

BASIC DATA ENTRY OPERATOR

(Subject Code: 67)

(Sector: Information Technology)

OVERVIEW

Basic Data Entry Operator in the IT-ITeS Industry is also known as Data Entry Operator. These individuals are responsible for entering data into different computer databases. Individual tasks vary depending on the size and structure of the organization. This job requires the individual to have thorough knowledge of various technology trends and processes as well as have updated knowledge about database management systems and IT initiatives. The individual should be fast and accurate in typing/data encoding. This job involves entering data, checking accuracy of data that has been inputted, resolving discrepancies in information, and obtaining further information. These individuals are also responsible for creating back-ups and retrieval of information upon request.

OUTCOMES:

On completion of the course, students should be able to:

- apply effective oral and written communication skills to interact with people and customers;
- demonstrate self-management skills;
- demonstrate the ability to provide self-analysis in context of entrepreneurial skills and abilities;
- demonstrate the knowledge of the importance of green skills in meeting the challenges of sustainable development and environment protection;
- work safely on a computer;
- identify the principal components of a computer system;
- demonstrate the basic skills of using a computer;
- start the computer;
- open and use the related software;
- exit from the software;
- shut down the computer;
- use the computer for data entry process;
- collect all necessary information about the query;
- log any decision about the query on the data entry tracking form;
- follow rules and guidelines for data entry;
- handle queries;
- undertake data entry with speed and accuracy;
- identify and control hazards in the workplace that pose a danger or threat to their safety or health or that of others.

Class IX

There will be **one** written paper of **two hours** duration carrying 100 marks and Internal Assessment of Practical of 100 marks.

COURSE STRUCTURE:

PART I: THEORY – 100 MARKS

Employability Skills – 30 Marks

Unit 1: Communication Skills – I

Unit 2: Self-management Skills – I

Unit 3: Basic Information and Communication Technology Skills – I

Unit 4: Entrepreneurial Skills – I

Unit 5: Green Skills – I

Vocational Skills – 70 Marks

Unit 6: Introduction to IT-ITeS Industry

Unit 7: Data Entry & Keyboarding Skills

Unit 8: Digital Documentation (Elementary)

Unit 9: Electronic Spreadsheet (Elementary)

Unit 10: Digital Presentation

PART II: INTERNAL ASSESSMENT (PRACTICAL) – 100 MARKS

Practical Work – 70 Marks

Practical Examination – 40 Marks

Practical File – 10 Marks

Viva Voce (based on Practical Examination/File) – 20 Marks

Project Work – 30 Marks

Report of Field Visit/Project – 10 Marks

Student Portfolio – 10 Marks

Viva Voce (based on Report of Field Visit/Student Portfolio/Project) – 10 Marks

PART I: THEORY – 100 MARKS

Employability Skills

Unit-1: Communication Skills – I

Learning Outcome 1.1: Demonstrate knowledge of various methods of communication

Theory	Practical
- Methods of communication: - Verbal - Non-verbal - Visual	- Writing pros and cons of written, verbal, and non-verbal communication - Listing dos and don'ts for avoiding common body language mistakes

Learning Outcome 1.2: Identify elements of communication cycle

Theory	Practical
- Meaning of communication - Importance of communication skills - Elements of communication cycle: - Sender - Ideas - Encoding - Communication channel - Receiver - Decoding - Feedback	- Draw a diagram of communication cycle - Role plays on communication process related to the sector/job role

Learning Outcome 1.3: Identify the factors affecting our perspectives in communication

Theory	Practical
- Perspectives in communication - Factors affecting perspectives in communication: - Visual perception - Language - Past experience - Prejudices - Feelings - Environment	- Group discussion on factors affecting perspectives in communication - Sharing of experiences on factors affecting perspectives - Sharing experiences on factors affecting communication at workplace

Learning Outcome 1.4: Demonstrate the knowledge of basic writing skills

Theory	Practical
- Writing skills related to the following: - Phrases - Kinds of sentences - Parts of sentence - Parts of speech - Use of articles - Construction of a paragraph	Demonstration and practice of writing sentences and paragraphs on topics related to the subject

Unit-2: Self-management Skills – I**Learning Outcome 2.1: Describe the meaning and importance of self-management**

Theory	Practical
- Meaning of self-management - Positive results of self-management - Self-management skills	- Identification of self-management skills - Strength and weakness analysis

Learning Outcome 2.2: Identify the factors that help in building self-confidence

Theory	Practical
- Factors that help in building self-confidence – social, cultural, and physical factors - Self-confidence building tips – getting rid of the negative thoughts, thinking positively, staying happy with small things, staying clean, hygienic, and smart, chatting with positive people, etc.	- Role play exercises on building self-confidence - Use of positive metaphors/words - Positive stroking on waking up and before going to bed - Helping others and working for community

Unit-3: Basic Information and Communication Technology Skills – I**Learning Outcome 3.1: Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace**

Theory	Practical
- Introduction to ICT - Role and importance of ICT in personal life and at the workplace - ICT in our daily life (examples) - ICT tools – mobile, tab, radio, TV, email, etc.	- Discussion on the role and importance of ICT in personal life and at the workplace - Preparing posters/collages for showing the role of ICT at workplace

Learning Outcome 3.2: Identify components of basic computer system and their functions

Theory	Practical
1. Computer system - Central Processing Unit (CPU), memory, motherboard, storage devices 2. Hardware and software of a computer system 3. Role and functions of Random Access Memory (RAM) and Read-only Memory (ROM) 4. Role and functions of Central Processing Unit 5. Procedure for starting and shutting down a computer	▪ Connecting the cables and peripherals to the Central Processing Unit ▪ Starting and shutting down a computer ▪ Group discussion on the various aspects of hardware and software

Learning Outcome 3.3: Demonstrate use of various components and peripherals of a computer system

Theory	Practical
1. Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system	▪ Identification of various parts and peripherals of a computer ▪ Demonstration and practice on the use of a mouse ▪ Demonstration and practice on the use of a keyboard ▪ Demonstration of the use of printers, webcams, scanner, and other peripheral devices ▪ Drawing a diagram of a computer system and labelling it

Learning Outcome 3.4: Demonstrate basic computer skills

Theory	Practical
1. Primary operations on a computer system – input, process, storage, output, communication, networking, etc.	▪ Identification of the various input and output units and explanation of their purposes

Unit-4: Entrepreneurial Skills – I**Learning Outcome 4.1: Identify various types of business activities**

Theory	Practical
1. Types of businesses – service, manufacturing, hybrid 2. Types of businesses found in our community, business activities around us	▪ Prepare posters of business activities found in cities/villages, using pictures ▪ Discuss the various types of activities, generally adopted by small businesses in a

	local community ▪ Best out of waste ▪ Costing of the product made from waste ▪ Selling of items made from waste materials ▪ Prepare list of businesses that provide goods and services in exchange for money
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Learning Outcome 4.2: Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

Theory	Practical
1. Meaning of entrepreneurship development 2. Distinguishing characteristics of entrepreneurship 3. Role and rewards of entrepreneurship	▪ Prepare charts showing advantages of entrepreneurship over wages ▪ Group discussions on the role and features of entrepreneurship ▪ Lectures/presentations by entrepreneurs on their experiences and success stories ▪ Identify core skills of successful entrepreneurs

Unit-5: Green Skills – I

Learning Outcome 5.1: Demonstrate the knowledge of the factors influencing natural resource conservation

Theory	Practical
1. Introduction to the environment 2. Relationship between society and environment, ecosystem and factors causing imbalance 3. Natural resource conservation 4. Environment protection and conservation	▪ Group discussion on hazards of deteriorating environment ▪ Prepare posters showing environment conservation ▪ Discussion on various factors that influence our environment

Learning Outcome 5.2: Describe the importance of green economy and green skills

Theory	Practical
1. Definition of green economy 2. Importance of green economy	▪ Discussion on the benefits of green skills and importance of green economy ▪ Prepare a poster showing the importance of green economy with the help of newspaper/magazine cuttings

Vocational Skills

Unit-6: Introduction to IT–ITeS Industry

Learning Outcome 6.1: Appreciate the application of IT in IT-ITeS industry

Theory	Practical
1. Introduction to IT and ITeS 2. BPO services 3. BPM industry in India 4. Structure of the IT-BPM industry 5. Applications of IT in home computing, everyday life, library, workplace, education, entertainment, communication, business, science and engineering, banking, insurance, marketing, health care, IT in the government and public service	▪ Identify and list the various IT-enabled services ▪ Observe the application of IT in various areas

Unit-7: Data Entry and Keyboarding Skills

Learning Outcome 7.1: Use data entry tools, keyboard, and mouse

Theory	Practical
1. Keyboarding Skills 2. Types of keys on a keyboard 3. Numeric keypad 4. Home keys, guide keys 5. Typing and deleting text 6. Typing ergonomics 7. Positioning of fingers on the keyboard 8. Allocation of keys to fingers on four different rows 9. Pointing device – mouse 10. Mouse operations	▪ Identify the keys and their use on the keyboard ▪ Demonstrate to use various keys on the keyboard ▪ Demonstrate to type the text, numbers, special characters using appropriate keys on the keyboard ▪ Practice the correct typing ergonomics ▪ Practice to place fingers on correct keys in four different rows of the keyboard ▪ Practice various mouse operations

Learning Outcome 7.2: Use typing software

Theory	Practical
1. Introduction to Rapid Typing Tutor 2. Touch typing technique 3. User interface of Typing Tutor 4. Typing text and interpreting results 5. Working with lesson editor 6. Calculating typing speed 7. Typing rhythm	▪ Identify the user interface of Typing Tutor ▪ Practice to type text in Typing Tutor software and interpret the results ▪ Practice to work in lesson editor ▪ Calculate the typing speed ▪ Practice to improve typing using Typing Tutor software

Unit-8: Digital Documentation (Elementary)

Learning Outcome 8.1: Start the word processing application

Theory	Practical
1. Introduction to word processing 2. Word processing applications 3. Introduction to LibreOffice Writer 4. Starting LibreOffice Writer 5. Creating a document 6. Parts of Writer window 7. Cursor and mouse pointer	▪ List the available word processing applications ▪ Introduce with the parts of the main window ▪ Change document views, start a new document ▪ Open an existing document ▪ Save a document ▪ Close a document ▪ Use the Navigator

Learning Outcome 8.2: Edit the document

Theory	Practical
1. Text editing – undo and redo 2. Moving and copying text 3. Copy and paste 4. Selecting text 5. Selection criteria 6. Selecting non-consecutive text items 7. Selecting a vertical block of text 8. Find and replace option 9. Jumping to a page number 10. Non-printing characters 11. Checking spelling and grammar 12. Using synonyms and the thesaurus	▪ Type some text in the document and edit it ▪ Demonstrate to use undo and redo options ▪ Use the keyboard and mouse options to select, cut, copy, paste, and move text ▪ Demonstrate to select non-consecutive text items, vertical block of text ▪ Search the word from the text and replace it with another word ▪ Jump to the given page number in a document ▪ Insert non-printing characters in a document ▪ Check spelling and grammar and apply the changes to the document ▪ Demonstrate to use synonyms and thesaurus

Learning Outcome 8.3: Format the document

Theory	Practical
1. Page style dialog box 2. Formatting text - removing manual formatting, common text formatting, changing text case, superscript and subscript 3. Formatting paragraph – indenting paragraphs, aligning paragraphs, font colour, highlighting, and background colour 4. Using bullets and numbering 5. Assigning colour, border, and background to a	▪ Apply various text formatting options for the text ▪ Demonstrate to format paragraphs – indent/align paragraphs, assign font colour, highlighting, and background colour ▪ Assign numbers or bullets to the list items ▪ Demonstrate to assign colour, border, and background to paragraph ▪ Demonstrate page formatting – set up basic

paragraph 6. Page formatting – setting up basic page layout using styles, inserting page break, creating header/footer and page numbers, defining borders and backgrounds, inserting images, shapes, special characters in a document, dividing a page into columns, formatting the shape or image	page layout using styles, insert page break, create header/footer and page numbers, define borders and backgrounds, insert images, shapes, special characters in a document, divide a page into columns, format the shape or image
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Learning Outcome 8.4: Create and use a table

Theory	Practical
1. Creating a table in Writer 2. Inserting row and column in a table 3. Deleting rows and columns 4. Splitting and merging tables 5. Deleting a table 6. Copying a table 7. Moving a table	▪ Demonstrate and do the following in Writer: - Create a table - Insert and delete rows and columns in a table - Split and merge tables - Delete a table - Copy or move from one location to another location of document

Learning Outcome 8.5: Print the document

Theory	Practical
1. Printing options in Writer 2. Print preview 3. Controlling printing 4. Printing all pages, single and multiple pages	▪ Demonstrate to print the document, selected pages in the document ▪ Print the document with various options ▪ Preview pages before printing

Learning Outcome 8.6: Print the letters using mail merge

Theory	Practical
1. Concept of mail merge in word processing 2. Creating a main document 3. Creating the data source 4. Entering data in the fields 5. Merging the data source with main document 6. Editing individual document 7. Printing the merged letter 8. Saving the merged letter	▪ Demonstrate to print the letters using mail merge, do the following to achieve it: - Create a main document - Create the data source - Enter data in the fields - Merge the data source with main document - Edit individual document - Print the merged letter - Save the merged letter

Unit-9: Electronic Spreadsheet (Elementary)

Learning Outcome 9.1: Create a spreadsheet

Theory	Practical
1. Introduction to spreadsheet application 2. Starting LibreOffice Calc 3. Parts of LibreOffice Calc 4. Worksheet – rows and columns, cell, and cell address 5. Range of cell – column range, row range, row, and column range	▪ Start the LibreOffice Calc ▪ Identify the parts of Calc ▪ Identify the row number, column number, cell address ▪ Define the range of cell ▪ Identify row range, column range, row, and column range

Learning Outcome 9.2: Enter and edit the text in spreadsheet

Theory	Practical
1. Different types of data 2. Entering data – label, values, formula 3. Formula, how to enter formula 4. Mathematical operators used in a formula 5. Simple calculations using values and operators 6. Formulae with cell addresses and operators 7. Commonly used basic functions in Calc – SUM, AVERAGE, MAX, MIN, COUNT 8. Use of functions to do calculations	▪ Demonstrate to enter the text, numeric data in a cell ▪ Identify the label, values, and formula in the cell ▪ Demonstrate to enter formula in a cell ▪ Construct the formula using mathematical operators ▪ Identify formulae with cell addresses and operators ▪ Identify the correct syntax of formula ▪ Use the basic functions to perform calculations on data

Learning Outcome 9.3: Format data in the spreadsheet

Theory	Practical
1. Formatting tools 2. Use of dialog boxes to format values 3. Formatting a range of cells with decimal places 4. Formatting a range of cells to be seen as labels 5. Formatting of a cell range as scientific 6. Formatting a range of cells to display time 7. Formatting alignment of a cell range 8. Speeding up data entry using the fill handle 9. Uses of fill handle for copying formulae	▪ Identify the formatting tools ▪ Demonstrate to use of dialog boxes to format values ▪ Demonstrate to format range of cells with decimal places ▪ Demonstrate to format a range of cells to labels ▪ Demonstrate to format of a cell range as scientific ▪ Demonstrate to format a range of cells to display time ▪ Demonstrate to align the cell data range ▪ Demonstrate to create number series using fill

	handle ▪ Copy formula by dragging the formula using fill handle
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Learning Outcome 9.4: Use referencing

Theory	Practical
1. Concept of referencing 2. Relative referencing 3. Mixed referencing 4. Absolute referencing	▪ Demonstrate to use relative referencing in spreadsheet ▪ Demonstrate to use mixed referencing in spreadsheet ▪ Demonstrate to use absolute referencing in spreadsheet

Learning Outcome 9.5: Introduce the types of charts in Calc

Theory	Practical
1. Importance of chart in spreadsheet 2. Types of charts 3. Example of chart	▪ List the different types of charts supported by Calc ▪ Illustrate the example of chart in Calc

Unit-10: Digital Presentation

Learning Outcome 10.1: Describe the quality of a good presentation

Theory	Practical
1. Concept of presentation 2. Elements of a presentation 3. Characteristics of a good quality presentation	▪ Identify and list the elements of a presentation ▪ List the characteristics of a good quality presentation

Learning Outcome 10.2: Create a presentation

Theory	Practical
1. Introduction to a presentation software 2. Starting Impress 3. Parts of Impress window 4. Closing Impress 5. Creating a presentation using template 6. Selecting slide layout 7. Saving a presentation 8. Running a slide show 9. Save a presentation in PDF 10. Closing a presentation 11. Using Help	▪ Start Impress ▪ Identify and name the various components of main Impress window ▪ Observe the different workspace views ▪ Create a new presentation using Wizard ▪ Run the presentation ▪ Save the presentation ▪ Close the presentation ▪ Demonstrate to use Help in a presentation

Learning Outcome 10.3: Work with slides

Theory	Practical
1. Inserting a duplicate slide 2. Inserting new slides 3. Slide layout 4. Copying and moving slides 5. Deleting and renaming slides in a presentation 6. Copying, moving, and deleting contents of a slide 7. View a presentation 8. Controlling the size of the view 9. Workspace views – Normal, Outline, Notes, Slide sorter view	▪ Demonstrate to insert a new slide and a duplicate slide in a presentation ▪ Change the slide layout ▪ Demonstrate to copy and move slides in the presentation ▪ Demonstrate to copy, move, and delete contents of the slide ▪ Demonstrate to view a presentation in different views

Learning Outcome 10.4: Format the text in a presentation

Theory	Practical
1. Formatting toolbar 2. Various formatting features 3. Text alignment 4. Bullets and numbering	▪ Identify and list the various options in formatting toolbar ▪ Apply the appropriate formatting option to the presentation in Impress ▪ Align the text in the presentation ▪ Apply bullets and numbering to the list items in the presentation

Learning Outcome 10.5: Create and use a table in a presentation

Theory	Practical
1. Inserting tables in a presentation 2. Entering and editing data in a table 3. Selecting a cell, row, column, table 4. Adjusting column width and row height 5. Table borders and background	▪ Demonstrate the following: - Insert a table in the presentation - Enter and edit data in a table - Select a cell, row, column, table - Adjust column width and row height - Assign table borders and background

Learning Outcome 10.6: Insert and format an image in the presentation

Theory	Practical
1. Inserting an image from a file 2. Inserting an image from the gallery 3. Formatting images 4. Moving images	▪ Demonstrate to insert an image from a file, gallery in the presentation ▪ Apply formatting options to an image in the presentation ▪ Demonstrate to move, resize, and rotate

5. Resizing images	images
6. Rotating images	▪ Apply formatting options of Image toolbar
7. Formatting by using the Image toolbar	▪ Drawing line, shapes using graphic objects
8. Drawing graphic objects – line, shapes	▪ Demonstrate to group and un-group objects
9. Grouping and un-grouping objects	

Learning Outcome 10.7: Work with the slide master

Theory	Practical
1. Slide masters	▪ Create the slide masters
2. Creating the slide masters	▪ Apply the slide masters to the presentation
3. Applying the slide masters to all slides	▪ Add transitions to the presentation
4. Adding transitions	

PART II: INTERNAL ASSESSMENT (PRACTICAL) – 100 MARKS

To be assessed internally by the school.

For guidelines for Internal Assessment refer to Class X.

Class X

There will be **one** written paper of **two hours** duration carrying 100 marks and Internal Assessment of Practical of 100 marks.

COURSE STRUCTURE:

PART I: THEORY – 100 MARKS

Employability Skills – 30 Marks

Unit 1: Communication Skills – II

Unit 2: Self-management Skills – II

Unit 3: Basic Information and Communication Technology Skills – II

Unit 4: Entrepreneurial Skills – II

Unit 5: Green Skills – II

Vocational Skills – 70 Marks

Unit 6: Digital Documentation (Advanced)

Unit 7: Electronic Spreadsheet (Advanced)

Unit 8: Database Management System

Unit 9: Maintaining Health, Safety and Secure Working Environment

PART II: INTERNAL ASSESSMENT (PRACTICAL) – 100 MARKS

Practical Work – 70 Marks

Practical Examination – 40 Marks

Practical File – 10 Marks

Viva Voce (based on Practical Examination/File) – 20 Marks

Project Work – 30 Marks

Report of Field Visit/Project – 10 Marks

Student Portfolio – 10 Marks

Viva Voce (based on Report of Field Visit/Student Portfolio/Project) – 10 Marks

PART I: THEORY – 100 MARKS

Employability Skills

Unit-1: Communication Skills – II

Learning Outcome 1.1: Demonstrate knowledge of various methods of communication

Theory	Practical
- Methods of communication: - Verbal - Non-verbal - Visual	- Writing pros and cons of written, verbal, and non-verbal communication - Listing dos and don'ts for avoiding common body language mistakes

Learning Outcome 1.2: Provide descriptive and specific feedback

Theory	Practical
- Communication cycle and importance of feedback - Meaning and importance of feedback - Descriptive feedback – written comments or conversations - Specific and non-specific feedback	Constructing sentences for providing descriptive and specific feedback

Learning Outcome 1.3: Apply measures to overcome barriers in communication

Theory	Practical
- Barriers to effective communication – types and factors - Measures to overcome barriers in effective communication	- Enlisting barriers to effective communication - Applying measures to overcome barriers in communication

Learning Outcome 1.4: Apply principles of communication

Theory	Practical
- Principles of effective communication 7Cs of effective communication	- Constructing sentences that convey all facts required by the receiver - Expressing in a manner that shows respect to the receiver of the message - Exercises and games on applying 7Cs of effective communication

Learning Outcome 1.5: Demonstrate basic writing skills

Theory	Practical
- Writing skills related to the following: - Sentence - Phrase	Demonstration and practice of writing sentences and paragraphs on topics related to the subject

(iii) Kinds of Sentences (iv) Parts of Sentence (v) Parts of Speech (vi) Articles (vii) Construction of a Paragraph	
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Unit-2: Self-management Skills – II

Learning Outcome 2.1: Apply stress management techniques

Theory	Practical
1. Meaning and importance of stress management 2. Stress management techniques – physical exercise, yoga, meditation 3. Enjoying, going to vacations and holidays with family and friends 4. Taking nature walks	- Exercises on stress management techniques – yoga, meditation, physical exercises - Preparing a write-up on an essay on experiences during a holiday trip

Learning Outcome 2.2: Demonstrate the ability to work independently

Theory	Practical
1. Importance of the ability to work independently 2. Describe the types of self-awareness 3. Describe the meaning of self-motivation and self-regulation	- Demonstration on working independently on goals - Planning of an activity - Executing tasks in a specific period, with no help or directives - Demonstration on the qualities required for working independently

Unit-3: Basic Information and Communication Technology Skills – II

Learning Outcome 3.1: Distinguish between different operating systems

Theory	Practical
1. Classes of operating systems 2. Menu, icons, and taskbar on the desktop 3. File concept, file operations, file organization, directory structures, and file-system structures 4. Creating and managing files and folders	- Identification of taskbar, icons, menu, etc. - Demonstration and practice of creating, renaming, and deleting files and folders, saving files in folders and sub-folders, restoring files and folders from recycle bin

Learning Outcome 3.2: Apply basic skills for care and maintenance of computer

Theory	Practical
1. Importance and need of care and maintenance of a computer 2. Cleaning computer components 3. Preparing maintenance schedule 4. Protecting computer against viruses 5. Scanning and cleaning viruses and removing SPAM files, temporary files, and folders	▪ Demonstration of the procedures to be followed for cleaning, care and maintenance of hardware and software

Unit- 4: Entrepreneurial Skills – II**Learning Outcome 4.1: List the characteristics of successful entrepreneurs**

Theory	Practical
1. Entrepreneurship and society 2. Qualities and functions of an entrepreneur 3. Role and importance of an entrepreneur 4. Myth about entrepreneurship 5. Entrepreneurship as a career option	▪ Writing a note on entrepreneurship as a career option ▪ Collecting success stories of first generation and local entrepreneurs ▪ Listing the entrepreneurial qualities – analysis of strength and weaknesses ▪ Group discussion of self-qualities that students feel are needed to become a successful entrepreneur ▪ Collect information and related data for a business ▪ Making a plan in teams for setting up a business

Unit-5: Green Skills – II**Learning Outcome 5.1: Demonstrate the knowledge of importance, problems and solutions related to sustainable development**

Theory	Practical
1. Definition of sustainable development 2. Importance of sustainable development 3. Problems related to sustainable development	▪ Identify the problem related to sustainable development in the community ▪ Group discussion on the importance of respecting and conserving indigenous knowledge and cultural heritage ▪ Discussion on the responsibilities and benefits of environmental citizenship, including the conservation and protection of environmental values ▪ Preparing models on rainwater harvesting, drip/sprinkler irrigation, vermin-compost, solar energy, solar cooker, etc.

Vocational Skills

Unit-6: Digital Documentation (Advanced)

Learning Outcome 6.1: Apply Styles in the document

Theory	Practical
1. Style categories in Writer 2. Formatting window 3. Fill Format 4. Creating and updating new style from selection 5. Load a style from template or another document 6. Creating a new style using drag-and-drop 7. Applying styles	▪ List style categories in Writer ▪ Select the style from the Styles and Formatting window ▪ Use Fill Format to apply a style to many different areas quickly ▪ Create and update new style from a selection ▪ Load a style from a template or another document ▪ Create a new style using drag-and-drop

Learning Outcome 6.2: Insert and use images in the document

Theory	Practical
1. Options to insert image to a document from various sources 2. Options to modify, resize, crop, and delete an image 3. Drawing objects and its properties 4. Creating drawing objects and changing its properties 5. Resizing and grouping drawing objects 6. Positioning image in the text	▪ Insert an image to the document from various sources ▪ Modify, resize, crop, and delete an image ▪ Create drawing objects ▪ Set or change the properties of a drawing object ▪ Resize and group drawing objects ▪ Position the image in the text

Learning Outcome 6.3: Create and use template

Theory	Practical
1. Template in Writer 2. Using predefined templates 3. Creating a template 4. Set-up a custom default template 5. Updating a document 6. Changing to a different template 7. Using the template	▪ Create a template ▪ Use predefined templates ▪ Set-up a custom default template ▪ Update a document ▪ Change to a different template ▪ Use the template

Learning Outcome 6.4: Create table of contents

Theory	Practical
1. Table of contents 2. Hierarchy of headings 3. Customization of table of contents 4. Character styles 5. Maintaining a table of contents	▪ Create a table of contents ▪ Define a hierarchy of headings ▪ Customize a table of contents ▪ Apply character styles ▪ Maintain a table of contents

Unit-7: Electronic Spreadsheet (Advanced)

Learning Outcome 7.1: Analyse data using scenarios and Goal Seek

Theory	Practical
1. Using Consolidate data 2. Creating subtotals 3. Using “What-If” scenarios 4. Using “What-If” tools 5. Using Goal Seek and Solver	▪ Use Consolidate data ▪ Create subtotals ▪ Use “What-If” scenarios ▪ Use “What-If” tools ▪ Use Goal Seek and Solver

Learning Outcome 7.2: Link spreadsheet data

Theory	Practical
1. Setting up multiple sheets 2. Creating reference to other sheets by using keyboard and mouse 3. Creating reference to another document by using keyboard and mouse 4. Relative and absolute hyperlinks 5. Hyperlinks to the sheet 6. Linking to external data 7. Linking to registered data sources	▪ Set-up multiple sheets by inserting new sheets ▪ Create reference to other sheets by using keyboard and mouse ▪ Create reference to another document by using keyboard and mouse ▪ Create, edit, and remove hyperlinks to the sheet ▪ Link to external data ▪ Link to registered data source

Learning Outcome 7.3: Share and review a spreadsheet

Theory	Practical
1. Setting up a spreadsheet for sharing 2. Opening and saving a shared spreadsheet 3. Recording changes 4. Add, edit, and format the comments 5. Reviewing changes – view, accept or reject changes 6. Merging and comparing	▪ Set-up a spreadsheet for sharing ▪ Open and save a shared spreadsheet ▪ Record changes ▪ Add, edit, and format the comments ▪ Review changes – view, accept or reject changes ▪ Merge and compare sheets

Learning Outcome 7.4: Use macro in spreadsheet

Theory	Practical
1. Using the macro recorder 2. Creating a simple macro 3. Using a macro as a function 4. Passing arguments to a macro 5. Passing the arguments as are values 6. Macros to work like built-in functions 7. Accessing cells directly 8. Sorting the columns using macro	▪ Use the macro recorder ▪ Create a simple macro ▪ Use a macro as a function ▪ Pass arguments to a macro ▪ Pass the arguments as are values ▪ Write macros that act like built-in functions ▪ Access cells directly ▪ Sort the columns using macro

Unit-8: Database Management System

Learning Outcome 8.1: Appreciate the concept of Database Management System

Theory	Practical
1. Concept and examples of data and information 2. Concept of database 3. Advantages of database 4. Features of database 5. Concept and examples of Relational Database 6. Concept and examples of field, record, table, database 7. Concept and examples of primary key, composite primary key, foreign key 8. Database management system (DBMS) software	▪ Identify the data and information ▪ Identify the field, record, table in the database ▪ Prepare the sample table with some standard fields ▪ Assign the primary key to the field ▪ Identify the primary key, composite primary key, foreign key

Learning Outcome 8.2: Create a table using table Wizard

Theory	Practical
1. Introduction to LibreOffice Base 2. Database objects – tables, queries, forms, and reports of the database 3. Terms in database – table, field, record 4. Steps to create a table using table Wizard 5. Data types in Base 6. Option to set primary key 7. Table Data View dialog box	▪ Start the LibreOffice Base and observe the parts of the main window ▪ Identify the database objects ▪ Create the sample table in any category using wizard ▪ Practice to create different tables from the available list and choosing fields from the available fields. ▪ Assign data types of fields ▪ Set primary key ▪ Edit the table in Design View ▪ Enter the data in the fields

Learning Outcome 8.3: Perform operations on the table

Theory	Practical
1. Inserting data in the table 2. Editing records in the table 3. Deleting records from the table 4. Sorting data in the table 5. Referential integrity 6. Creating and editing relationships – one to one, one to many, many to many 7. Field properties	▪ Demonstrate to: - Insert data in the table - Edit records in the table - Delete records from the table - Sort data in the table - Create and edit relationships – one to one, one to many, many to many - Enter various field properties

Learning Outcome 8.4: Retrieve data using query

Theory	Practical
1. Database query 2. Defining query 3. Query-creation using Wizard 4. Creation of query using Design View 5. Editing a query 6. Applying criteria in query – single field, multiple fields, using wild card 7. Performing calculations 8. Grouping of data 9. Structured Query Language (SQL)	▪ Prepare a query for given criteria ▪ Demonstrate to create query using wizard, and using design view ▪ Edit a query ▪ Demonstrate to apply various criteria in query – single field, multiple fields, using wild card ▪ Performing calculations using query in Base ▪ Demonstrate grouping of data ▪ Use basic SQL commands

Learning Outcome 8.5: Create Forms and Reports using Wizard

Theory	Practical
1. Forms in Base 2. Creating form using Wizard 3. Steps to create form using Form Wizard 4. Options to enter or remove data from forms 5. Modifying form 6. Changing label, background 7. Searching record using Form 8. Inserting and deleting record using Form View 9. Concept of Report in Base 10. Creating Report using Wizard 11. Steps to create Report using Wizard	▪ Illustrate the various steps to create Form using Form Wizard ▪ Enter or remove data from Forms ▪ Demonstrate to modify Forms ▪ Demonstrate to change label, background ▪ Search record using Form ▪ Insert and delete record using Form View ▪ Illustrate the various steps to create Report using Report Wizard ▪ Demonstrate the various examples of Report

Unit-9: Maintaining Health, Safety and Secure Working Environment

Learning Outcome 9.1: Maintain workplace safety

Theory	Practical
1. Basic safety rules to follow at the workplace – fire safety, falls and slips, electrical safety, use of first aid 2. Case studies of hazardous situation at the workplace	Practice to follow basic safety rules at the workplace to prevent accidents and protect workers – fire safety, falls and slips, electrical safety, use of first aid.

Learning Outcome 9.2: Prevent accidents and emergencies

Theory	Practical
1. Accidents and emergency 2. Types of accidents 3. Handling accidents 4. Types of Emergencies	- Illustrate handling accidents at the workplace - Demonstrate following the evacuation plan and procedure in case of an emergency

Learning Outcome 9.3: Protect health and safety at work

Theory	Practical
1. Hazards and sources of hazards 2. General evacuation procedures 3. Healthy living	- Identify hazards and sources of hazards - Identify the problems at workplace that could cause accidents - Practice the general evacuation procedures in case of an emergency

PART II: INTERNAL ASSESSMENT (PRACTICAL) – 100 MARKS

Practical Work

- Practical Examination – 40 Marks
- Practical File – 10 Marks
- Viva Voce (based on Practical Examination/File) – 20 Marks

The Practical Work allows candidates to demonstrate that they have knowledge and understanding of performing a task. This will include the hands-on Practical Examination and viva-voce. In addition, candidates will be required to maintain a practical file of the work done throughout the year.

*Candidates will be required to perform any **two** practicals selected by the external examiner. The two practicals selected by the external examiner will be from different units of the syllabus.*

Project Work

- Report of Field Visit/Project – 10 Marks
- Student Portfolio – 10 Marks
- Viva Voce (based on Report of Field Visit/Student Portfolio/Project) – 10 Marks

Project Work aims at assessing the practical skills of candidates over a certain period of time. This includes report of field visits, project undertaken, student portfolio along with viva-voce.

*Candidates are required to have completed **one** project on a topic of their choice from any topic/allied aspect covered in the syllabus. The project may include case study (example, study of a local industry/business), survey, model making, poster making/creation of audio-visual aids, interview of an entrepreneur from the local industry, etc.*

Candidates should maintain record of the field visits undertaken during the year. This should include subject-specific information obtained from the experts/observations made during the field visits.

The student portfolio is a compilation of work done by the candidate throughout the year, and may include reports, articles, photos of products prepared by the candidate in relation to the unit of competency.

EVALUATION

The practical and project work is to be evaluated by the subject teacher and by an External Examiner. The External Examiner shall be nominated by the Head of the school and may be a teacher from the faculty, but not teaching the subject in the relevant section/class.

The Internal Examiner and the External Examiner will assess the candidate's work independently.

Award of Marks	(100 Marks)
Subject Teacher (Internal Examiner)	50 marks
External Examiner	50 marks

The total marks obtained out of 100 are to be sent to the CISCE by the Head of the school.

The Head of the school will be responsible for the online entry of marks on the CISCE's CAREERS portal by the due date.

Teaching-learning Activities

For effective transaction of the subject content a combination of classroom activities, practical work and field visits/educational tours are to be used by the teacher.

Special emphasis should be laid on occupational safety, health and hygiene while conducting the teaching-learning activities.

Classroom Activities

Classroom activities, including, interactive lecture sessions followed by discussions, should be conducted by the subject teachers, using a variety of instructional or teaching aids such as, audio-video materials, colour slides, charts, diagrams, models, exhibits, hand-outs, online teaching materials, etc.

Practical Work

Practical work may include but not be limited to hands-on training, simulated training, role play, case-based studies, exercises, etc. Equipment and supplies should be provided to enhance hands-on learning experience of students. Only trained personnel should teach specialized techniques.

Field Visits/Educational Tours

Students should be taken for field visits to give them an opportunity to interact with experts and to expose them to the various tools, equipment, materials, procedures, and operations in the workplace. During field visits, students should obtain subject-specific information from the experts or make a record of the activities observed.

A checklist of observations to be made by the students during the field visits should be developed by the teachers for systematic collection of information by the students on the various aspects.

For example, a visit may be organized to a data entry centre where the students may observe the following: location, site, office building, computer systems, tools and equipment, printer, scanner, etc.

During the visit, students should obtain the following information from the owner or the supervisor of the data centre:

- Name of the data entry centre
- Computer infrastructure available
- Total expenditure of data entry centre
- Total annual income
- Profit/loss (annual)
- Workforce engaged
- Assistive technology
- Sitting posture of data entry operators
- Any other information

In a year, at least 3 field visits/educational tours should be organised for the students, to expose them to the activities in the workplace. Schools may identify different opportunities for field visits within a short distance from the school and make necessary arrangements for the same.

List of Equipment and Materials

The list given below is suggestive. An exhaustive list should be prepared by the teacher. Only basic tools, equipment and accessories should be procured by the school so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience.

S. No.	Item Name, Description & Specification	Quantity
HARDWARE		
1.	Computer with latest configuration or minimum Pentium Processor with 2 GB RAM, 512 GB HDD, 17" LED monitor, NIC card, 3 button mouse, 105 keys keyboard and built-in speakers and microphone	15
2.	Laser printer black	01
3.	Inkjet printers (colour & black)	01
4.	Scanner	01
5.	Online UPS 5 KVA	01
6.	16 port switches	01
7.	Air Conditioner 1.5 tonne	02
8.	Telephone line (For Internet)	01
9.	Fire extinguisher	01
SOFTWARE		
1.	Operating System Linux and Windows	
2.	Anti-virus Latest version	
3.	LibreOffice or MS Office latest version	
FURNITURE		
1.	Classroom chairs and desks	25
2.	Computer tables	15
3.	Straight back revolving & adjustable chairs (Computer Chairs)	15
4.	Printer tables	02
5.	Trainers table	01
6.	Trainer's chair	01
7.	Steel cupboards with drawers	02
8.	Cabinet with drawers	01
9.	Steel almirah (big)	01
10.	Steel almirah (small)	01

Teacher Qualifications

The suggestive qualifications and minimum competencies for the subject teacher are as follows:

- Diploma in Computer Science/Information Technology

OR

Bachelor's Degree in computer application/ Science/ Information Technology (BCA, B. Sc. Computer Science/ Information Technology)

OR

Graduate with PGDCA

OR

DOEACC A Level Certificate.

- The candidate should have a minimum of 1 year of work experience in the same job role.
- Effective communication skills (oral and written)
- Technical competencies.