

BIJU PATTNAIK COMPUTER CENTRE

Course on Computer Concepts [CCC]

Detailed Syllabus and Learning Outcome:

S. No.	Chapter Name	Course Outline	Duration (Hours)		Learning Outcomes
			Theory	Lab	
1	Chapter-1 Introduction to Computer	1.0 Introduction 1.1 Objectives 1.2 Computer and Latest IT gadgets 1.2.1 Evolution of Computers & its applications 1.2.2 IT gadgets and their applications 1.3 Basics of Hardware and Software 1.3.1 Hardware			After completion of this chapter, the candidate will be able to □ identify computers, IT gadgets and explain their evolution and
		1.3.1.1 Central Processing Unit 1.3.1.2 Input devices 1.3.1.3 Output devices 1.3.1.4 Computer Memory & storage 1.3.2 Software 1.3.2.1 Application Software 1.3.2.2 Systems Software 1.3.2.3 Utility Software 1.3.2.4 Open source and Proprietary Software 1.3.2.5 Mobile Apps 1.4 Summary 1.5 Model Questions and Answers			applications. • Get familiar with various input, output and hardware components of a computer along with storage devices. • Get familiar with various types of softwares, utilities used for computer and mobile apps.
	Chapter-2 Introduction to Operating System	2.0 Introduction 2.1 Objectives 2.2 Operating System 2.2.1 Basics of Operating system 2.2.2 Operating Systems for Desktop and Laptop 2.2.3 Operating Systems for Mobile Phone and Tablets 2.3 User Interface for Desktop and Laptop 2.3.1 Task Bar 2.3.2 Icons & shortcuts 2.3.3 Running an Application 2.4 Operating System Simple Setting 2.4.1 Using Mouse and Changing its Properties 2.4.2 Changing System Date and Time 2.4.3 Changing Display Properties 2.4.4 To Add or Remove Program and Features 2.4.5 Adding, Removing & Sharing Printers 2.5 File and Folder Management 2.6 Types of file Extensions 2.7 Summary 2.8 Model Questions and Answers			After learning this chapter, candidate 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.

BIJU PATTNAIK COMPUTER CENTRE

Course on Computer Concepts [CCC]

3.	Chapter-3 WORD PROCESSING	3.0 Introduction 3.1 Objective 3.2 Word Processing Basics 3.2.1 Opening Word Processing Package 3.2.2 Title Bar, Menu Bar, Toolbars & Sidebar 3.2.3 Creating a New Document 3.3 Opening and Closing Documents 3.3.1 Opening Documents 3.3.2 Save and Save As 3.3.3 Closing Document 3.3.4 Using The Help 3.3.5 Page Setup 3.3.6 Print Preview 3.3.7 Printing of Documents 3.3.8 PDF file and Saving a Document as PDF file		After completion of this chapter, candidate will have <ul style="list-style-type: none"> 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,
		3.4 Text Creation and manipulation 3.4.1 Document Creation 3.4.2 Editing Text 3.4.3 Text Selection 3.4.4 Cut, Copy and Paste 3.4.5 Font, Color, Style and Size selection 3.4.6 Alignment of Text 3.4.7 Undo & Redo 3.4.8 AutoCorrect, Spelling & Grammar 3.4.9 Find and Replace 3.5 Formatting the Text 3.5.1 Paragraph Indentation 3.5.2 Bullets and Numbering 3.5.3 Change case 3.5.4 Header & Footer Table 3.6 Manipulation 3.6.1 Insert & Draw Table 3.6.2 Changing cell width and height 3.6.3 Alignment of Text in cell 3.6.4 Delete / Insertion of Row, Column and Merging & Splitting of Cells 3.6.5 Border and Shading 3.7 Mail Merge 3.8 Shortcut Keys 3.9 Summary 3.10 Model Questions and Answers		paragraph and whole document. <ul style="list-style-type: none"> 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.

BIJU PATTNAIK COMPUTER CENTRE

Course on Computer Concepts [CCC]

4.	Chapter-4 SPREAD SHEET	4.0 Introduction 4.1 Objectives 4.2 Elements of Spread Sheet 4.2.1 Creating of Spread Sheet 4.2.2 Concept of Cell Address [Row and Column] and selecting a Cell 4.2.3 Entering Data [text, number, date] in Cells 4.2.4 Page Setup 4.2.5 Printing of Sheet 4.2.6 Saving Spreadsheet 4.2.7 Opening and Closing Manipulation of Cells & Sheet 4.3 4.3.1 Modifying / Editing Cell Content 4.3.2 Formatting Cell (Font, Alignment, Style) 4.3.3 Cut, Copy, Paste & Paste Special 4.3.4 Changing Cell Height and Width 4.3.5 Inserting and Deleting Rows, Column 4.3.6 AutoFill 4.3.7 Sorting & Filtering 4.3.8 Freezing panes Formulas, Functions and Charts 4.4 4.4.1 Using Formulas for Numbers (Addition, Subtraction, Multiplication & Division) 4.4.2 AutoSum 4.4.3 Functions (Sum, Count, MAX, MIN, AVERAGE) 4.4.4 Charts (Bar, Pie, Line) Summary Model Questions and Answers 4.5 4.6		After completion of this chapter, candidate will have good hands- on practice on <ul style="list-style-type: none"> • 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.
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BIJU PATTNAIK COMPUTER CENTRE

Course on Computer Concepts [CCC]

5.	Chapter-5 Presentation	5.0 5.1 Introduction Objectives 5.2 Creation of Presentation 5.2.1 Creating a Presentation Using a Template 5.2.2 Creating a Blank Presentation 5.2.3 Inserting & Editing Text on Slides 5.2.4 Inserting and Deleting Slides in a Presentation 5.2.5 Saving a Presentation Manipulating Slides 5.3 5.3.1 Inserting Table 5.3.2 Adding ClipArt Pictures 5.3.3 Inserting Other Objects 5.3.4 Resizing and Scaling an Object 5.3.5 Creating & using Master Slide Presentation of Slides 5.4 5.4.1 Choosing a Set Up for Presentation 5.4.2 Running a Slide Show 5.4.3 Transition and Slide Timings 5.4.4 Automating a Slide Show Providing Aesthetics to Slides & Printing 5.5 5.5.1 Enhancing Text Presentation 5.5.2 Working with Color and Line Style 5.5.3 Adding Movie and Sound 5.5.4 Adding Headers, Footers and Notes 5.5.5 Printing Slides and Handouts		After completion of this chapter, candidate will have good hands-on practice on <ul style="list-style-type: none"> • 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.	Chapter-6 INTRODUCTI ON TO INTERNET AND WWW	6.0 Introduction 6.1 Objectives 6.2 Basic of Computer Networks 6.2.1 Local Area Network (LAN) 6.2.2 Wide Area Network (WAN) 6.2.3 Network Topology Internet 6.3 6.3.1 Concept of Internet & WWW 6.3.2 Applications of Internet 6.3.3 Website Address and URL 6.3.4 Introduction to IP Address 6.3.5 ISP and Role of ISP 6.3.6 Internet Protocol 6.3.7 Modes of Connecting Internet (Hotspot, Wi- Fi, LAN Cable, Broadband, USB Tethering) 6.3.8 Identifying and uses of IP/MAC/IMEI of various devices Popular Web Browsers (Internet Explorer/Edge, Mozilla Firefox, Opera etc.) 6.4 Exploring the Internet Chrome, 6.5 6.5.1 Surfing the web 6.5.2 Popular Search Engines 6.5.3 Searching on Internet 6.5.4 Downloading Web Pages 6.5.5 Printing Web Pages		After completion of this chapter, candidate will be able to: <ul style="list-style-type: none"> • 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.

BIJU PATTNAIK COMPUTER CENTRE

Course on Computer Concepts [CCC]

		6.6 Summary 6.7 Model Questions and Answers		<ul style="list-style-type: none"> • Can search Information on the Internet on various topics.□ • Download and print web pages.□
7.	Chapter-7 E-mail, Social Networking and e-Governance Services	7.0 Introduction 7.1 Objectives 7.2 Structure of E-mail 7.3 Using E-mails 7.3.1 Opening Email account 7.3.2 Mailbox: Inbox and Outbox 7.3.3 Creating and Sending a new E-mail 7.3.4 Replying to an E-mail message 7.3.5 Forwarding an E-mail message 7.3.6 Searching emails 7.3.7 Attaching files with email 7.3.8 Email Signature Social Networking & e-Commerce 7.4 7.4.1 Facebook, Twitter, LinkedIn, Instagram 7.4.2 Instant Messaging (WhatsApp, Facebook Messenger, Telegram) 7.4.3 Introduction to Blogs 7.4.4 Basics of E-commerce 7.4.5 Netiquettes Overview of e-Governance Services like Railway Reservation, Passport, eHospital [ORS] 7.5 Accessing e-Governance Services on Mobile Using "UMANG APP" 7.6 Digital Locker Summary 7.7 Model Questions and Answers		<p>After completion of this chapter, candidate will be able to:</p> <ul style="list-style-type: none"> • 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.	Chapter-8 DIGITAL FINANCIAL TOOLS AND APPLICATIONS	8.0 Introduction 8.1 Objectives 8.2 Digital Financial Tools 8.2.1. Understanding OTP [One Time Password]and QR [Quick Response] Code 8.2.2 UPI [Unified Payment Interface] 8.2.3 AEPS [Aadhaar Enabled Payment System] 8.2.4 USSD[Unstructured Supplementary Service Data] 8.2.5 Card [Credit / Debit] 8.2.6 eWallet 8.2.7 PoS [Point of Sale] Internet Banking 8.3 8.3.1 National Electronic Fund Transfer (NEFT) 8.3.2 Real Time Gross Settlement (RTGS) 8.3.3 Immediate Payment Service (IMPS) Online Bill Payment 8.4 Summary 8.5 Model Questions and Answers 8.6		<p>After completion of this chapter, candidate will be able to:</p> <ul style="list-style-type: none"> • Know the Digital Financial Tools. • Get Knowledge of Internet Banking Modes. • Get familiar with e- Governance Services, e-Commerce and Mobile Apps. • Use the Digital Locker and will be able to store documents in Digital Locker.
9.	Chapter-9	9.0 Cyber Security 9.0.1 Need and Goal of Cyber Security		

BIJU PATTNAIK COMPUTER CENTRE

Course on Computer Concepts [CCC]

	<p>Overview of Cyber Security</p>	<p>9.0.2 Securing PC 9.0.3 Securing Browser 9.0.4 Securing Email and Social Media Accounts (Facebook, Instagram, WhatsApp) 9.0.5 Securing Smart Phone 9.1 Summary 9.2 Model Questions and Answers</p>		<p>After completion of this chapter, candidate will be familiar with the :</p> <ul style="list-style-type: none"> □ Will be able to understand need of Cyber Security and will be able to secure their PC and Mobile devices by using basic security features.
	<p>Chapter-10</p> <p>Overview of Future skills and Artificial Intelligence</p>	<p>10.0 Introduction to Future skills 10.1 Introduction to 10.1.1 Internet of Things (IoT) 10.1.2 Big Data Analytics 10.1.3 Cloud Computing 10.1.4 Virtual Reality 10.1.5 Artificial Intelligence 10.1.6 Social & Mobile 10.1.7 Blockchain Technology 10.1.8 3D Printing/ Additive Manufacturing 10.1.9 Robotics Process Automation 10.2 What is Artificial Intelligence (AI)? 10.3 History of Artificial Intelligence 10.4 Why Artificial Intelligence? 10.5 Goals of Artificial Intelligence 10.6 Ethics of Artificial Intelligence 10.7 Advantages of Artificial Intelligence 10.8 Disadvantages of Artificial Intelligence 10.9 Application of AI 10.10 Types of Artificial Intelligence: 10.11 Subsets of Artificial Intelligence 10.12 Future of Artificial Intelligence 10.13 Artificial Intelligence (AI) at Present 10.14 Myths about Advanced Artificial Intelligence 10.15 Future impact of AI in different sectors 10.16 Summary 10.17 Model Questions and Answers</p>		<p>After completion of this chapter, candidate will be familiar with the:</p> <ul style="list-style-type: none"> • Latest trends and technologies in upcoming fields in IECT. • Latest trends and use of Artificial Intelligence in present and future scenario.
<p>Total Hours = 90</p>				