

Based on Revised Syllabus (M1-R5.1)

IT Tools and Network Basics



English Medium

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Preface

Today most of our work of life are completed with the help of computer, internet, mobile and others digital financial services. Today, you can sent the information easily and quickly anywhere in the world with the help of internet. Besides this, you can also access the data and information about any subject with the help of internet. For this it is necessary, you have basic knowledge of computer, Internet and digital financial tools. To increase the digital literacy, government and many non government organization launch the some programs. 'O' Level is also a digital literacy program that is managed and run by NIELIT (National Institute of Electronics and Information Technology).

The book is based on the syllabus of first paper (M1-R5: IT Tools and Network Basics) of 'O' Level Program. This book is divide into 9 parts and each part of this book describe a special topic as per the syllabus of IT Tools and Network Basics program, such as Introduction of computer, operating system with Ubuntu, LibreOffice, Knowledge of internet and world wide web, Email, Social networking site, e-governance, digital financial tools, Future skills and Cyber Security etc. Each topic of this book has multiple choice questions (MCQ). Some important questions of these topics are given at the end of the book as "Model Test Paper". Shortcut keys, IT Full form, are also given at the end of book.

We express our sincere thanks to the learns for their valuable suggestions for improving the quality of the book. Suggestions for further improvement of the book will be thankfully received and acknowledged.

Author

Information Technology Tools and Network Basics

Introduction

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

Objectives

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

- Identify the basic components of computers and Understand file management.
- Create documents using word processor, spreadsheet & presentation software.
- Understand computer networks and browse the Internet, content search, email.
- Use e-Governance applications and improve existing skills & learn new skills.
- Understanding Social Networking platform
- Using the Internet for Digital Financial services
- Develop knowledge about Future Skills
- Understand the various financial services and aware of the various Government schemes started by Government.

Duration

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

Sr.	Module Unit or Chapter name	Duration		Marks (Max.)
		Theory	Practical	
1.	Introduction to Computer	4	6	10
2.	Introduction to Operating System	4	6	
3.	Word Processing	6	9	20
4.	Spreadsheet	8	12	20
5.	Presentation	6	9	20
6.	Introduction to Internet and WWW	6	9	20
7.	E-mail, Social Networking and e-Gov. Services	6	9	
8.	Digital Financial Tools and Applications	4	6	10
9.	Overview of Future Skills& Cyber Security	4	6	
Total		48	72	100

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DETAILED SYLLABUS

1. Introduction to Computer

- 1.1 What is Computer
 - 1.1.1 Characteristics of Computer
 - 1.1.2 Limitations of Computer
- 1.2 History of computer
 - 1.2.1 Generation of Computer
 - 1.2.2 IT Gadgets and Its Applications
- 1.3 Types of Computer
- 1.4 Functions of a Computer
- 1.5 Central Processing Unit (CPU)
 - 1.5.1 Processor
 - 1.5.2 Motherboard
- 1.6 Application of Computer
- 1.7 Input and Output Devices
 - 1.7.1 Input Devices
 - 1.7.2 Output Devices
 - 1.7.2.1 Monitor
 - 1.7.2.2 Printers
 - 1.7.2.3 Projector
 - 1.7.2.4 Audio Output Devices
- 1.8 Computer Memory
 - 1.8.1 Cache Memory
 - 1.8.2 Primary Memory
 - 1.8.3 Secondary Memory
- 1.9 Hardware and Software
 - 1.9.1 Hardware
 - 1.9.2 Software
 - 1.9.2.1 System Software
 - 1.9.2.2 Application Software
 - 1.9.2.3 Open Source Software
 - 1.9.2.4 Proprietary Software
 - 1.9.3 Mobile Apps
- 1.10 Computer Languages
- 1.11 Booting Process of a System
- 1.12 Representation of Data & Information

2. Introduction to Operating System

- 2.1 What is Operating System?
 - 2.1.1 Types of Operating System
 - 2.1.2 Functions of Operating System
 - 2.1.3 Components of Operating System
- 2.2 Useful Common Operating System
 - 2.2.1 Operating System for Desktop and Laptop
 - 2.2.2 Operating System for Mobile Phone and Tablets
- 2.3 Ubuntu
 - 2.3.1 Directory Structure
 - 2.3.2 Ubuntu shell commands
- 2.4 User Interface
 - 2.4.1 Ubuntu Desktop
 - 2.4.2 Start Applications
 - 2.4.3 Logout, Power Off, Switch user
- 2.5 Install and Remove Software
- 2.6 User Account and System setting
 - 2.6.1 Change the Date and Time
 - 2.6.2 Using Mouse and Touchpad
 - 2.6.3 Display and Screen
 - 2.6.4 Adding Printers
- 2.7 Files and Folders Management
- 2.8 File Extensions

3. Word Processing (LibreOffice Writer)

- 3.1 What is LibreOffice?
- 3.2 LibreOffice Writer
- 3.3 Starting LibreOffice Writer
 - 3.3.1 Toolbar and Menu bar
 - 3.3.2 Sidebar
 - 3.3.3 Document Views
 - 3.3.4 Using help
- 3.4 Create a new Document

- 3.4.1 Closing a Document
 - 3.4.2 Exit from LibreOffice
- 3.5 Opening and Saving Documents
 - 3.5.1 Opening a Document
 - 3.5.2 Saving a Document
 - 3.5.3 Reloading a Document
 - 3.5.4 Exporting a Document
 - 3.5.5 E-Mailing a Document
- 3.6 Document Setup and Printing
 - 3.6.1 Page Layout Setup
 - 3.6.2 Printing a Document
 - 3.6.3 Working with Styles
 - 3.6.4 Working with Template
 - 3.6.5 Using the Navigator
- 3.7 Editing and Formatting Text
 - 3.7.1 Editing Text
 - 3.7.2 Selecting Text
 - 3.7.3 Cut, Copy and Paste
 - 3.7.4 Font, color and size selection
 - 3.7.5 Alignment of Text
 - 3.7.6 Using Undo and Redo
 - 3.7.7 AutoCorrect and Spell Checking
 - 3.7.8 Find and Replace
 - 3.7.9 Changing Case of Text
 - 3.7.10 Formatting the Text
- 3.8 Working with Documents
 - 3.8.1 Using Paragraph Indent
 - 3.8.2 Using Tabs
 - 3.8.3 Line and Paragraph Spacing
 - 3.8.4 Bullets and Numbering
 - 3.8.5 Using Header and Footer
 - 3.8.6 Using Footnotes and Endnotes
 - 3.8.7 Using Multi-Columns
 - 3.8.8 Creating Title Page
 - 3.8.9 Using Hyperlinks
 - 3.8.10 Using Page Break
 - 3.8.11 Digital Signing on Document
- 3.9 Working with Image and Graphics

- 3.9.1 Inserting Pictures
 - 3.9.2 Formatting Images
 - 3.9.3 Using Shapes
 - 3.9.4 Using FontWork
 - 3.9.5 Using Text Box
 - 3.9.6 Chart
- 3.10 Table Manipulation
 - 3.10.1 Inserting Table
 - 3.10.2 Changing cell Width and Height
 - 3.10.3 Alignment of Text in cell
 - 3.10.4 Delete/Insert Row and Column
- 3.11 Mail Merge
- 3.12 Track Changes and Comments
 - 3.12.1 Track Changes
 - 3.12.2 Comments
- 3.13 Macro

4. Spreadsheet (LibreOffice Calc)

- 4.1 What is LibreOffice Calc?
- 4.2 Elements of Calc Window
 - 4.2.1 Concept of Cell Address
- 4.3 Working with Spreadsheet
 - 4.3.1 Creating a Spreadsheet
 - 4.3.2 Opening a Spreadsheet
 - 4.3.3 Saving a Spreadsheet
 - 4.3.4 Printing of Spreadsheet
 - 4.3.5 Exporting of Spreadsheet
 - 4.3.6 Page Layout Setup
- 4.4 Manipulation of Cells and Worksheet
 - 4.4.1 Entering Data in cell
 - 4.4.2 Formatting cells
 - 4.4.3 Editing and Formatting Data
 - 4.4.4 Sorting of Data
 - 4.4.5 Using Filter
 - 4.4.6 Using Fill Tool
- 4.5 Editing Worksheet
 - 4.5.1 Insert and Delete of Row, Column

- 4.5.2 Changing cell height and width
- 4.5.3 Using Freeze Panes
- 4.6 Formula and Function
 - 4.6.1 Formula
 - 4.6.2 Functions
 - 4.6.3 Common and Useful Functions
- 4.7 Chart and Graphs
 - 4.7.1 Create a Chart
- 4.8 Pivot Table
- 4.9 What-if Analysis
 - 4.9.1 Goal Seek
 - 4.9.2 Scenario
 - 4.9.3 Subtotal

5. Presentation (LibreOffice Impress)

- 5.1 What is LibreOffice Impress?
- 5.2 Starting LibreOffice Impress
 - 5.2.1 Element of Impress Window
 - 5.2.2 Workspace Views
- 5.3 Create and Open a Presentation
 - 5.3.1 Create a New Presentation
 - 5.3.2 Open a Presentation
 - 5.3.3 Save a Presentation
- 5.4 Print and Export a Presentation
 - 5.4.1 Print a Presentation
 - 5.4.2 Export a Presentation
 - 5.4.3 E-Mail a Presentation
 - 5.4.4 Page Setup of a Slides
- 5.5 Working with Slides
 - 5.5.1 Entering and Editing Text
 - 5.5.2 Inserting and Deleting Slides
 - 5.5.3 Organizing Slides
- 5.6 Arranging a Preparation
 - 5.6.1 Create Bulleted & Numbered List
 - 5.6.2 Adding Header and Footer
 - 5.6.3 Using Table
 - 5.6.4 Inserting Hyperlinks
- 5.7 Working with Objects
 - 5.7.1 Inserting Images

- 5.7.2 Creating Lines and Shapes
- 5.7.3 Managing Objects
- 5.7.4 Adding Movies and Sound
- 5.8 Slide Master
- 5.9 Providing Aesthetics to Slides
 - 5.9.1 Adding Animation Effects
 - 5.9.2 Using Slide Transitions
 - 5.9.3 Motion Path and Interaction
 - 5.9.4 Using Interactions
- 5.10 Slide Show
 - 5.10.1 Right-click navigation & option
 - 5.10.2 Custom Slide Show
 - 5.10.3 Rehearsal Timing

6. Internet and World Wide Web

- 6.1 Computer Network
 - 6.1.1 Type of Networks
 - 6.1.2 Network Topology
 - 6.1.3 Communication Media
 - 6.1.4 Networking Devices
 - 6.1.5 Network Protocol
- 6.2 Layered System
 - 6.2.1 OSI Model
 - 6.2.2 Internet Model
- 6.3 Internet
 - 6.3.1 Concept of Internet
 - 6.3.2 World Wide Web (WWW)
 - 6.3.3 Website Address and URL
 - 6.3.4 Domain Name System
 - 6.3.5 IP Address
 - 6.3.6 Internet Protocols
 - 6.3.7 Identifying the Various Devices
 - 6.3.8 Internet Service Provider (ISP)
- 6.4 Applications of Internet
- 6.5 Modes of Connecting Internet
- 6.6 Web Browsers
- 6.7 Searching on Internet
 - 6.7.1 Popular Search Engines
 - 6.7.2 YouTube

6.8 Exploring the Web

6.8.1 Surfing the Web

6.8.2 Download Web Pages

6.8.3 Printing of Web Pages

6.9 Net Etiquettes

8.2.1 OTP

8.2.2 QR Code

8.2.3 UPI

8.2.4 AEPS

8.2.5 USSD

8.2.6 BHIM

8.3 National Payments Corporation of India

8.4 Credit Card and Debit Card

8.5 e-Wallet

8.6 Point of Sales (POS)

8.7 Internet Banking

8.7.1 NEFT

8.7.2 RTGS

8.7.3 IMPS

8.8 Mobile Banking

8.9 Online Bill Payment

8.9.1 Bharat BillPay

7. E-mail, Social Networking and e-Governance Services

7.1 Electronic Mail (E-mail)

7.2 Structure of E-mail

7.3 Using E-mail

7.3.1 Opening E-mail Account

7.3.2 Mailbox: Inbox and Outbox

7.3.3 Creating and sending E-mail

7.3.4 Replying to an Email message

7.3.5 Forwarding an Email message

7.3.6 Sorting and Searching Email

7.3.7 Attaching files with Email

7.3.8 Handling SPAM

7.3.9 Adding Signature

7.3.10 Managing Emails

7.4 Social Networking Services

7.4.1 Instant Messaging and Blogs

7.5 E-Commerce

7.5.1 Types of e-commerce

7.5.2 Online Shopping Web sites

7.6 Cloud Storage

7.7 e-Governance

7.7.1 Railway Reservation

7.7.2 Passport Seva

7.7.3 e-Hospital

7.8 UMANG APP

7.9 Digital Locker

8. Digital Financial Tools

8.1 Banking System

8.1.1 Types of accounts & Deposits

8.2 Digital Financial Tools

9. Future Skills and Cyber Security

9.1 Introduction to Industry 4.0

9.2 Futuristic Technology

9.2.1 Internet of Things (IoT)

9.2.2 Big Data Analytics

9.2.3 Mobile Social Network

9.2.4 Cloud Computing

9.2.5 Virtual Reality

9.2.6 Artificial Intelligence

9.2.7 Blockchain Technology

9.2.8 3D Printing

9.2.9 Robotics Process Automation

9.3 Cyber Security

9.3.1 Need of Cyber Security

9.3.2 How protect against cyber attack

9.3.3 Securing your PC

9.3.4 Securing your Mobile

9.4 Trust Seal

9.5 SSL Certificate

9.6 Digital Signature