

**MODULAR EMPLOYEABLE SKILL COURSES OFFERED BY KEONICS FOR SPONSORED PROGRAMME WITH COURSE CODE**

Sl.No	Module Code	Name of the Course	Module	Subject Code	Subject	Hours	Course Fees	Duration
1	ICT 702	DTP & Print Publishing Assistant	M5	702S1	Computer Fundamentals, History and Generations of Computer, Advantage and disadvantage of Computer, Block Diagram of a Computer Description of Different parts of a Computer, System Software and Application Software	6	3200	120 Hrs
				702S2	MS Office, Introduction to MS Office Word Processing Software, Electronic Spreadsheet	21		
				702S3	PageMaker, Introduction to various versions, concepts and applications of PageMaker Guides & rulers, Drawing tools, Fills & outlines.	21		
				702S4	CorelDraw, Print Design Basics, Design Principles & Color Harmony, Typography Layout Design, Computer Graphics	36		
				702S5	Photo Shop, Introduction to various versions, concepts and applications of Photoshop, Understanding the Print Industry, Printing technology and uses Understanding Design principles and color theory, Understanding the use of various fonts and type issues with Web design, Understanding Designing standards, Print layout Design and creative visualization for intuitive layouts.	36		
2	SS 102	Soft Skills	M5	102S1	Concept of Effective Communication	10	6900	280 Hrs
				102S2	Grammatical Use (Mind your language towards better English)	80		
				102S3	Self Introduction:	4		
				102S4	Our Environment & People	4		
				102S5	Daily Activities:	4		
				102S6	My Family:	4		
				102S7	My Friends and Classmates	4		
				102S8	Getting a Job / Interview for Admission in School:	10		
				102S9	English at different place :	40		
				102S10	English in media watching / listening to clips for information	40		
				102S11	Language : Comprehension and composition	40		
				102S12	Becoming a professional	40		
3	ICT 701	Accounting & Tally	M5	701S1	Computer Fundamentals, History and Generations of Computer, Advantage and disadvantage of Computer, Block Diagram of a Computer, Description of Different parts of a Computer, System Software and Application Software	6	9200	300 Hrs
				701S2	MS Office, Introduction to MS Office, Word Processing Software, Electronic Spreadsheet	20		
				701S3	Introduction to Accounting, Basics of Accounting, Accounting Concepts, Double Entry Concept, Golden Rule of Accounting	60		
				701S4	Working with Tally, Voucher Entry, Ledger Posting, Final Account Preparation, Cash Book, Ratio Analysis Depreciation, Stock Management, Analysis of VAT, Cash Flow, Fund Flow	60		
				701S5	Features of Tally Accounting on Computers, Introduction – Reports, Business Organizations (Different areas like Schools, Colleges, Shops, Factory etc) Double entry system of book keeping, Budgeting Systems, Scenario management and Variance Analysis, Costing Systems, Understanding Ratios, and Analysis of financial statements, Inventory Basics, POS Invoicing, TDS, TCS, VAT & Service Tax Processing in Tally, Interface in Different Languages, Processing Payroll Functions in Tally, what is Management Control Systems.	80		
				701S6	Internet Basics What is Internet? How Internet works? Types of Internet Browsers and Web pages. Types of different web sites. Cyber Laws.	15		

				701S7	Cyber Security - Overview of Information Security Understanding Information Security,Need of the Information security Basics of IS (CIA),History and evolution of IS Dimensions of Information Security Intranet/Internet Information Security and Cyber Security relationship, Why Care About Security? Challenges to Information Security,Benefits of Information of Security,Understanding techniques to enforce IS in an organization Identifying tools to enforce Information Security, Identifying frameworks to enforce Information Security	10	
				701S8	Overview of Information Security ThreatsTypes of threats – DDoS, Malicious, codes, Espionage, etc,Identification of Threats,Probing of threats,Scanning of threats, ModusOperandi,Sources of Threats,External threats, Internal threats,Best Practices or Guidelines used to Identify Threats,Conduct regular education and awareness trainings for employees and third parties, Best Practices or Guidelines used in mitigation of hreats, Deploying up to date technology,Maintaining Systems and Procedures,Educating Users, Conducting regular education and awareness trainings for employees and third parties,Collaborate with peers and experts through different forums to understand contemporary issues and solutions	10	
				701S9	Information Security Vulnerabilities Why do Information Security Vulnerabilities exists, Types of Technical Vulnerabilities,Types of Native Vulnerabilities,Understanding Security Vulnerabilities,Flaws in Software or Protocol Designs, Weaknesses in How Protocols and Software Are Implemented,Weaknesses in System and Network Configurations,Weaknesses in Web or Cloud applications,Weaknesses in Online etransactions, Browser Security and Role of cookies and pop-ups, Security holes in Browser, Web Applications, OS, and Smartphones, Identifying role of Social sites and media in cyber security and vulnerability, Understanding Vulnerability Assessment Tools and Techniques,Techniques to Exploit Vulnerabilities, Techniques to Fix the Vulnerabilities, Identify security vulnerabilities on a regular basis using requisite tools an processes, How to fix the security gaps and holes, Identifying liabilities of service providers, software vendors,Software authors, system owners and third parties,Best Practices and Guidelines to mitigate security Vulnerabilities	10	
				701S10	Risk Management What is Risk?,Relationship between Threat,Vulnerability, and Risk,What Is the Value of an Asset? What Is a Threat Source/Agent? Examples of Some Vulnerabilities that Are Not Always Obvious What Is a Control? What Is Risk Likelihood and consequences? What Is Impact? Control Effectiveness Risk Management Purpose of Risk Management,Risk Assessment (Phases), Why Is Risk Assessment Difficult?, Types of Risk Assessment Different Approaches to Risk Analysis, Best Practices and Guidelines in Assessing and Calculating Risks, Develop and implement policies and procedures to mitigate risks arising from ICT supply chain and outsourcing, Best Practices and Guidelines in Mitigating Risks	4	
				701S11	Legal Framework Need for Legal Framework and its enforcement, Types of Law Foundational Concepts of Law,Common Laws – Criminal, Common Laws – Civil, Common Laws Administrative, Intellectual Property Laws,More Intellectual Property Laws, Software Licensing, Historic Examples of Computer Crimes, Who Perpetrates These Crimes? IT (Amendment) Act 2008, Cyber crimes Authorities,Enforcement and Penalties Security measures and Privacy protection Digital Signature legal ecosystem, Intermediary Guidelines, National Cyber Security Policy Identification Protection & Prosecution, Computer Crime and Its Barriers Countries Working Together, Security Principles for International Use, Determine if a Crime Has Indeed Been Committed, When Should Law Enforcement Get Involved?, Citizen versus Law Enforcement Investigation, Investigation of Any Crime, Role of Evidence in a Trial, General Rules for Evidence, Evidence Requirements, Evidence Collection Topics, Chain of Custody, How Is Evidence Processed? □ Evidence Types □ Hearsay Rule Exception □ Privacy of Sensitive Data □ Privacy Issues □ Section 43A, 7 of IT (Amendment) Act, Justice A.P. Shah Report □ European Union Principles on Privacy □ US Laws on Privacy □ Routing Data Through DifferentCountries □ Employee Privacy Issues □ Sets of Ethics □ Ethics – Mile2 □ Ethics – Computer Ethics Institute □ Ethics – Internet Architecture Board GAISP- Generally Accepted Information Security Principles	10	

				701S12	Privacy Protection Understanding Privacy as a Domain, Relationship between security and privacy, Revitalizing security program to enable Privacy Protection, Assess privacy implications of security technologies, Privacy impact assessment, Develop and implement privacy protection measures within the organization	5		
				701S13	Information Security Policy and Procedures Understanding Security Frameworks Security Standards, Understanding organizational requirements from an information security point of view, Security Policy, Procedures, and Practices, Security Policy, Security-Related Procedures, Security Practices Security Compliances, Develop information security policies and procedures implement information security policies and procedures Collaborate with other departments within the organization for effective implementation of security provisions, Understand the organization and individual behaviors for information security, Enforcing and maintaining strategies for effective implementation of security practices, Update and upgrade Key Performance Indicators for security implementation, Best practices and Guidelines in developing information security policies and procedure	5		
				701S14	Internet Marketing What is Internet Marketing? What is chatting? e-bay and similar open source tools, Types of basic modules, Types of advanced modules. What is international selling?	5		
4	BAN 202	Banking Associate (Diploma in Financial & Accounting Management)	M5	202S1	Introduction to accounts Debit/ Credit	5	10410	300 Hrs
				202S2	Tally accounting software	145		
				202S3	Indian Financial System Recent developments in the Indian Financial system – market structure & financial innovation. RBI, SEBI, IRDA etc & their major functions. Role & functions of banks –Regulatory enactments governing banks, Retail & Wholesale banking, Role & functions of Capital markets & Mutual Funds, Role & functions of Insurance Companies & Bank assurance, Importance of risk management in banks, Alliances/mergers/consolidation, Participatory Notes, Credit Information Bureau Ltd, Fair practices for debt collection, Banking Codes & Standard Boards	14		
				202S4	Functions of banks Deposits: Banker-Customer relations, KYC guidelines, different Deposit products & services offered by banks, Mandate & Power of attorney – Banker's lien. right of set off, garnishee order, Income tax attachment order etc, Payment & collection of cheque, Account opening for various types of customers – minors, joint account, HUF, firms, companies, trusts, societies, Govt & public bodies. Importance of AML. Credit, Principles of lending, Different types of documents, documentation procedures, Different modes of charging, types of collaterals & their characteristics, Priority sector lending.	14		
				202S5	Agriculture/SMEs/SHGs/SSI/Tiny sector financing New products & services –Factoring, securitization, bank assurance, mutual funds etc. Credit cards/home, loans/personal loans – brief outline of procedures & practices, Ancillary services – remittances, safe deposit lockers etc.	14		
				202S6	Support Services – Marketing of Banking Services Products :Marketing Management -Meaning, Importance and Functions - Marketing of Services, Product Research & Development - Test marketing of bank products - Product Life Cycle - Product Modification - New Product Development ,Packaging and Branding of bank	14		
				202S7	products, Diversification, Pricing of bank products and services, Objectives, Strategies and Methods, Factors Influencing the Pricing Decisions, Importance of Pricing, Distribution - Factors Influencing, Direct and Indirect Channels of bank products - Physical Distribution, Channel Functions and Services, Promotion - Promotion Mix and Role of Promotion in Marketing, Marketing Information Systems, Role of DSA/DMA in Bank Marketing, Channel Management, Selling function in a bank, Portfolio and Wealth Management, Tele marketing/Mobile Phone banking,	14		

				202S8	Basics of Business Mathematics Bonds - Calculation of YTM Duration - Bond Pricing, Premium and Discount -Bond, valuation rules preliminary method, definition of debt, rules on compounding in respect of loan accounts, penal interest etc.Capital Budgeting - Discounted,cash flow - net present value, pay back methods, Depreciation - different types,methods of calculation, Foreign Exchange Arithmetic for beginners.	14	
				202S9	Accounting in Banks/Branches,Definition & Scope and Accounting Standards, Nature and purpose of accounting,historical perspectives - Origins of accounting principles - accounting standards and its definition and Scope, Generally Accepted Accounting Principles - USA,Transfer Price mechanism Basic Accountancy Procedures, Concepts of accountancy, entity going concern - double entry systems, Principles of conservatism - revenue recognition and realization, accrual and cash basis, Record keeping basics, account categories - debit and credit concepts, journalizing ,Maintenance of Cash/ Subsidiary books and Ledger, Trial Balance, Adjusting and Closing entries - Day Book and General Ledger Posting.	14	
				202S10	Bank Accounting Balance Sheet,Rules for bank accounts,cash/clearing/transfer,vouchers/system - subsidiary,book and main day book, General Ledger, Branch v/s Bank Accounts, Bank Balance Sheet Structure, accounts categories -Assets,Liabilities and Net Worth Components, Accounting for NPA /Provisioning/Suit Filed Accounts, Preparation of Final Accounts, Final Accounts of Banking Companies, Disclosure requirements.	14	
				202S11	Other Accounts Partnership accounts - partner's, fixed capital accounts, Current accounts, loan accounts,treatment of intangibles like, goodwill - admission / retirement / death of partner, Company accounts - classes of Share Capital, issue/ forfeiture of Shares -issue of Bonus Shares, Bank reconciliation statement, Capital & Revenue Expenditure, Depreciation/ Inventory Valuation/Bill of Exchange/Consignment Account / Joint Venture - Special accounts - Leasing and Hire-Purchase Company accounts – Accounts of Non - Trading Concerns - Accounting from incomplete records – Receipts & Payments Account – Income & Expenditure Account, Ratio Analysis.	14	
				202S12	Computerized Accounting, Accounting in electronic environment, methods procedures - security, rectification, Core banking environment is to be highlighted. Standard books maintained for different accounts are to be shown as Indian Partnership Act, 1932 Definition and types of partnership, relation of partners to one another - Relation of partners to third parties, Minor admitted to the benefits of Partnership, Dissolution of firm, Effect of non - registration - The Transfer of property Act (i) Foreign Exchange Management Act 2000 (ii) Prevention of Money Laundering Money Act (iii) Right to Information Act (iv) Information Technology Act.	10	
				202S13	Regulations & Compliance A. Provisions of RBI Act 1935 ,Banking Regulation Act 1949 Banking Companies [Acquisition and transfer of undertakings Act 1970 &1980]. B. Government & RBI's powers, Opening of new banks and branch licensing, Constitution of board of directors and their rights, Banks share holders and their rights, CRR/SLR concepts, Cash/currency management, Winding up - amalgamation and mergers,Powers to control advances, selective credit control monetary and credit policy, Audit and Inspection, Supervision and control -board for financial supervision - its, Disclosure of accounts and balance sheets, Submission of returns to RBI etc, Corporate Governance Legal aspects of banking operations: □ Case laws on responsibility of paying /collecting banker. □ Indemnities/guarantees - scope and application - obligations of a banker - precautions and rightslaws relating to bill finance, LC and Deferred Payments - Laws relating to securities - valuation of securities - modes of chargingsecurities - lien, pledge, mortgage, hypothecation etc - □ registration offirms/companies -creation of charge and satisfaction of charge Banking Related Laws:□ Law of limitation.□ Provisions of Bankers Book Evidence Act. □ Special features of Recovery of Debts Due to Banks and Financial Institutions Act, 1993 (a) TDS, (b) Banking Cash Transaction tax, (c) Service Tax, (d) Asset Reconstruction Companies. □ The Securitization and Reconstruction of FinancialAssets and Enforcement of Security Interest Act, 2002. a) The Consumer Protection Act, 1986, (b) Banking Ombudsman, (c) Lok Adalats (d) Lender's Liability Ac Commercial laws with reference to banking operations:	14	

5	ICT 707	Web Designing & Publishing Assistants (Web Designing)	M5	707S1	Computer Fundamentals History and Generations of Computer -Advantage and disadvantage of Computer -Block Diagram of a Computer-Description of Different parts of a Computer.System Software and Application Software	6	12928	320 Hrs
				707S2	MS Office Introduction to MS Office-Word Processing Software-Electronic Spreadsheet	26		
				707S3	Introduction to Web, Overview of Internet and WWW. Web pages, home page, Web browsers, search Engines, web sites and servers.	16		
				707S4	Introduction to HTML HTML features and uses, structure of an HTML document, creating HTML document, adding body text and comments, Using all the features, colours and other effects of HTML. Converting MS Office documents to HTML.Tables & Lists – Creating Tables and Lists in HTML documents,Links: Creating links to local range,other pages, specific part of page,electronic mail, Images: Including icon and picture in HTML document. Creation of animated GIF. Sizing the pictures.	20		
				707S5	MultimediaObjects Adding external images, video, and sound file including device independent (DVI) files. Add marquees of scrolling text.	4		
				707S6	Frames Setting and releasing frames. Using one frame to index another. Creating floating frames, borderless frames and frames with borders.	2		
				707S7	Forms Creating basic forms. Adding text box, check box, radio buttons, pulldown menus, single-line text field and password field. Processing the forms.	4		
				707S8	Style sheets Creating style sheets to other HTML element, altering different characteristics and features, Cascading HTML style sheets.	20		
				707S9	DHTML Creating layers using style sheet syntax. Create animation, Theory related to practical	6		
				707S10	Computer Graphics Understanding how images are formed, image file formats and their properties	2		
				707S11	Design Principles & Color Harmony Understanding Design principles and color theory Knowledge of Internet, Web design techniques and study of designs as per content, GIGW, OWSP, GCIG Concepts Understanding the use of various fonts and type issues with Web design Understanding design issues in Web medium and visualizing intuiting web designs	4		
				707S12	Photo Shop Introduction to various versions,concepts and applications of Photoshop,Understanding the Print Industry, Printing technology and uses,Understanding Design principles and color theory, Understanding the use of various fonts and typo issues with Web design, Understanding Designing standards, Print layout Design and creative visualization for intuitive layouts	40		
				707S13	Javascripting, Creating scripts for Web for Dynamic websites, Validation on Forms	6		
				707S14	VB Script Creating scripts for Web for Dynamic websites, Validation on Forms	6		
				707S15	PHP & MySQL Using PHP & MySQL to create dynamic web pages enabled with forms and database usage, ODBC Concepts for Connection with Database with PHP,Difference between Server Side & Client Side Script, Hosting & Deploying Website.	40		
				707S16	Web Design Basics Getting connected using FTP.Down loading software, Upgrading Browser versions.Using Telnet to get connected to remote computer	6		

				707S17	Web Design in Flash with scripting About Flash and General,overview – Stage and Work area of Flash, using, guides, grid & rulers, Using frames and key frames, Working with time line, Using layers,Using Guide layers.Drawing in Flash tooling colors in Flash, to use a gradient fill, Importing Artwork, Video and Audio. Different file formats in Video & Audio, Flash Compatible Audio & Video file formats Create interactive animations for learning medium, Programming simple interactive applications, using Action Scripting Creating Banners, Logo Animation, simple 2D animation content used in Web and E-learning medium	50		
				707S18	Web Layout Design Standards Study design issues in Web medium and visualizing intuiting web designs	2		
				707S19	Cyber Security - Overview of Information Security Understanding Information Security, Need of the Information security,Basics of IS (CIA), History and evolution of IS, Dimensions of Information Security,Intranet/Internet, Information Security and Cyber Security relationship,Why Care About Security?, Challenges to Information Security, Benefits of Information of Security,Understanding techniques to enforce IS in an organization, Identifying tools to enforce Information Security, Identifying frameworks to enforce Information Security	10		
				707S20	Overview of Information Security Threats, Types of threats – DDoS, Malicious codes, Espionage, etc,Identification of Threats, Probing of threats, Scanning of threats, Modus Operandi, Sources of Threats, External threats, Internal threats,Best Practices or Guidelines used to Identify Threats, Conduct regular education and awareness trainings for employees and third parties,Best Practices or Guidelines used in mitigation of threats,Deploying up to date technology,Maintaining Systems and Procedures,Educating Users,Conducting regular education and awareness trainings for employees and third parties,Collaborate with peers and experts through different forums to understand contemporary issues and solutions	10		
				707S21	Information Security Vulnerabilities Why do Information Security Vulnerabilities exists,Types of Technical Vulnerabilities,Types of Native Vulnerabilities,Understanding Security Vulnerabilities, Flaws in Software or Protocol designs,Weaknesses in How Protocols and Software Are Implemented, Weaknesses in System and Network Configurations,Weaknesses in Web or Cloud applications, Weaknesses in Online etransactions Browser Security and Role of cookies and pop-ups, Security holes in Browser, Web Applications, OS, and Smartphones, Identifying role of Social sites and media in cyber security and vulnerability,Understanding Vulnerability Assessment Tools and Techniques, Techniques to Exploit Vulnerabilities,Techniques to Fix the Vulnerabilities,Identify security vulnerabilities on a regular basis using requisite tools and processes,How to fix the security gaps and holes, Identifying liabilities of service providers, software vendors,Software authors, system owners, and third parties,Best Practices and Guidelines to mitigate security Vulnerabilities	10		
				707S22	Risk Management What is Risk? Relationship between Threat, Vulnerability, and Risk What Is the Value of an Asset? What Is a Threat Source/Agent? Examples of Some Vulnerabilities that Are Not Always Obvious What Is a Control? What Is Risk Likelihood and consequences? What Is Impact? Control Effectiveness Risk Management Purpose of Risk Management Risk Assessment (Phases) Why Is Risk Assessment Difficult?Types of Risk Assessment Different Approaches to Risk Analysis Best Practices and Guidelines in Assessing and Calculating Risks Develop and implement policies and procedures to mitigate risks arising from ICT supply chain and outsourcing, Best Practices and Guidelines in Mitigating Risks	6		
				707S23	- Software Development Security	12		
				707S24	Legal Framework	4		
				707S25	Privacy Protection	4		
				707S26	Audit and Testing	4		

6	ICT 708	Animation and Multimedia Assistant (2D & 3D Animation)	M5	708S1	Computer Fundamentals History and Generations of Computer -Advantage and disadvantage of Computer- Block Diagram of a Computer- Description of Different parts of a Computer.- System Software and Application Software	6	14544	360 Hrs
				708S2	MS Office,Introduction to MS Office,Word Processing Software Electronic Spreadsheet	24		
				708S3	Drawing Drawing practice with various basic shapes and live objects, Anatomy drawing , live study,digital drawing using pen tablet and drawing software, Drawing stick figures and study mannequin digitally, practice of strong line of action,gesture drawing, and human figure with basic shape.	20		
				708S4	Basics of Animation Drawing basic forms and shapes which are fundamentals for further drawing session.Definition of AnimationHistory of Animation.First Animation in the world,First Animation movie Two basic method of classical, Animation.Pose to Pose animation. Straight ahead animation.Basic understanding of key poses, extreme,Breakdown and in betweens.Keyposes of walk cycles. Keyposes of Run cycles.Basic rules of body mechanism and ActingClean-up.Rough drawing and composite,with Background Making final output.	50		
				708S5	2D Digital Animation After placing the keys putting the motion between symbols and shape between drawing when required	60		
				708S6	3D ANIMATION Print Design Basics,Fundamental Principal of Design.Color Theory, Layout Composition.Creative use of Colors.	80		
				708S7	Drawing Anatomically correct human figures,Learning proper body proportion.	20		
				708S8	Adobe Premier,Different formats of Video files,Video Editing tools Time line,Insertion of graphics, animation,clippings, Photos and video,clippings,Video Transition effects Voice over	40		
				708S9	Sound forge,Different Audio file formats – AVI,WAV, WMA, MP3, MP4,Audio editing tools,Audio/ Sound effects	60		
7	ICT 709	Media Developer Assistant (Computer Graphics)	M5	709S1	Computer Fundamentals History and Generations of Computer ,Advantage and disadvantage of Computer,Block Diagram of a Computer Description of Different parts of a Computer,System Software and Application Software	6	14544	360 Hrs
				709S2	MS Office Introduction to MS Office,Word Processing Software,Electronic Spreadsheet,Powerpoint	24		
				709S3	Media Design: (A) Adobe Photoshop -* Image Fundamentals: - Digital,Image pixel. Resolution. DPL, Raster image /bitmaps. Vector,Image/graphics,Various File Format:- Bitmap,JPEG, PSD. PDD, TIFF, GIF, EPS,Understanding Various Tools:-MarqueeRectangular/Elliptical.Move Lasso, Polygonal Lasso,Magnetic Lasso, Magic wand.Crop Air brush, Paint brush,Pencil, Rubber Stamp, Pattern stamp, Erase, Paint bucket,Direct selection, Path component selection , Pen custom shape,Eye dropper, Hand Zoom. Understanding various,Palettes:-Navigator, info, Color, Swatches Style History, Layers, Paths, Character, Paragraph	80		
				709S4	,Foreground Colors. Background Colors,Default colors,Switch colors,Details about Status Bar,Option Bar,Edit Image in Standard mode. Quick Mask Mode,Various Image Display,Options: - Standard Screen mode. Full,Screen Mode with Menu Bar, Full Screen mode,Various Edit Commands:-Transform Preferences, Define Brush etc,Various Image Commands Inverse. Adjust, Extract, Liquefy etc,Mode RGB /CMYK /LAB /Grayscale,Adjust Brightness/ Contrast. Hue/ Saturations,desecrate, Replace Colors,invert, Variations, Canvas size,Rotate canvas, crop, TrimVarious Layer Commands,Rearranging Layers, Lock Layers, Merge down, Merge, Visible, Flatten Image. Working With layers set, Various Select commands,Various Filter Effects, Render,3D Transform, Lens Flare,Lightning Effects. Motion Blur. Radial Blur...,Various View Commands,Print Option,Industrial visit of graphics designstudios / Add agency / News Paper /Prepress Bureau and Printing Press	60		

				709S5	Corel Draw: - * Introduction: -Creating. Opening,Drawing. Setting up the drawing Page. Using the rulers. Grid. And Guidelines. Viewing document,Drawing and Shaping Objects:-Drawing. Moving & Shaping object,drawing lines and curves,Dimensions line,Working with Style & Templates,Organizing Objects:- Arranging & Changing the order of objects, Grouping, Ungrouping locking and Unlocking objects,Using and setting layers,Aligning & editing objects data,Working with pattern and texture,Fills. Applying and editing line ending shapes, splitting and erasing portions of objects positioning moving stretching and rotating Objects,Working with multiple on screen,color palettes,Adding graphics symbols and Specials characters. Editing,Formatting text and paragraph. Hyphenating text. Linking paragraph,text frames, using spell checker and Grammar, using thesaurus, Creating and editing blends,Envelopes,Creating and modifying vector and Bitmap,Extrusions. Creating drop,Shadows. Creating and editing transparencies, contoured,Objects, Working with linked bitmap, cropping, coloring and Converting bitmaps,Applying special effects to bitmaps by 3D, effects, blur effects, contour effects Creating documents for various,Formats, using layout. Previewing Sizing and positioning a print job,Creating color separations, working with halftone and bitmap screens, Importing and exporting files. OLE,(Object linking and embedding),Printing of Document/Design.	80		
				709S6	Use of Multilingual Software. Setting of Bilingual (Hindi / Any,Regional language) matter Solid and Tabular setting with any multi script language software, i.e.i leap Office / ISM publisher,HTML: Concepts,Common HTML Tags, Creating simple,web pages. Inserting pictures. Creating hyperlinks, Frames etc.Creating Forms, tables, Ordered and Unordered lists , Creating various user defined styles for Web pages. Working with a WYSIWYG web design tool to design and edit web pages,Javascript :Concepts,Designing Web Pages using Java Script, JS output, If – else, switch, loops, break and Math object .	40		
				709S7	Adobe Flash Adobe Flash :Concept and application,Working with Flash Action Script, Adobe Authorware: Concept & application related media, Understanding the SCROM compliance issues for Elearning, Create interactive animations and applications using Flash, Create Interactive Applications and Elearningmodules, Twitter Bootstrap and Zurbfoundation :Concept & application	60		
				709S8	Rendering and Deployment of Media. Media Licensing.	10		
8	ICT 706	Call Centre Training	M5	706S1	Computer Fundamentals History and Generations of Computer,Advantage and disadvantage of Computer,Block Diagram of a Computer Description of Different parts of a Computer.System Software and Application Software	6	10600	360 Hrs
				706S2	MS Office Introduction to MS Office,Word Processing Software Electronic Spreadsheet	24		
				706S3	Detailed knowledge and usage of past, present & future continuous, perfect, simple, perfect,continuous tenses, g). affixes, active topassive, comparative& superlative adjectives and adverbs,h). Phrasal and modal verbs, singular and plural nouns,direct to indirect speech Recognize and produce,compound and complex sentences, quantifiers. i). Common grammatical errors.Basics of English j). Introduction to basics of English,k). Sentence Construction l). Pronunciation Basics Math and Problem Solving Basic Mental Arithmetic practice,m). Basics of Problem Solving for Quantitative and Verbal Tests Personal Grooming,n). Importance and Aspects of Personal,o). Grooming,p). Basic Relaxation and Stress Techniques, Corporate Etiquette, Current Affairs,Politics, Society, Sports,Business,q). World, World Economy and Patterns	40		
				706S4	Business writing etiquette,emails, letters. Understanding and responding to mails from customers and team members using appropriate,Formats,aa. Common email and letter writing errors,bb. Principles of Team work,cc. Dos and don'ts while working in a team.,dd. Reading and Interpreting/Analyzing dataand forms,ee. Spotting trends / issues. Creating MIS,ff. Problem Solving Skills.	60		



				706S5	Control and Management:a). Learning to keep emotions under control(Human) b) Psychology, study of Perceptual Images) Time Management,c). Conflict Management,d). Stress Tolerance,mm. Business Process Outsourcing – Basics –Benefits of BPO – Growth, Drivers – BPO, nn. Models and Types of Vendors, Offshore BPO – Evolution,Destinations, Challenges of, e). Off shoring – BPO Companies in India,f). BPO Industry – Employment,Opportunities – Employee,Structure – Skill Set Required,g). Compensation Levels,Contact Centre BPO – Types of Call Centres – Technology, g). Components and working of a Call center – Issues and Problems – Case Study – Intelenet,h). Global,i). Healthcare BPOTransaction Processing BPO,j). Human Resource BPO	30		
				706S6	Life In BPO: a) Understand concept of working across time Keeping health while working in shifts Managing time b). Managing clients, customers & target	30		

				706S7	Detailed knowledge and usage of iii. Past, present & future continuous, perfect simple, perfect continuous tenses,jjj. Affixes, active to passive,comparative & superlative adjectives and adverbs,kkk. Phrasal and modal verbs, singular and plural nouns,direct to indirect speech,III. Recognize and produce,compound and complex sentences, quantifiers, appropriate usage of mmm. Pronunciation, right pronunciation of words commonly used in a contact center,nnn. Correction of MTIs and common errors, totochiev errors to achieve neutral spoken English, ETYMOLOGY AND INFLECTION,ooo. Introduction, Etymology, Inflection, Diphthongants,Polyphones, Arabic Persian sound,ppp. & Minimal Pair Exercise	40		
				706S8	Telephone Etiquette; Brief on American and British Culture / Accent: Political setup, culture inputs, Geographical,Structure; Difference in work,habits between US, UK and India; World Time Zones;Time management; Call Flow and Work Flow; American and Hispanic names;Interactive videos on US/UK English usage; Inbound / Outbound, operation – an explanation; Telephone Tips;Winning Attributes of a customer service, representative; Structure of a call; Listening and paraphrasing; Effective probing; Rapport, and Empathy .ITES and Back Office function;Workflow Management; Workforce productivity system; Scanning ; Call center technology – PBX system,features; IVR (Interactive Voice, Response System); ACD,(Automatic Communication Distributor System);Interaction,- Mail (unified Messaging and Voice Mail); Interaction,Fax; Web Services; Software - Phone; IPLC (International Private Leased Circuit Lines);VOIP; Dialers; Call Logger..Importance of Customer Service,- Understand Customer,Service processes and steps for a service call. Listening and understanding customer requirements, Responding to different customer requirements.Dealing with difficult customers	50		
				706S9	Speak Well 2: ssss. Questioning Techniques,tttt. Selling and Cross Selling techniques based on target,audience and situations and types of product,Dealing with customers,uuuu. Importance of collections Basic steps of a collection call,Managing your emotions vvvv. Dealing with challenging customers,Problem Solving Skill: a). Basic data analysis and problem solving skills,Logical reasoning,Team Work 2,b). Principles of team work,c). Do's and don'ts while working in a team Being Professional,d). Learning to keep emotions under control Time management,e). Conflict management Typing Skill,f).Accurate typing of information while listening.	20		
				706S10	Information Sources a) Introduction , Types of Information Sources, Print media, Documentary sources,b) .Non- Documentarysources, Non-print media,c) .Electronic media, Conclusion.Information Centre d). Introduction,Classification, Services,Conclusion.Procedure for Information Search,f) Introduction, Need of approach, Types of approach, Steps for Information search,Preparation of g).biographic card, Preparation of index card, h).Conclusion.Learning,nnnnn.Introduction, Concept of learning, Basic model of Learning, Principles of learning, Conclusion, Memory of Cognition. Introduction, Basic concepts, Dual store model of memory, Sensory register characteristics, Attention,Factors affecting attention,Figure ground rule, Working,memory (WM) :Characteristics of WM,.Control processes in WM,Long term memory (LTM):Characteristics of LTM,Control processes in LTM,Organization of Knowledge,and Conclusion,Meta Cognition & Study Stratifies,. Introduction, Meta cognitive knowledge & skills,. Self regulated learning,Effective learning & study,strategies (Covert) : Selectiveattention, Maintain,Rehearsal,. Meaningful learning reflection, Internal, organization, Elaborative --** Visualization,.Effective overt learning,strategies: Effective reading,Effective listening, Notes Learning on Job. Introduction, Definition,Identifying general and specific skills, Work place as a system, Types of system, Conclusion. Learning Practical Skills Introduction,Process of performing them job, Domains of learning job,Conclusion,Testing of Acquired Skills. Introduction, Objectives,Process for skill analysis,Conclusion,Basics of Communication,. Definition, Concept of communication,Communication cycle,Communication, Conclusion.Techniques of Communications Introduction, Oral,communication, Written,communication, Bodylanguage, Conclusion	20		

				706S11	Back office management what is Outsourcing. Administrative Financial & HR Administrative outsourcing,. Text Processing, claim processing, assets management, Transcription & translation, document management, Financial outsourcing, Billing Services, accounting, transactions, general accounting, tax consultancy & compliance, risk management, HR outsourcing. benefits at the station, recruiting & staffing, parole services, hiring administration, records management, team building, etc. Front office management,. What is a Call Center?. According to location of process- International & Domestic,. According to process, Inbound, outbound & blended, According to characteristic : Voice Based & Web Based,. According to functionality, Real Call Center & Virtual Call center, key Technical Support,. Provide technical support to customers within And outside organization: troubleshooting for Customers using products & services like PC's, Printers, internet, etc., Soft Skills Listening Skills,. Stress / Change, Management Telemarketing, Skills,. Typing Skills, Maintain a healthy, safe and secure, working environment,. Safety signs & color at work, Causes for accidents, Safe attitudes, Sign categories, Sign types, safe lifting and carrying techniques, Causes of injury, Types of injury and, methods to prevent them, Points that make an object/load difficult to carry, Preparation before lifting or shifting heavy loads, Correct body posture, Fire and fire, extinguishers, Controlled and uncontrolled fire, Preventing fire, controlling and extinguishing fire, Fire. extinguishers types, General procedure to be adopted in the event of a fire, Hazard, identification, Risk assessment and risk control, Common hazards at office. Workstation layout and ergonomic guideline, Signs and symptoms of injury, aches and, pains, Suggested workstation dimensions and adjustment ranges, Chair position,. rearrange your workstation layout, General office safety, Types of office accidents, Hazards from electrical equipment. Emergency action plan	40		
9	ICT 704	Computer Network Assistant	M5	704S1	Introduction to Computer Networks – Advantages of Networking, Peer-to-Peer and Client/Server Network, Network Topologies – Star, Ring, Bus, Tree, Mesh, Hybrid. Type of Networks – Local Area Networks (LAN), Metropolitan Area Networks (MAN), Wide Area Networks (WAN) and Internet, Ethernet, Wi-Fi, Bluetooth, Mobile Networking, Wire and wireless Networking. Difference between Intranet and Internet. Communication Media & Connectors – Unshielded twisted-pair (UTP), shielded twisted-pair (STP), Fiber Optics and coaxial cable: RJ-45, RJ-11, BNC. Understanding color codes of CAT5 cable. 568A and 568B convention. Introduction to Data Communication – Analog and Digital Signals, Simplex, Half-Duplex and Full-Duplex transmission mode	20	10600	300 Hrs
				704S2	OSI Model - The functions of different layers in OSI model Network Components – Modems, Firewall, Hubs, Bridges, Routers, Gateways, Repeaters, Transceivers, Switches, Access point, etc. – their functions, advantages and applications.	10		
				704S3	Protocols, TCP/IP, FTP, Telnet etc., Theory on Setting IP Address (IP4/IP6) & Subnet Mask, Classes of IP Addressing.	40		
				704S4	Simple Mail Transfer Protocol (SMTP), Telnet, File Transfer Protocol (FTP), Hyper Text Transfer Protocol (HTTP), Simple Network Management Protocol (SNMP). Network Security Concept of Dynamic Host Control Protocol	20		
				704S5	Concept of Internet. Architecture of Internet. DNS Server. Internet Access Techniques, ISPs and examples (Broadband/Dialup/Wifi). Concept of Social Networking Sites, Video Calling & Conferencing. Concept of VIRUS and its Protection using Anti Virus, UTM and Firewall.	40		
				704S6	Collaborating using wired and wireless networks, Protecting a Network, Network performance study and enhancement.	20		
				704S7	Surveillance using network devices, collaboration on network for team optimization and support activities. Remote management of devices.	20		
				704S8	Server concepts, Installation steps, configuration of server. Concept of Active Directory and DNS. Setting up of DHCP, Routing and remote access.	40		
				704S9	Network Security Modern Network Security Threats and the basics of securing a network, Secure Administrative Access, LAN security considerations. Cryptography, Wi-fi security considerations.	20		
				704S10	Internet and Web Browser World wide web and website, Web Browsing and popular web browsing, software, Introduction to Search Engines, Popular Search engines, Concept of Favourites Folder, What is an Electronic Mail, Email Addressing, BCC and CC, Inbox, Outbox, Address book, SPAM.	20		
10	ICT 703	Computer Hardware Assistant	M5	703S1	Basic concepts of Electricity, Resistors, Inductance, Capacitance and Soldering & De-soldering., Electronic Components, DIGITAL ELECTRONICS,	6	10600	300 Hrs

				703S2	<p>DeskTop : a) Introduction to computers, classification, generations, applications. Basic blocks of a digital computer. b) Hand Tools Basics and Specifications. a) Types of cabinets, relation with mother board form factor. Precautions to be taken while opening and closing PC cabinet. b) Main devices, components, cards, boards inside a PC(to card or device level only). c) Types and specifications of the cables and connectors used for interconnecting the devices, boards, cards, components inside a PC. d) Precautions to be taken while removing and/or re-connecting cables inside a PC</p> <p>PC Repair Safety: Identification, specification and application of basic hand tools. How to handle components to ensure their longevity What one shouldn't wear while working inside a computer The danger of static electricity</p> <p>How to protect a PC from lightning strikes and power outages</p>	24		
				703S3	<p>Hardware Identification - Identify the front and rear panel controls and ports on a PC:Cases, Cooling, Power Supplies, Power Supply Connections , Motherboard Connections , Motherboard ,Components , CPU (Processor) , RAM (Memory) , Hard Drive Connections , Mechanical vs. Solid State Drives, ROM Drives ,Video Cards ,Sound Cards (a) Types of I/O devices and ports on a standard PC for connecting I/O devices. b) Function of keyboard, brief principle, types, interfaces, connectors, cable. c) Function of Mouse, brief principle, types, interfaces, connectors, cable. d) Function of monitor, brief principle, resolution, size, types, interfaces, connectors, cable. e) Function of Speakers and Mic, brief principle, types, interfaces, connectors, cable. f) Function of serial port, parallel port, brief principle of communication through these ports, types of devices that can be connected, interface standards, connectors, cable. g) Precaution to be taken while connecting/removing connectors from PC ports. Method of ensuring firm connection.</p>	20		
				703S4	<p>Hardware -Remove-Test-Replace/ Install :Removing RAM,Installing RAM ,Removing a ROM Drive ,Installing a ROM Drive , Removing a Hard Drive, Installing a Hard Drive , Defects related to SMPS, its cable, connector and servicing procedure. , Removing a Power Supply , Installing a Power Supply , Removing a Video Card , Installing a Video Card , Install Expansion Cards , Removing Fans , Installing Fans , Removing the Motherboard , Installing the Motherboard , Removing the Processor , Installing the Processor , Installing a CPU Cooler , Troubleshooting , Checking the Power Switch , Removing the CMOS Battery , Seating Expansion Cards ROM, PROM, EMPROM, EEPROM, Static and dynamic - a) Example of memory chips, pin diagram, pin function of b) Concept of track, sector, cylinder. FD Drive components- read write head, head actuator, spindle motor, sensors, PCB. c) Precaution and care to be taken while dismantling Drives.</p> <p>d) Drive bay, sizes, types of drives that can be fitted. Precautions to be taken while removing drive bay from PC. f) HDD, advantages, Principle of working of Hard disk drive, cylinder and clusture, types, capacity, popular brands, standards, interface, jumper setting. Drive components- hard disk platens, and recording media, ,air filter, read write head, head actuator, spindle motor, circuit board, sensor, features like head parking, head positioning, reliability, performances, shock mounting capacity. HDD interface IDE, SCSI-I/2/3 comparative study. Latest trends in interface technology in PC and server HDD interface.</p> <p>g) Precautions to be taken while fitting drives into bays and bay inside PC cabinet. h) CMOS setting.(restrict to drive settings only). i) Meaning and need for using Scan disk and defrag.</p> <p>j) Basic blocks of SMPS, description of sample circuit.</p>	20		

				703S5	<p>Windows Installation</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A walkthrough of installing Windows 7 / 8</li> <li><input type="checkbox"/> A walkthrough of installing Windows XP</li> <li><input type="checkbox"/> Imaging: create a Windows system image</li> <li><input type="checkbox"/> How to Backup/Restore your Windows partition with the bootable image disk</li> <li><input type="checkbox"/> Duplicating a partition (creating a multiboot system)</li> <li><input type="checkbox"/> A multiboot system: the Windows bootmanager vs. an alternative bootmanager</li> <li><input type="checkbox"/> Setting up a multiboot/dualboot system</li> <li><input type="checkbox"/> Dual Boot Ubuntu and Windows</li> <li><input type="checkbox"/> Windows XP registry tweaks</li> </ul> <p>Hardware Troubleshooting</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The danger in not diagnosing problems first</li> <li><input type="checkbox"/> Learn how to test your RAM</li> <li><input type="checkbox"/> Check your hard drive for errors</li> </ul> <p>PC Cleaning</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The best cleaning supplies to use</li> <li><input type="checkbox"/> How to increase airflow and increase your computer's lifespan</li> <li><input type="checkbox"/> How to clean your computer</li> </ul> <p>Types of software. System software-OS, Compiler. Application software-like MS office. Functions of an operating system. Disk operating system.</p> <p>a) Concept of GUI, Modes of starting on different occasions.</p> <p>b) Desktop, Icon, selecting, choosing, drag and drop.</p> <p>c) My computer, network neighbourhood / network places.</p> <p>d) Recycle bin, briefcase, task bar, start menu, tool bar, and menus.</p> <p>e) Windows Explorer.</p> <p>f) Properties of files and folders.</p> <p>g) Executing application programs.</p> <p>h) Properties of connected devices.</p>	80		
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				<p><b>703S6</b></p> <p><b>Hard Drives</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Partitioning hard disk (primary and extended partitions)</li> <li><input type="checkbox"/> Hard Drive Failures</li> <li><input type="checkbox"/> How To Troubleshoot a Noisy Hard Drive</li> <li><input type="checkbox"/> How to Format a Hard Drive <input type="checkbox"/> How to Completely Erase a Hard Disk Drive</li> <li><input type="checkbox"/> How to check to see if your hard drive has bad sectors</li> <li><input type="checkbox"/> Fix the master boot record</li> <li><input type="checkbox"/> Installation and configuration of storage devices. Integration of PATA and SATA drivers.</li> <li><input type="checkbox"/> Recover emails, files, and data from a crashed hard drive or computer</li> </ul> <p><b>Virus Removal</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> How to run a full system scan</li> <li><input type="checkbox"/> How to fix your browser from redirecting to other websites (browser hijack)</li> <li><input type="checkbox"/> Using a modern anti-virus utility</li> <li><input type="checkbox"/> When utilities don't fix everything, how to manually remove a virus</li> <li><input type="checkbox"/> 2 specific things to disable when trying to get rid of a nasty virus</li> <li><input type="checkbox"/> 2 special utilities that work wonders <input type="checkbox"/> How to Completely Erase a Hard Disk Drive</li> <li><input type="checkbox"/> How to check to see if your hard drive has bad sectors</li> <li><input type="checkbox"/> Fix the master boot record</li> <li><input type="checkbox"/> Installation and configuration of storage devices. Integration of PATA and SATA drivers.</li> <li><input type="checkbox"/> Recover emails, files, and data from a crashed hard drive or computer</li> </ul> <p><b>Virus Removal</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> How to run a full system scan</li> <li><input type="checkbox"/> How to fix your browser from redirecting to other websites (browser hijack)</li> <li><input type="checkbox"/> Using a modern anti-virus utility</li> <li><input type="checkbox"/> When utilities don't fix everything, how to manually remove a virus</li> <li><input type="checkbox"/> 2 specific things to disable when trying to get rid of a nasty virus</li> <li><input type="checkbox"/> 2 special utilities that work wonderextended partitions)</li> </ul>	60		
				<p><b>703S7</b></p> <p><b>Windows Update &amp; Device Driver</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> How to find your system version in Windows, Linux</li> <li><input type="checkbox"/> Installing a service pack</li> <li><input type="checkbox"/> How to perform a Windows Update</li> </ul> <p><b>Software Installation</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Installing a software program in windows</li> <li><input type="checkbox"/> How to run a file from MS-DOS</li> <li><input type="checkbox"/> Extracting or uncompressing a compressed file</li> <li><input type="checkbox"/> How to compress or make files into one file</li> <li><input type="checkbox"/> Extracting files from the Windows cabinets</li> <li><input type="checkbox"/> Uninstalling Windows software</li> <li><input type="checkbox"/> Unable to remove a program from Windows Add/Remove programs</li> </ul> <p><b>Installing Hardware Drivers</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> How To Update Drivers in Windows</li> <li><input type="checkbox"/> How To Roll Back a Driver in Windows</li> <li><input type="checkbox"/> Familiarization with Device manager.</li> <li><input type="checkbox"/> Interfacing with cellphone, tablet PC, synchronization of contacts.</li> </ul> <p><b>Windows Utilities</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> How to Repair Corrupted Files Problems</li> <li><input type="checkbox"/> How to check for corrupted files</li> <li><input type="checkbox"/> Restore your machine back to normal</li> <li><input type="checkbox"/> Hard disk is filling up, what should one do?</li> <li><input type="checkbox"/> Where's the disk space ?</li> <li><input type="checkbox"/> Top 15 Ways to Speed Up the Computer</li> <li><input type="checkbox"/> How to Automatically Clean and Organize the Desktop, Downloads, and Other Folders</li> <li><input type="checkbox"/> 5 Simple Rules To Keep Files Organized</li> <li><input type="checkbox"/> 5 Reasons - Computer Is Running Slow Version of a software. Service pack. Updating of OS. Different</li> </ul>	40		

				703S8	Project Work	50		
11	ELC 701	Repair & Maintenance of Domestic Electronics	M5	701S1	Basic Electronics: Voltage, Current, and Resistance, Electromagnetic Induction, Rectifiers, Batteries, AC sine wave, Frequency, Time period, RMS, Peak value, peak to peak, instantaneous values, Insulators, conductors and semiconductor. Usage of multimeters, Cable testing, Earthing checking, Soldering Practice, Etc.,	60	13975	300 Hrs
				701S2	Study of basic electronics parts: Working, Testing & Identification of Transformers, Capacitors, Diodes, Transistor, LEDs, Switches, ICs, PCB, Power supplies, SMPS, Microphones & Speakers	80		
				701S3	Domestic Electronics Appliances: Working principle explanation & Functioning, Faultfinding of 1. Washing Machines, 2. Microoven, 3. Steam Iron, 4. Electric rice cooker, 5. Electric Kettle, 6. Mixer Grinder, 7. Electric fans	80		
				701S4	Required Tools & Instruments: 1. Soldering Iron 2. Desoldering Pump 3. Digital & Analogue Multimeter 4. Variable DC Power supply 5. Technical tool Kit 6. Washing machine Semi automatic/Fully automatic 7. Micro wave oven grill, convention type 8. Radiation leakage tester 9. Steam iron 10. Electric rice cooker 11. Electric kettle 12. Mixer-grinder	80		
12	ELC 702	Repair & Maintenance of Electronic Equipments	M5	702S1	Basic Electronics: Voltage, Current, and Resistance, Electromagnetic Induction, Rectifiers, Batteries, AC sine wave, Frequency, Time period, RMS, Peak value, peak to peak, instantaneous values, Insulators, conductors and semiconductor. Usage of multimeters, Cable testing, Earthing checking, Soldering Practice, Etc.,	60	13975	300 Hrs
				702S2	Measurement of AC voltages between Live, Neutral & Earth & rectify earthing problem, Measurement of DC voltages, Current & Resistors. Troubleshooting all types of rectifiers, SMPS, Identification of defective Diodes, Transistors, Transformers. Testing of Batteries and replacement of parts like Switches, Cables and PCB modules etc., Testing of parts by using LCR Meters.	80		
				702S3	Study of <b>1.PA systems</b> : Amplifiers, various types Speakers and Microphones, Fault finding in PA systems. <b>2.Photo copier</b> : Dismantling and assembling of paper feed mechanism, paper tray, Thermal unit and Toner Unit. Dismantling and fitting of drum unit- cleaning of drum unit Fault finding in light unit. Identify the faults and repair in Repairing of multipurpose copy printers <b>3.Fax Machines</b> : Operation of a Fax machine, Dismantling and assembling of paper feed mechanism, paper tray, Thermal unit and Toner Unit of Fax machine <b>4.Printers &amp; Scanners</b> : working principle of dot matrix, ink jet & Laser printer & scanners, Cables used to interface the various printers & scanners to computer. assembling & dessembling of printers & scanners with replacement knowledge of all parts. <b>5.Telephone system</b> : Working principle of telephone, Voltage checking of telephone lines and repair of telephone instruments.	160		
13	ELC 703	Repair & Maintenance of Personal Electronic Devices	M5	703S1	Basic Electronics: Voltage, Current, and Resistance, Electromagnetic Induction, Rectifiers, Batteries, AC sine wave, Frequency, Time period, RMS, Peak value, peak to peak, instantaneous values, Insulators, conductors and semiconductor. Usage of multimeters, Cable testing, Earthing checking, Soldering Practice, Etc.,	60	13975	300 Hrs
				703S2	TV RECEIVER: Explain in detailed all stages of LCD/LED color TV using block diagram. various types of connectors, SMPS, boards, front panel, remote controls, Dismantle LCD/LED display unit, & identify the different parts of sections, General problems troubleshooting. DTH System: Merits & Demerits of satellite communication, applications, types of satellite & its orbits, Satellite Frequency Bands. Install a DTH system & track a TV channel. Basic components of DTH system: PDA, LNBC, Satellite receiver terminal, dish installation aspects, Azimuth & elevation settings of dish/ DTH receiver. Various types of connectors, cables and wiring procedure. Cell phones: Introduction to various types of mobile handsets, their description, features & uses of these features. Identify the keys and their uses. Identify the components used in a cell phone. SIM and SIM related problems of GSM & CDMA PHONES. Use of computer for cell phone servicing – cell phone software Flashing and its need. Dismantle, identify the parts and assemble different types of cell phone/smart phones. Dismantle the cell phone/smart phone replace the display <del>Dismantle the cell phone/smart phone remove the key pad and clean it. test for the continuity of the</del>	80		
				703S3	Computer Hardware: Basic blocks of a computer, Hardware and System software, I/O devices, keyboard, types of mouse, Different types of printers, HDD, DVD. Various ports in the computer. Identification of various indicators, Connectors, ports on the computer cabinet. Identify drives and their capacity. Identify various connectors and cables inside the cabinet & Identify connections to rear side and front panel of the cabinet. Identify various parts of the system. General PC problems troubleshooting	160		