folder
Recognizing File types using icons
Running a program from explorer
Renaming a file or folder
Sorting a folder
5. Displaying the properties for a file or folder
Using cut and paste operations to move a file
Using copy and paste operations to copy a file
Moving and copying files with mouse
Searching a file or folder by using search command
6. Finding a file or folder, by name
Defragmenting the disk, using disk defragmenter
Controlling the speaker volume
Recording and saving an audio file
Connecting a printer to the PC
7. Booting Linux, Maintaining User accounts
Creating folders, renaming folders and files
Copying, moving, deleting files
Taking backups and restoration of files
Practicing the commands like passwd, who, whoami, kill, write etc.

SUGGESTED HANDS ON EXERCISES

OFFICE APPLICATIONS - I

8. Preparing a Govt. Order / Official Letter / Business Letter / Circular Letter
Covering formatting commands - font size and styles - bold, underline, upper case, lower case, superscript, subscript, indenting paragraphs, spacing between lines and characters, tab settings etc.
9. Preparing a news letter:
To prepare a newsletter with borders, two columns text, header and footer and inserting a graphic image and page layout.
10. Creating and using styles and templates
To create a style and apply that style in a document
To create a template for the styles created and assemble the styles for the template.
11. Creating and editing the table
To create a table using table menu
To create a monthly calendar using cell editing operations like inserting, joining, deleting, splitting and merging cells
To create a simple statement for math calculations viz. Totalling the column.
12. Creating numbered lists and bulleted lists
To create numbered list with different formats (with numbers, alphabets, roman letters)
To create a bulleted list with different bullet characters.
13. Printing envelopes and mail merge.
To print envelopes with from addresses and to addresses
To use mail merge facility for sending a circular letter to many persons
To use mail merge facility for printing mailing labels.
14. Using the special features of word
To find and replace the text
To spell check and correct.
To generate table of contents for a document
To prepare index for a document.
15. Create an advertisement
Prepare a resume.
Prepare a Corporate Circular letter inviting the share holders to attend the Annual Meeting.

SUGGESTED HANDS ON EXERCISES

OFFICE APPLICATIONS - II

16. Using formulas and functions:
To prepare a Worksheet showing the monthly sales of a company in different branch offices (Showing Total Sales, Average Sales).
Prepare a Statement for preparing Result of 10 students in 5 subjects (using formula to get Distinction, I Class, II Class and Fail under Result column against each student).
17. Operating on the sheets:
Finding, deleting and adding records, formatting columns, row height, merging, splitting columns etc. Connecting the Worksheets and enter the data.
18. Creating a Chart:
To create a chart for comparing the monthly sales of a company in different branch offices.

19. Using the data consolidate command:
To use the data consolidate command to calculate the total amount budgeted for all departments (wages, travel and entertainment, office supplies and so on) or to calculate the average amount budgeted for – say, department office expenses.
20. Sorting Data, Filtering Data and creation of Pivot tables.

SUGGESTED HANDS ON EXERCISES

OFFICE APPLICATIONS - III

21. Creating Student's address Database and then list the data on the screen in alphabetical order.
22. Performing various queries.
23. Generating Query in Access
24. Generating the Report from Database
25. Importing and exporting data.

SUGGESTED HANDS ON EXERCISES

OFFICE APPLICATIONS - IV

26. Creating a new Presentation based on a template – using Auto content wizard, design template and Plain blank presentation.
27. Creating a Presentation with Slide Transition – Automatic and Manual with different effects.
28. Creating a Presentation applying Custom Animation effects –
Applying multiple effects to the same object and changing to a different effect and removing effects.
29. Creating and Printing handouts.

SUGGESTED HANDS ON EXERCISES

OFFICE APPLICATIONS - V

30. Searching for a web site / application / text documents viewing and downloading.
31. Create an E-mail account, Retrieving messages from inbox, replying, attaching files filtering and forwarding
32. Operating on a Tablet / Smart Phone - browsing and practising on some important applications (UcBrowser, Skype) - operating on internet – creating and sending messages / mails using the applications like WhatsApp and WeChat - downloading text and media files and video conferencing using Skype.

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SCHEME OF VALUATION AND PATTERN OF QUESTION PAPER

THEORY EXAMINATION

Time: 2 Hrs.

Max. Marks: 100

Min. Marks to pass: 40

Sl. No.	Type of the Questions	No of Questions	Marks per Question	Total marks for this division
1.	Fill in the blanks	10	1	10
2.	Matching the pairs	10	1	10
3	Multiple choice questions	10	1	10
4	True or False	10	1	10
5	One or Two line descriptive type questions	15	2	30
6	Short answer descriptive type questions (Each question will have two subdivisions out of which one has to be answered)	6	5	30
			Total	100

PRACTICAL EXAMINATION

Time: 2 Hrs.

Max. Marks: 100

Min. Marks to pass: 50

Distribution of Marks: In the Practical Examination, Question Paper should be in two Parts
i.e. Part A comprising 3 questions and
Part B comprising 2 questions.

i.	Part A	:	30 Marks
ii.	Part B	:	60 Marks
iii.	Viva-voce	:	05 Marks
iv.	Record Note	:	05 Marks
Total			100 Marks

Note: Record Note should be hand written. Each exercise should state clearly the aim of the exercise, Procedure followed (how to do the exercise, sequence of steps) and its Output.

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Suggested reading and reference books:

1. Fundamentals of computers - V.Rajaraman - Prentice- Hall of india
2. Microsoft Office 2007 Bible - John Walkenbach,Herb Tyson,Faithe Wempen,cary N.Prague,Michael R.groh,Peter G.Aitken, and Lisa a.Bucki -Wiley India pvt.ltd.
3. The complete reference Linux - Richard petersen - Tata McGraw - Hill Edition
4. A Conceptual Guide to OpenOffice.org 3 - R. Gabriel Gurley- CreateSpace Independent Publishing Platform, 2008
5. Introduction to Information Technology - Alexis Leon, Mathews Leon, and Leena Leon, Vijay Nicole Imprints Pvt. Ltd., 2013.
6. Computer Fundamentals - P. K. Sinha Publisher: BPB Publications
7. Operating System Concepts - by Abraham Silberschatz, Greg Gagne, and Peter Baer Galvin Publisher: Wiley; 8 edition (July 29, 2008)
8. Computer Networking 6th ed. - J.F. Kurose and K.W. Ross - Pearson;
9. Data Communications and Networking - Behrouz A. Forouzan, 2nd Edition - McGraw Hill Education;
10. Discovering the Internet: Complete - Shelly Cashman 4th Edition - Course Technology
11. Computer & Internet Basics Step-by-Step - Etc-end the Clutter - Infinity Publishing
12. <https://en.wikipedia.org>
13. <https://bosslinux.in/sites/default/files/BOSS4.0-Usermanual.pdf> (For EduBOSS3.0)
14. <https://wiki.openoffice.org/wiki/Documentation>
15. <http://windows.microsoft.com/en-in/windows/windows-basics-all-topics>