**ANNEXURE**

**STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU**

**DIPLOMA IN ENGINEERING / TECHNOLOGY SYLLABUS**

**N-SCHEME**

(Implements from the Academic year 2019-2020 onwards)

Course Name : All branches of Diploma in Engineering and Technology and Special Programmes except DMOP, HMCT and film & TV.

Subject Code : **40001**

Semester : I Semester (Non-Circuit Branches), II Semester (Non-Circuit Branches)

Subject Title : **Computer Application Practical**

**TEACHING AND SCHEME OF EXAMINATION**

Number of weeks per semester: 15 weeks

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Subject | Instructions | | Examination | | | |
| COMPUTER APPLICATION  PRACTICAL | Hours / Week | Hours / Semester | Marks | | | Duration |
| 3 Hrs. | 45 Hrs. | Internal Assessment | Board Examination | Total |
| 25 | 100 | 100 | 3 Hrs. |

**Topics and Allocation of Hours**

|  |  |  |
| --- | --- | --- |
| Sl. No. | Topic | Time (Hrs.) |
| 1 | Word Processing | 15 Hrs. |
| 2 | Spread Sheets | 15 Hrs. |
| 3 | Power Point Presentations | 9 Hrs. |
| 4 | Drafting | 6 Hrs. |
| **Total** | | **45 hrs.** |

# OBJECTIVES:

# On completion of the exercises, the students must be able to

# Use the different facilities available in the word processor

# Analyze the data sheet

# Prepare PowerPoint presentation

# Practice on Computer Aided Drafting.

# Word Processing 15 Hrs.

Creating new document – Opening an existing document – Edit & Save a document – Typing a text – Deleting a text – Inserting a text – Finding a text – Replacing a text – Copying & Moving a text – Selecting Font & Font Size – Justifying Texts – Bold – Italic – Underline – Strike – Double Strike – Coloring Text – Spell Check – Ruler – Formatting Page – Line Spacing – Margins – Page Size – Page Border – Page Color – Page Columns – Watermark – Page Break – Section Break – Portrait – Landscape – Inserting Symbols, Equations & Shapes – Text Box – Word Art – Hyperlink – Inserting Pictures – Picture Arrangement - Align Objects – Bullets & Numbering – Working with Tables – Header & Footer – Table of Contents – Inserting Page Number – Changing Character width & Line Spacing – Printing the document – Print Preview – Shortcuts for various activities in Word.

**EXERCISES**

1. Prepare seminar report from the given printed document of minimum 500 words.

(Use text formatting tools, header & footer, page number, line spacing, font, tables, images and table of content.) \*

1. Create a resume for placement from the given printed template with your personal details. Publish a copy of the resume as PDF and send the same to the given email. \*

# Create a standard covering letter and use mail merge to generate the customized letters for applying to a job in various organizations. Also, create a database and generate labels for the applying organizations.

# Spreadsheet 15 hrs.

Creating a new worksheet - Opening an existing worksheet - Editing and Saving a worksheet - Creating, Renaming and Deleting worksheets in a workbook - Types of data like Numeric, text etc. - Entering in a cell - Manipulation of a cell, row and column (deleting, inserting, finding, replacing, copying and moving) - Justifying in a cell, Merging cells and columns - Addition, Subtraction and using formula - Selecting Font and Font Sizes - Using and manipulating tables, inserting / deleting of rows and columns - Sorting Columns - Using Header and footer, Inserting Page number - Border and Shading of cells, rows and columns - Formatting page, margins, page size, portrait and landscape - Selecting area for printing, Printing of a worksheet and workbooks, Using print preview - Copy / moving text between two different worksheets and workbooks - Using Chart Wizard, Creation of different types of charts – Protect excel sheet using password - Shortcuts for various activities in Microsoft Excel.

**EXERCISES**

1. Create a worksheet for the given relational data (minimum ten records) and show the data in the Line Chart, Bar Chart and Pie Chart. \*
2. Create a worksheet for the given data with various functions like Sum, Average, Count, Min, Max, Logical functions [IF, AND, OR and NOT] & Round functions. \*
3. Create a worksheet for the given data and analysis the data with various filters and conditional formatting. \*

# Presentation 9 hrs.

Creating New Presentations - Opening Presentations - Saving Presentation - Inserting new Slides - Slide Layout - Slide Design - Presentation View - Adding Text - Font formatting - Paragraph formatting – Inserting Clipart & Pictures - Inserting and Manipulating Smart Art - Running a slide show - - Insert Slide Number - Slide Header & Footer - Applying Slide Animation – Custom Animation - Inserting Shapes - Insert Video & Sound - Insert Action - Hyperlinks - Charts - Tables –Page Setup - Print Preview - Printing - Shortcuts of various activities in power point.

**EXERCISES**

1. Create a power point of 15 slides from a topic to present in a presentation.

## Create a power point presentation of 10 slides about your college with Slide & Custom Animation, Shapes, Header & Footer, Slide number, Video, Audio, Picture, Tables and Hyperlink between slides.

**Drafting 6 hrs.**

Introduction – Applications of computer in drafting – Advantages over manual drafting – Hardware requirement – Software requirement – Windows desktop – screen interface – menus – Tool bars – How to start drafting package – How to execute command –types of co-ordinate systems – Absolute – Relative – Polar.

**DRAWING AND EDITING COMMANDS**

Creating objects (2D) – Using draw commands – Drawing with precision – Osnap options – drafting settings – drawing aids – Fill, Snap, Grid, Ortho lines – Function keys - Editing and modify commands – Object selection methods –Erasing object – Oops - Cancelling and undoing a command – Copy – Move – Array – Offset – Scale – Rotate – Mirror – Break – Trim – Extend – Explode - Divide – Measure – stretch – Lengthen – Change properties – Color – line types –LT scale – Creating text – Editing text – Dimensioning – Methods of dimensions.

**EXERCISES**

## Create Two Simple 2D engineering drawings \*

## (Practice Minimum 10 component drawings for practice)

**Note:**

**\* Hard copy of the data / drawing related to the exercise should be given to the students based on the requirements**.

**40001 – COMPUTER APPLICATION PRACTICAL**

**BOARD EXAMINATION**

**Note:**

1. **Required minimum hardware and software facilities should be provided to the students. The students should be given proper training in all the sections. All the exercises should be completed. The students should maintain observation and record notebook and submit during the Board Practical Examinations.**
2. **Any one exercise should be given by lot for the Board Practical Examination.**
3. **The hard copy of the data / drawing required for exercise should be provided by the examiner with the question paper.**

##### **DETAILED ALLOCATION OF MARKS**

###### **Board Practical Examination: 100 Marks**

|  |  |
| --- | --- |
| **Content** | **Mark Allotted** |
| Procedure | 15 |
| Data entry / Formatting / Creation | 30 |
| Demonstration / Execution | 35 |
| Output / Printout / Handout | 15 |
| Viva voce | 5 |
| **Total Marks** | **100** |

###### **Internal Assessment: 25 Marks**

|  |  |
| --- | --- |
| **Content** | **Mark Allotted** |
| Observation | 10 |
| Record | 10 |
| Attendance | 5 |
| **Total Marks** | **25** |

**40001 – COMPUTER APPLICATION PRACTICAL**

**EQUIPMENT REQUIRED**

**Minimum Hardware Requirements:**

1. Desktop Computers: 30 Nos.

(1 GHz Processor, 1 GB RAM, 500 GB HDD, 15” Monitor, Keyboard & Mouse)

1. Projector: 1 No.
2. Laser Printer: 1 No.
3. Internet Connection: 1Mbps. [Available as per AICTE]

**Minimum Software Requirements:**

1. Operating System: Any GUI Operating System
2. Office Packages: 30 users
3. Drafting Packages: 30 users