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**CERTIFICATE COURSE IN
COMPUTER ON OFFICE AUTOMATION**

SYLLABUS

(To be implemented from August 2022 Examinations)

**DIRECTORATE OF TECHNICAL EDUCATION,
CHENNAI-600 025, Tamil Nadu**

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 & INTRODUCTION TO VARIOUS DEVICES AND
TOOLS**

Note:

1. A candidate has to complete a minimum of 120 hrs. of training.
2. WIDOWS 10, EduBOSS 4.1 MS-OFFICE 2010 and OpenOffice_4.1.12 to be followed for Theory and Practical Examinations.
3. The approximate weightage for Theory and Practical Examinations as follows.
MS WINDOWS and MS OFFICE - 70%
LINUX and OPEN OFFICE - 30%

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, SSD, CD, DVD, Blue ray Disc, Pen Drive Magnetic tape & Zip disk ;- **CPU:** Components of CPU - Mother board, Hard disk, SSD, RAM, ROM, Processor, SMPS & Connecting wire - Graphics Card, Sound Card, Network Card - Modem; **Input, Output devices:** Keyboard, Mouse, Scanner, Digital Camera, Joystick, Graphic Tablet, Monitor, Printer, Plotter - Connecting port - Serial, parallel port - USB port - Installation of scanner and printer - connecting monitor, mouse, keyboard to system unit

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

System Administration: Installing Windows- Booting the system - Maintaining user accounts - File systems and special files - Backups and restoration.

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

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.

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 & INTRODUCTION TO VARIOUS DEVICES AND TOOLS

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

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, 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(electronic gadgets), which are widely using by executives in the Offices:- Tablet, Smart Phone – concept of mobile phone and Tablet and their uses Applications of Google forms, Google sheets, Google slides, – scan an image using scanner and edit it using tools available by default in windows and Linux operating systems

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	15/18	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

OPERATING SYSTEM

1. Starting a program, running a program
Running multiple programs and switching between windows
Running a program from explorer
2. Customizing the Task bar, Making the taskbar wider
Controlling the size of start menu options
Adding a program to the start menu
3. Recycle bin, restoring the deleted files
Arranging icons on the Desktop
Creating Shortcuts. Adding a program shortcut in the Desktop
4. Creating and removing folders, renaming folders and files
Expanding and collapsing a 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
6. Moving and copying files with mouse
Searching a file or folder by using search command
Recognizing File types using icons
7. Recording and saving an audio file
Connecting a printer to the PC
Capturing and saving entire monitor screen & active program window as images

MS OFFICE: MS-WORD & OPEN OFFICE: WRITER

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. totaling 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.

MS OFFICE: MS-EXCEL & OPEN OFFICE: CALC & MATH

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.

MS OFFICE: MS-ACCESS OPEN OFFICE: BASE

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.

MS OFFICE: MS-POWER POINT & OPEN OFFICE: IMPRESS

- 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.

INTERNET & INTRODUCTION TO VARIOUS DEVICES AND TOOLS

- 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. Create Google form to collect data
- 33. Create Google sheet to collect data
- 34. Scan a photo using scanner and edit it using tools available in operating system by default.

* * *

Time: 2 Hrs. Max. Marks: 100 Min. Marks to pass: 50

Distribution of Marks:

In the Practical Examination, Question Paper has three exercises carries equal marks.

i. Lab exercise (3x30)	:	90 Marks
ii. Viva-voce	:	05 Marks
iii. 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 and its Output.

Practical record note book

1. Record note book must be in A4 size only.
2. Cover page, Certificate page, table of content (index) page should be in the format given in the syllabus only.
3. Record note book must be hand written by the candidate, output may be in printed form.
4. Record must be either in hard bound or spiral bound or soft bound
5. All exercises should be written in the record book as per syllabus.
6. Private candidates has to submit their Record Note books to the Chief Superintendent of the Examination Centre 10 days before the commencement of COA Examinations.

DIRECTORATE OF TECHNICAL EDUCATION

Guindy, Chennai -25.

LABORATORY RECORD BOOK SUBMITTED IN PARTIAL FULFILLMENT
FOR THE AWARD OF THE CERTIFICATE OF

**Certificate Course
in
Computer on Office Automation**

Name :

Registration Number :

Name of centre :

Certificate Course in Computer on Office Automation

CERTIFICATE

Certified that this is the bonafide record of work done by _____ Reg. No _____ in the certificate course in Computer on Office Automation Laboratory and submitted for the August/February 20__ Examination held at the examination centre _____

Submitted for the practical examination held on _____

Staff Incharge

Record marks

Internal Examiner

External Examiner

CONTENTS

Sl. No	Date	Name of the Exercise	Page no.	Signature

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Left side page

Output:

Right side page

Ex No:

TITLE OF EXERCISE

Date:

Aim:

Proedure:

(how to do the exercise, sequence of steps)

Result: