M1-R5: INFORMATION TECHNOLOGY TOOLS AND NETWORK BASICS

OVERVIEW OF MODULE

Introduction

The module is designed to equip a student to use computers for professional as well as day to day use. It provides theoretical background as well as in-depth knowledge of Software/ packages.

Objectives

After completing the module, the incumbent will be able to:

➢ Acquire confidence in using computers in Office and General Life

➢ Identify the basic components of computers and terminology

➢ Understand file management

➢ Create documents using word processor, spreadsheet & presentation software

➢ Understand computer networks and browse the Internet, content search, email and collaborate with peers

➢ Use e-Governance applications and use computer to improve existing skills and learn new skills

➢ Understanding Social Networking platform

➢ Using the Internet for Digital Financial services

➢ Develop knowledge about FutureSkills

➢ Understand the various financial services and be aware of the various schemes started by Government.

Duration

120 Hours - (Theory: 48hrs + Practical: 72 hrs)

Outline of Module

Module Unit	Duration (Theory) in Hours	Duration (Practical) in Hours	Learning Objectives
1. Introduction to Computer	4	6	After completion of this unit of module, the Learner will be able to • Identify computers, IT gadgets and explain their evolution and applications. • Get familiar with various input, output and hardware components of a computer along with storage devices. • Get familiar with various types of software, utilities used for computer and mobile apps.
2. Introduction to Operating System	4	6	After learning this unit, Learner will be: • Well acquainted with Operating System and its applications for both desktop and mobile devices. • Able to identify various desktop screen components and modify various properties, date, time etc. • Able to add and remove new program and features, manage files and folders. • Well versed with printing and know various types of file extensions.

3. Word Processing	6	9	After completion of this unit, Learner will have in depth knowledge of • Word Processing, their usage, details of word processing screen. • Opening, saving and printing a document including pdf files. • Document creation, formatting of text, paragraph and whole document. • Inserting Header and Footer on the document. • Finding text on a word document and correcting spellings. • Inserting and manipulating tables, enhancing table using borders and shading features. • Preparing copies of a document labels etc. for sending various recipients using Mail Merge.
4. Spreadsheet	8	12	After completion of this unit, Learner will have good hands-on practice on • Basic Knowledge of Spreadsheet Processing,

				their usage, details of Spreadsheet screen. • Opening, saving and printing a Spreadsheet. • Spreadsheet creation, inserting and editing data in cells, sorting and filtering of data. • Inserting and deleting rows /columns. • Applying basic formulas and functions. • Preparing chart to represent the information in a pictorial form.
5. Presentation	6		9	After completion of this unit, Learner will have good hands-on practice on • Basic Knowledge of presentations. • Opening/saving a presentation and printing of slides and handouts. • Manipulating slides to enhance the look of the slides as well as whole presentation by inserting a picture, objects, multimedia formatting etc. • Running a slide show with various transitions.
6. Introduction to Internet and WWW	6		9	After completion of this unit, Learner will be able to • Gather knowledge of various types of networks and topologies • Get an overview of the Internet, its applications and various browsers available to access the Internet. • Connect to the Internet using various modes of connections/devices available.

				• Get knowledge of device identification on local network as well as on the Internet for both Desktop and Mobile Devices. • Can search Information on the Internet on various topics. • Download and print web pages.
7.	E-mail, Social Networking and e-Governance Services	6	9	After completion of this unit, Learner will be able to • Create an email account, compose an email, reply an email and send the email along with attachments • Get familiar with Social Networking, Instant Messaging and Blogs. • Get familiar with e-Governance Services, e-Commerce and Mobile Apps.
8.	Digital Financial Tools and Applications	4	6	After completion of this unit, Learner will be able to • Know the Digital Financial Tools. • Get Knowledge of the Internet Banking Modes. • Use the Digital Locker and will be able to store documents in Digital Locker.
9.	Overview of FutureSkills& Cyber Security	4	6	After completion of this unit, Learner will be familiar with the • Latest trends and technologies in upcoming fields in IECT. • Need of Cyber Security and will be able to secure their PC and Mobile devices by using basic security features.

INFORMATION TECHNOLOGY TOOLS
AND
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MARKS DISTRIBUTION

Module Unit	Written Marks (Max.)
1. Introduction to Computer, Introduction to Operating System	10
2. Word Processing	20
3. Spreadsheet	20
4. Presentation	20
5. Introduction to Internet and WWW, E-mail, Social Networking and e-Governance Services	20
6. Digital Financial Tools and Applications, Overview of FutureSkills& Cyber Security	10
7. Total	100

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SYLLABUS

Detailed Syllabus

(i) Introduction to Computer

Computer and Latest IT gadgets, Evolution of Computers & its applications, IT gadgets and their applications, Basics of Hardware and Software, Central Processing Unit, Input devices, Output devices, Computer Memory & storage, Application Software, Systems Software, Utility Software, Open source and Proprietary Software, Mobile Apps.

(ii) Introduction to Operating System

Operating System, Basics of Operating System, Operating Systems for Desktop and Laptop, Operating Systems for Mobile Phone and Tablets, User Interface for Desktop and Laptop, Task Bar, Icons & shortcuts, running an application, Operating System simple setting, using mouse and changing its properties, changing system date and time, changing display properties, to add or remove Program and its features, adding, removing &sharing Printers, File and Folder management, types of file extensions.

(iii) Word Processing

Word Processing Basics, Opening Word Processing Package, Title Bar, Menu Bar, Toolbars & Sidebar, Creating a New Document, Opening and Closing Documents, Opening Documents, Save and Save As, Closing Document, Using The Help, Page Setup, Page Layout, Borders, Watermark, Print Preview, Printing of Documents, PDF file and Saving a Document as PDF file, Text Creation and manipulation, Document Creation, Editing Text, Text Selection, Cut, Copy and Paste, Font, Color, Style and Size selection, Alignment of Text, Undo & Redo, AutoCorrect, Spelling & Grammar, Find and Replace, Formatting the Text, Creating and using user defined Styles, Paragraph Indentation, Bullets and Numbering, Change case, Header & Footer, Table Manipulation, Insert & Draw Table, Changing cell width and height, Alignment of Text in cell, Delete / Insertion of Row, Column and Merging & Splitting of Cells, Border and Shading,

Mail Merge, Table of Contents, Indexes, Adding Comments, Tracking changes, Macros

(iv) Spreadsheet

Elements of Spread Sheet, Creating of Spread Sheet, Concept of Cell Address [Row and Column] and selecting a Cell, Entering Data [text, number, date] in Cells, Page Setup, Printing of Sheet, Saving Spreadsheet, Opening and Closing, Manipulation of Cells & Sheet, Modifying / Editing Cell Content , Formatting Cell (Font, Alignment, Style), Cut, Copy, Paste & Paste Special, Changing Cell Height and Width, Inserting and Deleting Rows, Column, AutoFill, Sorting & Filtering, Freezing panes, Formulas, Functions and Charts, Using Formulas for Numbers (Addition, Subtraction, Multiplication & Division), AutoSum, Functions (Sum, Count, MAX, MIN, AVERAGE),Sort, Filter, Advanced Filter, Database Functions (DSUM, DMIN,DMAX, DCOUNT, DCOUNTA), What-if Analysis, Pivot table Charts (Bar, Column, Pie, Line), Data Validation.

(v) Presentation

Creation of Presentation, Creating a Presentation Using a Template, Creating a Blank Presentation, Inserting & Editing Text on Slides, Inserting and Deleting Slides in a Presentation, Saving a Presentation, Manipulating Slides, Inserting Table , Adding Pictures, Inserting Other Objects, Resizing and Scaling an Object, Creating & using Master Slide, Presentation of Slides , Choosing a Set Up for Presentation, Running a Slide Show, Transition and Slide Timings, Automating a Slide Show, Providing Aesthetics to Slides & Printing, Enhancing Text Presentation, Working with Color and Line Style, Adding Movie and Sound, Adding Headers, Footers and Notes, Printing Slides and Handouts

(vi) Introduction to Internet and WWW

Basic of Computer Networks, Local Area Network (LAN), Wide Area Network (WAN), Network Topology , Internet, Concept of Internet & WWW, Applications of Internet, Website Address and URL, Introduction to IP Address, ISP and Role of ISP, Internet Protocol, Modes of Connecting Internet (HotSpot, Wifi, LAN Cable, BroadBand, USB Tethering), Identifying and uses of IP/MAC/IMEI of various devices, Popular Web Browsers (Internet Explorer/Edge, Chrome, Mozilla Firefox, Opera etc.), Exploring the Internet , Surfing the web, Popular Search Engines, Searching on Internet, Downloading Web Pages, Printing Web Pages

(vii) E-mail, Social Networking and e-Governance Services

Structure of E-mail, Using E-mails, Opening Email account, Mailbox: Inbox and Outbox, Creating and Sending a new E-mail, Replying to an E-mail message, Forwarding an E-mail message, Searching emails, Attaching files with email, Email Signature, Social Networking & e-Commerce, Facebook, Twitter, Linkedin, Instagram, Instant Messaging (Whatsapp, Facebook Messenger, Telegram), Introduction to Blogs, Basics of E-commerce, Netiquettes, Overview of e-Governance Services like Railway Reservation, Passport,

eHospital [ORS], Accessing e-Governance Services on Mobile Using "UMANG APP", Digital Locker

(viii) Digital Financial Tools and Applications

Digital Financial Tools, Understanding OTP [One Time Password]and QR [Quick Response] Code, UPI [Unified Payment Interface], AEPS [Aadhaar Enabled Payment System], USSD[Unstructured Supplementary Service Data], Card [Credit / Debit], eWallet, PoS [Point of Sale], Internet Banking, National Electronic Fund Transfer (NEFT), Real Time Gross Settlement (RTGS), Immediate Payment Service (IMPS), Online Bill Payment

(ix) Overview of Futureskills and Cyber Security

Introduction to Internet of Things (IoT), Big Data Analytics, Cloud Computing, Virtual Reality, Artificial Intelligence, Social & Mobile, Blockchain Technology, 3D Printing/ Additive Manufacturing, Robotics Process Automation, Cyber Security, Need of Cyber Security, Securing PC, Securing Smart Phone