Information Booklet cum Syllabus

Of

Course on Computer Concepts

Revision-I

Feb 2024

National Institute of Electronics and Information Technology
An Autonomous Scientific Society under
Ministry of Electronics and Information Technology, Government of India

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CONTENTS

1. ## About Course

The course is designed to know the basics of computer and to operate the computer. After this course the student will be able to operate computer and use it in various day to day activity. It provides theoretical background as well as in depth knowledge of Software/ packages.

2. # NIELIT

National Institute of Electronics and Information Technology, NIELIT, (Erstwhile DOEACC Society) is an autonomous scientific society of the Ministry of Electronics & Information Technology, Government of India. The Society is registered under the Societies Registration Act, 1860. NIELIT was set up to carry out Human Resource Development and related activities in the area of Information, Electronics & Communications Technology (IECT). NIELIT is engaged both in Formal & Non-Formal Education in the areas of IECT besides development of industry-oriented quality education and training programs in the state-of-the-art areas. NIELIT has endeavored to establish standards to be the country's premier institution for Examination and Certification in the field of IECT. It is also one of the National Examination Body, which accredits institutes/organizations for conducting courses in IT and Electronics in the non-formal sector.

3. ## Objective of Course

This objective of this course is to introduce the learner to use computers for professional as well as day to day use. After completing the course, the incumbent will be digitally literate and will be able to:

- Acquire confidence in using computers in Office and General Life;
- Will be able to 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 internet for Digital Financial services
- Develop knowledge of Cyber Security
- Develop knowledge about Future skills

The module on financial literacy will enable the individuals to understand the various financial services and be aware of the various schemes of Government.

4. ## Job Roles of Course

After successful completion of the course the candidates shall be employed in the industries for following occupations:

- Computer Operator
- Data Entry Operator
- Social Media Operator

5. Eligibility

No minimum qualification is required for applying and appearing for the examination in the Course on Computer Concepts [CCC].

6. Total duration of the Course

90 Hours - (Theory: 30 hrs + Practical: 60 hrs)

7. Course Details

7.1. Course Outline and Objective of Each Unit

S. No.	Unit Name	Duration (Theory) in Hours	Duration (Practical) in Hours	Total Learning Hours	Learning Objectives
1.	**Introduction to Computer**	02	04	06	After completing this unit, 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, and utilities used for computer and mobile apps
2.	**Introduction to Operating System**	03	04	07	After completing this unit, Learner will be able to • Well acquainted with Operating Systems 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 programs and features, and manage files and folders.

					• Well versed with printing and know various types of file extensions.
3.	**Word Processing**	04	08	12	After completing this unit, Learner will be able to • 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 whole document. • Inserting Header and Footer on the document • Finding text on a word document and correcting spellings. • Able to insert and manipulate tables, enhance table using borders and shading features. • Can prepare copies of a document labels etc. for sending various recipients using Mail Merge.
4.	**Spreadsheet**	03	09	12	After completing this unit, Learner will be able to • 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.

					• Prepare chart to represent the information in a pictorial form..
5.	**Presentation**	03	09	12	After completing this unit, Learner will be able to

• Basic Knowledge of PowerPoint presentations.
• Opening/saving a presentation and printing of slides and handouts.
• Manipulate 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** | 03 | 04 | 07 | After completing this unit, Learner will be able to

• Gather knowledge of various types of networks and topologies.
• Get an overview of Internet, its applications and various browsers available to access the internet.
• Connect to Internet using various modes of connections/ devices available.
• Get knowledge of device identification on local network as well as on 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** | 03 | 06 | 09 | After completing 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**	03	05	08	After completing this unit, Learner will be able to • Know the Digital Financial Tools. • Get Knowledge of Internet Banking Modes. • Get familiar with e-Governance Service e-Commerce and Mobile Apps. • Use the Digital Locker and will be able to store documents in Digital Locker.
9.	**Overview of Cyber Security**	03	05	08	After completing this unit, Learner will be able to • Will be able to understand the need of Cyber Security and will be able to secure their PC and Mobile devices by using basic security features
10.	**Overview of Future Skills and Artificial Intelligence**	03	06	09	After completing this unit, Learner will be able to • Latest trends and technologies in upcoming fields in IECT. • Latest trends and use of Artificial Intelligence in • present and future scenario
	Grand Total	**30**	**60**	**90**	

7.2.Detailed Syllabus

Unit Name	Contents	Hrs.

Introduction to Computer	• Introduction
	• Objectives
	• Computer and Latest IT gadgets
	  o Evolution of Computers & its applications
	  o IT gadgets and their applications
	• Basics of Hardware and Software
	  o Hardware
	    ▪ Central Processing Unit
	    ▪ Input devices
	    ▪ Output devices
	    ▪ Computer Memory & storage
	  o Software
	    ▪ Application Software
	    ▪ Systems Software
	    ▪ Utility Software
	    ▪ Open source and Proprietary Software
	    ▪ Mobile Apps
	• Summary
	• Model Questions and Answers
		06

Introductionto OperatingSystem	• Introduction
	• Objectives
	• Operating System
	  o Basics of Operating System
	  o Operating Systems for desktops and Laptop
	  o Operating Systems for Mobile Phone andTablets
	• User Interface for Desktop and Laptop
	  o Task Bar
	  o Icons & shortcuts
	  o Running an Application
	• Operating System Simple Setting
	  o Using Mouse and Changing its Properties
	  o Changing System Date and Time
	  o Changing Display Properties
	  o To Add or Remove Program and Features
	  o Adding, Removing & Sharing Printers
	• File and Folder Management
	• Types of file Extensions
	• Summary
	• Model Questions and Answers
		07

WORD PROCESSING	• Introduction • Objective • 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 • Print Preview • Printing of Documents	12

	- 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 - 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 - Shortcut Keys - Summary - Model Questions and Answers	
SPREADSHEET	- Introduction - Objectives - 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) - Charts (Bar, Pie, Line) - Summary - Model Questions and Answers	12

Presentation	• Introduction	12
	• Objectives	
	• Creation of Presentation	
	o Creating a Presentation Using a Template	
	o Creating a Blank Presentation	
	o Inserting & Editing Text on Slides	
	o Inserting and Deleting Slides in a Presentation	
	o Saving a Presentation	
	• Manipulating Slides	
	o Inserting Table	
	o Adding ClipArt Pictures	
	o Inserting Other Objects	
	o Resizing and Scaling an Object	
	o Creating & using Master Slide	
	• Presentation of Slides	
	o Choosing a Set Up for Presentation	
	o Running a Slide Show	
	o Transition and Slide Timings	
	o Automating a Slide Show	
	• Providing Aesthetics to Slides & Printing	
	o Enhancing Text Presentation	
	o Working with Color and Line Style	
	o Adding Movie and Sound	
	o Adding Headers, Footers and Notes	
	o Printing Slides and Handouts	
	• Summary	
	• Model Questions and Answers	
INTRODUCTION TO INTERNET AND WWW	• Introduction	07
	• Objectives	
	• Basic of Computer Networks	
	o Local Area Network (LAN)	
	o Wide Area Network (WAN)	
	o Network Topology	
	• Internet	
	o Concept of Internet & WWW	
	o Applications of Internet	
	o Website Address and URL	
	o Introduction to IP Address	
	o ISP and Role of ISP	
	o Internet Protocol	
	o Modes of Connecting Internet (Hotspot, Wi-Fi, LAN Cable, Broadband, USB Tethering)	
	o 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	
	o Popular Search Engines	
	o Searching on Internet	
	o Downloading Web Pages	
	• Printing Web Pages	
	• Summary	
	• Model Questions and Answers	
E-mail, Social Networking and e-Governance Services	• Introduction	09
	• Objectives	
	• Structure of E-mail	
	• Using E-mails	

	o Opening Email account
	o Mailbox: Inbox and Outbox
	o Creating and Sending a new E-mail
	o Replying to an E-mail message
	o Forwarding an E-mail message
	o Searching emails
	o Attaching files with email
	o Email Signature
	• Social Networking & e-Commerce
	    o Facebook, Twitter, LinkedIn, Instagram
	    o Instant Messaging (WhatsApp, Facebook Messenger, Telegram)
	    o Introduction to Blogs
	    o Basics of E-commerce
	    o Netiquettes
	• Overview of e-Governance Services like Railway Reservation, Passport, eHospital [ORS]
	• Accessing e-Governance Services on Mobile Using
	• "UMANG APP"
	• Digital Locker
	• Summary
	• Model Questions and Answers	

DIGITAL FINANCIAL TOOLS AND APPLICATION S	• Introduction
	• Objectives
	• Digital Financial Tools
	    o Understanding OTP [One Time Password]and QR [Quick Response] Code
	    o UPI [Unified Payment Interface]
	    o AEPS [Aadhaar Enabled Payment System]
	    o USSD[Unstructured Supplementary Service Data]
	    o Card [Credit / Debit]
	    o eWallet
	    o PoS [Point of Sale]
	• Internet Banking
	    o National Electronic Fund Transfer (NEFT)
	    o Real Time Gross Settlement (RTGS)
	    o Immediate Payment Service (IMPS)
	• Online Bill Payment
	• Summary
	• Model Questions and Answers
		08

Overview ofCyber Security	• Cyber Security
	    o Need and Goal of Cyber Security
	    o Securing PC
	    o Securing Browser
	    o Securing Email and Social Media Accounts(Facebook, Instagram, WhatsApp)
	    o Securing Smart Phone
	• Summary
	• Model Questions and Answers
		08

Overview of Future Skillsand Artificial Intelligence	• Introduction to Future skills
	• Introduction to
	    o Internet of Things (IoT)
	    o Big Data Analytics
	    o Cloud Computing
	    o Virtual Reality
	    o Artificial Intelligence
	    o Social & Mobile
		09

o Blockchain Technology
o 3D Printing/ Additive Manufacturing
o Robotics Process Automation
• Artificial Intelligence (AI)
    o History of Artificial Intelligence
    o Why Artificial Intelligence?
    o Goals of Artificial Intelligence
    o Ethics of Artificial Intelligence
    o Advantages of Artificial Intelligence
    o Disadvantages of Artificial Intelligence
    o Application of AI
    o Types of Artificial Intelligence:
    o Subsets of Artificial Intelligence
    o Future of Artificial Intelligence
    o Artificial Intelligence (AI) at Present
    o Myths about Advanced Artificial Intelligence
    o Future impact of AI in different sectors
    o Summary
• Model Questions and Answers	

Total	**90**

8. Reference Books/Study Material

1. LibreOffce, Getting Started Guide by LibreOffice Documentation Team
2. Computer Networking by EdTittel, McGRaw Hills Companies
3. OpenOffice.org for DUMMIES by GurdyLeete, Ellen Finkelstein and Mary Leete

9. Practical Assignments

Assignment 1.	**Introduction to Computer** 1. Identify parts of computer 2. Classify between RAM and ROM 3. Draw parts of computer 4. Distinguish between software and hardware 5. Get familiar with various input, 6. output and hardware components of a computer along with storage devices. 7. Get familiar with various types of software, and utilities used for computer and mobile apps
Assignment 2.	**Introduction to Operating System** 1. Identify the desktop 2. Change the desktop background 3. Change the mouse and display properties in windows 4. Change the date and time setting 5. Change the theme 6. Change the desktop icon settings 7. Identify the desktop in Ubuntu 8. Change the desktop background in Ubuntu 9. Change the mouse and display properties in ubuntu 10. Change the date and time setting in ubuntu
Assignment 3.	**WORD PROCESSING** 1. Create a word document and type text in it 2. Edit the text.use cut,copy,paste commands

	3. Format the text.use bold,italic,underline ,font font color,font size
	4. Create a resume for job
	5. Create a letter .write letter to office asking for a day leave
	6. Create new document from template
	7. Create new document and insert images,table,shape
	8. Format the image,shape and table
	9. Insert header,footer.insert date,page number
	10. Create a title page
	11. Use styles in document
	12. Use mail merger to send letters to different people
Assignment 4.	**SPREADSHEET** 1. Create a sheet and enter data in it. 2. Edit the data 3. Create a student table and enter marks for different subjects 4. Calculate total,percentage and grade 5. Format the table 6. Use round(),roundup(),rounddown() formauls 7. Create a table for salary slip.enter basic pay calculate HRA,TA,DA and gross salary. 8. Insert images,chart,text box,shape,header,footer in the sheet
Assignment 5.	**Presentation** 1. Create a presentation.insert slides and enter text in slides. 2. Edit the text 3. Give background color to slides 4. Give different designs to slides 5. Insert images,chart,audio,video,shape in slides 6. Use images from gallery 7. Use styles to give different styles 8. Apply transition and animation to slides 9. Run slide show 10. Apply different slide timimgs
Assignment 6.	**INTRODUCTION TO INTERNET AND WWW** 1. Identify different network devices 2. Identify the IP address of your computer 3. Open browser.open nielit.gov.in 4. Open different educational website in the browser 5. Open search engine 6. Type some keywords to search in browser 7. Open a web page 8. Download a web page and print it
Assignment 7.	**E-mail, Social Networking and e- Governance Services** 1. Create email ID 2. Open email and read inbox 3. Forward a email 4. Reply to an email 5. Compose and email and send it 6. Compose and email and attach a file and send email 7. Create and store contact in contacts 8. Add signature to email 9. Open inbox and sort the email 10. Search some emails

Assignment 8.	**DIGITAL FINANCIAL TOOLS AND APPLICATIONS** 1. Open UPI app and transfer some money 2. Identify different UPI apps 3. Use digilocker and upload some documents in it 4. Use credit/debit card to transfer some money 5. Identify the IMEI number of the phone
Assignment 9.	**Overview of Cyber Security** 1. Identify the different types of threats 2. Use anti virus to protect computer 3. Create account to log in to computer 4. Use password to protect account 5. Use pin on mobile phones to lock the phone
Assignment 10.	**Overview of Future Skills and Artificial Intelligence** 1. Identify various future technologies 2. Use AI to search for something on internet 3. Use different AI tools to create some image