

PROGRAMME GUIDE

DIPLOMA IN COMPUTER (DCA)

***Scheme of Examination (CBCS/ELECTIVE)**

***Detailed Structure of Syllabus**

DIPLOMA IN COMPUTER

Duration: 12 Months (1 Year)

Eligibility: 12th Pass

COURSE STRUCTURE OF DCA SEMESTER Ist												
Subject Details			Main Examinations				Sessional***		Credit Distribution			Allotted Credits
Subject Code	Subject Name	Total Marks	Major		Minor		Max Marks	Min Marks	L	T	P	Subject wise Distribution
			Max Marks	Min Marks	Max Marks	Min Marks						
Theory Group												
2TDCA-101	Fundamentals of Computers & Information Technology	100	50	17	20	07	30	12	3	2	-	5
2TDCA-102	Operating Systems (DOS, Windows, Linux)	100	50	17	20	07	30	12	3	2	-	5
2TDCA-103	Computers in Office–I (MS Word & MS Excel)	100	50	17	20	07	30	12	3	2	-	5
2TDCA-104	Computers in Office–II (MSPowerPoint, MS Access & MS Outlook)	100	50	17	20	07	30	12	3	2	-	5
2TDCA-105	Communication Skills& Personality Development	100	50	17	20	07	30	12	3	2	-	5
Practical Group			Term End Practical Exam				Lab Performance					
2TDCA-102	Operating Systems (DOS, Windows, Linux)	50	25		08		25	08	-	-	1	1
2TDCA-103	Computers in Office–I (MS Word & MS Excel)	50	25		08		25	08	-	-	1	1
2TDCA-104	Computers in Office–II (MSPowerPoint, MS Access & MS Outlook)	50	25		08		25	08	-	-	1	1
Grand Total		650										28

Minimum Passing Marks are equivalent to Graded

Major- Term End Theory Exam/ Practical Exam

Minor- Pre University Test

Sessional weightage – Attendance 50%, Three Class Tests/Assignments 50%

L- Lectures T- Tutorials P- Practical

DIPLOMA IN COMPUTER

Duration: 12 Months (1 Year)

Eligibility: 12th Pass

COURSE STRUCTURE OF DCA SEMESTER IIInd												
Subject Details			Main Examinations				Sessionals ***		Credit Distribution			Allotted Credits
Subject Code	Subject Name	Total Marks	Major		Minor		Max Marks	Min Marks	L	T	P	Subject wise Distribution
			Max Marks	Min Marks	Max Marks	Min Marks						
Theory Group												
2TDCA-201	Introduction to Internet and web Technology	100	50	17	20	07	30	12	3	2	-	5
2TDCA-202	Introduction to financial Accounting with Tally	100	50	17	20	07	30	12	3	2	-	5
2TDCA-203	Programming in C	100	50	17	20	07	30	12	3	2	-	5
2TDCA-204	DBMS With MS Access	100	50	17	20	07	30	12	3	2	-	5
Practical Group			Term End Practical Exam				Lab Performance					
2TDCA-201	Introduction to Internet and web Technology	50	25		08		25	08	-	-	1	1
2TDCA-202	Introduction to financial Accounting with Tally	50	25		08		25	08	-	-	1	1
2TDCA-203	Programming in C	50	25		08		25	08	-	-	1	1
2TDCA-204	DBMS With MS Access	50	25		08		25	08	-	-	1	1
2TDCA-205	Project Report	100	50		17		50	17	-	-	2	2
Grand Total		700										26

Minimum Passing Marks are equivalent to Grade D

Major- Term End Theory Exam/ Practical Exam

Minor- Pre University Test

Sessional weightage – Attendance 50%, Three Class Tests/Assignment

L- Lectures T- Tutorials P- Practical

SEMESTER- 1st

Course: DCA

**SUBJECT: FUNDAMENTALS OF COMPUTERS &
INFORMATION TECHNOLOGY**

Subject Code: 2TDCA-101

Theory Max. Marks: 50

Theory Min. Marks: 17

COURSE OBJECTIVE:

- 1.To understand the basic knowledge of computer.
- 2.To understand the assembly-level programming.
- 3.To understand the input output devices, storage media, memory .
- 4.To understand the concept of Networking devices

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	Know the Computer -Introduction, What does computer stands for? Strengths of computers, Limitations of computers, Fundamental uses of computers, Development of computers, Types of Computers, Generations of Computers Personal Computer - Introduction, Personal computer, Uses of personal computers, Components of personal computers, Evolution of PCs, Developments of processors, Architecture of Pentium IV, Configuration of PC Number System - Introduction, Digital and Analog Operations, Binary Data, Binary Number System, Decimal Number System, Octal Number System, Hexadecimal Number System, Fractional Conversion, Coding System Data Representation and Binary Arithmetic - Introduction, Bits, Nibbles, Bytes and Words, Data Representation, Coding system, Binary Arithmetic, Binary Addition, Binary Subtraction, Binary Multiplication, Binary Division, Character Representation, Checking the Result of Binary Arithmetic.	ICT based class room teaching, Group Discussion, Case Analysis, Individual Presentations
Unit – II	Input Devices - Introduction, Input Device, Typing Input Devices, Pointing Input Devices, Scanning Input Devices, Audio Visual Input Devices Output Devices - Introduction, Output Devices, Soft Copy Vs Hard Copy Output, Monitor, Printers, Plotter, Electrostatic Technique, Special Purpose Output Equipments Central Processing Unit - Introduction, What is Central Processing Unit, Arithmetic and Logic Unit, Control Unit, Registers, Instruction set, Processor Speed Storage Devices - Introduction, Storage and its needs, Brain Vs Memory, Storage Evaluation Units, Data Access Methods, Primary Storage, Secondary Storage, Hard Disk Operations, Floppy Disk Drives, Winchester Disk, Optical Disk, VCD, CD-R, CD-RW, DVD, Zip Drive, Flash Drives, Blue Ray Disk, Memory Card, Driving Naming Conventions In a PC Basics of Software- Introduction, What Does Software Stand For? Needs of software, Types of software, Open Source Software, Integrated Development Environment Operating System - Introduction, Operating System, Why an Operating System, Functions of Operating System, The Booting Process, Types of Reboot, Booting From Different Operating	ICT based class room teaching, Case Analysis, Individual Presentation, Visit to Venture Capitalists

	System, Types of Operating System, Some Prominent Operating Systems Disk Operating System - Introduction, What is DOS?, Functions of DOS, Versions of DOS, DOS Executable Vs Non-Executable Files In Dos Commands , Important Internal Commands of DOS, Important External Commands of dos, Executable Vs Non-Executable Files In Dos	
Unit – III	Programming Languages , Introduction, Data, information And Knowledge, Characteristics of Information, Comparison between human language and , Computer Language, What is a program?, What is a Programming language?, Programming development cycle, Algorithm, Program Flowcharts, Pseudo code, Programming approaches, Programming Paradigms, Types of Programming Language, Third Generation Language, Fourth Generation Language Computer Virus - Introduction, Virus, History, Mechanism of virus, How A Virus Spreads , How is virus named, A few Prominent Viruses, Types of Computer Virus, Related Concepts :, Anti Virus Programs, Norton Anti - Virus (NAV), Execution of Norton Anti-Virus Communication and IT - Introduction, Computer Network, Communication Process, Communication Types, Transmission Media, Wireless Media, Communication Channels/Media, Modem, Characteristics of a Modem, Types of Modem	ICT based class room teaching, Case Analysis, Group Presentation
Unit – IV	Networks - Introduction, Internet Vs Intranet, Types of Network, Topology, Types of Connectivity, Network Devices Internet - Introduction, What is Internet actually ?, Growth of Internet, Owner of the Internet, Internet Service Provider, Anatomy of Internet, ARPANET and Internet history of the World Wide Web, Services Available on Internet (Internet Tools), Basic internet terminologies, net etiquette, Application of internet	ICT based class room teaching, Case Analysis, Individual Presentation
Unit - V	Applications of Computers and Information Technology - Introduction, Business And Computer, E-Mail, E-Commerce, Project management, Computers in Personnel Administration, Accounting, Computers in Cost and Budget Control, Marketing, Manufacturing, Materials management, Banking, Insurance And Stock broking, Purchasing, Computers in warehousing	ICT based class room teaching, Case Analysis, Individual Presentation

COURSE OUTCOMES: –

After study this student will be able to know about terms and concepts of Fundamentals of Computers & Information Technology (hardware, software, networking, security, Internet/Web,and applications).

Text Books:

- Computer Fundamental (3rd Ed) Sinha,P.K.
- Fundamental of Information Technology ShritvastavaCheton
- Fundamentals of Computers, Murthy,C.S.V. Delhi S. K. Kataria& Sons.
- MS office XP for Everyone, Saxena Sanjay, New Delhi Vikas Publication

Reference Books:

- Computer fundamental: V .Rajaraman; PHI
- Fundamental Of IT Leon and Leon Leon Tec World
- Fundamental of Computer Programming & Information Technology Sharma,G.& Singh G.Delhi S. K. Kataria& Sons

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Computer Operator, Office Assistant, Training and Support in Institutions/universities, Research and Academics,	Learn basic's of Computer, Computations, Network, Internet and Programming Languages,	No Poverty, Quality Education, Industry Innovation and Infrastructure.	Can start own Computer Assistance services.

System Analyst in State and Central Research organization,Consultant in Software firms,Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Time, Management, Speaking, Cooperating, Presenting		
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SEMESTER- 1st
Course: DCA
SUBJECT: OPERATING SYSTEMS (DOS, WINDOWS, LINUX)

Subject Code: 2TDCA-102
Theory Max. Marks: 50
Theory Min. Marks: 17

COURSE OBJECTIVE:-

1. To develop the understanding of Operating System.
2. To understand the Operating System Process Concepts, process state & process control
- 3 To understand the Features of Windows
- 4 To understand the Communication and Single User and Multiuser Operating System
5. To understand the Disk Scheduling, Disk Management

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	Operating system, definition and need. Main Services of operating system , various types of operating system, (definition and characteristics), multitasking, multiprocessing , multiprogramming, real time, time sharing, parallel, network operating system, booting process, file system. DISK OPERATING SYSTEMS (DOS) - Introduction, History & versions of DOS, DOS basics- Physical structure of disk, drive name, FAT, file & directory structure and naming rules, booting process, DOS system files. DOS commands: Internal - DIR, MD, CD, RD, COPY, DEL, REN, VOL, DATE, TIME, CLS, PATH, TYPE etc. External Commands - CHKDSK, XCOPY, PRINT, DISKCOPY, DISKCOMP, DOSKEY, TREE, MOVE, LABEL, APPEND, FORMAT, SORT, FDISK, BACKUP, EDIT, MODE, ATTRIB, HELP, SYS etc	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on Probability for Data Analysis.
Unit – II	WINDOWS - Introduction to Windows, its various versions and features. Hardware requirements for various versions of Windows. Working with Windows (Windows 7) Windows concepts, Windows Structure, Desktop, Taskbar, Start Menu, Working with files and folders, create, copy, delete, renaming and moving files and folders, working with recycle bin-restoring deleted files, emptying the recycle bin, searching files and folders .My computer, formatting floppy disks, Using CDROM Disk and Dives. Windows Accessories programs- Calculator, Notepad, Paint, WordPad, Character map, Paint, Command line. Using Media Player, Sound Recorder, Volume Control. Taking Printout from programs, Printer Properties, Add fonts to Windows (Specially adding Hindi Fonts and using them). Setting up Regional and Language settings in Windows.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – III	Advanced features of Windows -Managing Hardware & Software – Add or remove Hardware devices to/from computer, Add/remove programs, Using Scanner, Web camera, sharing of printers. System Tools - Backup, Clipboard Viewer, Disk Defragmenter, Drive Space, Scandisk, System, Information windows update.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – IV	Communication – Setting up Dial up Networking with Windows, Internet connection with Windows, Direct Cable Connection, Setting up TCP/IP properties, Hyper Terminal, Phone Dial ,Browsing theWeb with internet explorer, communication through Outlook Express, Multiple Users Features of Windows. Creating and deleting user, changing user password etc. Accessibility Features of Windows.-Sharing Information between Programs, sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers - Understanding OLE - Embed/Link Using Cut and Paste and Embed/Link Using Insert Object - Manage	Usage of ICT :-Power Points, PDF, Video lectures, Black board

	Embedded/Linked Object.	
Unit - V	LINUX - Linux introduction, Basic Features, Advantages, Features of Linux, Basic Architecture of Unix/Linux system, Kernel, Shell, Linux File system, Linux standard directories. Partitioning the Hard drive for Linux, Installing the Linux system, System, startup and shut-down process, How Linux works, Linux GUI, Linux Desktop, Creating files in Linux. Essential linux commands Understanding shells, Commands for files and directories cd, ls, cp, md,rm, mkdir, rmdir, pwd, file, more, less, creating and viewing files using cat, file comparisons – cmp & comm, View files, disk related commands, checking disk free spaces.	Usage of ICT :-Power Points, PDF, Video lectures, Black board

COURSE OUTCOMES: –

After Study, the Student will be able to know about functioning of Operating System. To make students able to learn different types of operating systems along with concept of file systems and CPU scheduling algorithms used in operating system.

To provide knowledge of memory management and deadlock handling algorithms. At the end of the course, students will be able to implement various algorithms required for management, scheduling, allocation and communication used in operating system

Text Books:

- Computer Fundamental (3rd Ed), Sinha, P.K.
- Fundamental of Information Technology, Shrivastava Cheton
- Fundamentals of Computers, Murthy, C.S.V. Delhi S. K. Kataria & Sons.
- MS office XP for Everyone, Saxena Sanjay, New Delhi Vikas Publication

Reference Books:

- Operating System Concepts by Silberschatz & Galvin, Addison Wesley Publication 6th Edition.
- Operating System Concepts & Design by Milan Milenkovic, TMH Publication
- Operating system William Stallings, Pearson Edu
- Linux and Shell Programming -Sumitabha Das, Tata McGraw Hill Publications.

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
System Admin, Technical support Engineer, Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Basics of OS and its working, Organizing and Planning, Analysing	No poverty, Quality Education, Decent Work and Economic Growth	Can start own Computer Assistance services.

SEMESTER- 1st
Course: DCA
SUBJECT: COMPUTER IN OFFICE–I (MS WORD & MS EXCEL)

Subject Code: 2TDCA-103
Theory Max. Marks: 50
Theory Min. Marks: 17

COURSE OBJECTIVE:-

1. To understand the basic knowledge of MS Windows.
2. To understand the Office Packages.
3. To understand the MS Excel.
4. To understand the formulas writing in MS Excel

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	MS Word Basics: Introduction to MS Office; its components, Introduction to MSWord; Features & area of use. Working with MS Word.; Menus & Commands; Toolbars & Buttons; Shortcut Menus, Wizards & Templates; Creating a New Document; Saving document, Saving as different format, Different Page Views and layouts; Applying various Text Enhancements; Working with – Styles, Text Attributes; Paragraph and Page.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Group projects on Usage of ms-word
Unit – II	Formatting- Using page border and watermark, Text Editing using various features ; Bullets, Numbering, Auto formatting, word count, various page view options, Printing & various print options Advanced Features of MS-Word: Spell Check, Thesaurus, Find & Replace; Headers &Footers ; Inserting – Page Numbers, Pictures, Files, Auto texts, Symbols etc.; Working with section breaks and page breaks, Working with Columns, Tabs & Indents; Creation & Working with Tables including conversion to and from text; Margins & Space management in Document.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – III	Adding References – footnotes, endnotes, and Table of contents, Insert drawing, Mail Merge, Envelops & Mailing Labels, protect and secure documents in MS Word, Working in different languages in MS Word. Using Unicode in MS Word, Insert WordArt and other objects like shapes, clipart, charts and Smart Arts, symbol in Document. Using Macros in Word- Record, edit and run macros.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – IV	MS Excel: Introduction and area of use; Working with MS Excel.; concepts of Workbook & Worksheets; Using Wizards; Various Data Types; Using different features with Data, Cell and Texts; Inserting, Removing & Resizing of Columns & Rows; Working with Data & Ranges; Different Views of Worksheets; Zooming, Column Freezing, Labels, Hiding, Splitting etc.; Using different features with Data and Text.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit - V	Formulas- Use of Formulas, Calculations using various type of functions- Logical, string, date & time, maths and other types; Cell Formatting including Borders & Shading; conditional formatting, sorting data items, Working with Different Chart Types; Printing of Workbook & Worksheets with various options. Import and export excel sheets to/from various format, add headers and footers, using macros in excel sheet- Record, edit and run macros.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on Data Analysis using Excel, Group activity to make PPT on latest topics.

COURSE OUTCOMES:-

After studying this student will be able to know about terms and concepts of Microsoft suite completely. (like MS-Word, Power-point-Excel and Outlook express)

Practical:

1. Introduction of Microsoft windows.
2. Creation of file and folder in MS Windows.
3. Introduction of MS Word.
4. Inserting Number, Bullets, Footer and Header.

5. Creating text, document and table in MS Word.
6. Write steps for mail merge.
7. Introduction of Microsoft excel.
8. Write steps to inserting formula in MS Excel.
9. Creating text, row and Column in MS Excel.
- 10 Introduction of Microsoft Power Point.
11. Write steps how to using graphics in power point.
12. Introduction and theory of Microsoft Outlook.

Text Books:

- MS-Office 2010 Mr. Kalpesh Patel (Computer World (2014))
- PC Software MS Office Naik Nitin K (Kamal Prakashan)

Reference Books:

- Introducing Windows 10 for IT Professionals Ed Bott (Microsoft Press)
- GO! with Microsoft Windows 10 Introductory Gaskin & Vargas (Publisher: Pearson)
- Microsoft Office 2010 a Complete Guide Blokdyk Gerardus (5starcooks)

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Computer Operator, Office Assistant, Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Learn basic's of MS-word and MS-excel improve their skills with advanced features	No Poverty, Quality Education, Industry Innovation and Infrastructure.	Can start own Computer Assistance services.

SEMESTER- 1st

Course: DCA

**SUBJECT: COMPUTERS IN OFFICE–II (MS POWERPOINT
MS ACCESS & MS OUTLOOK)**

Subject Code: 2TDCA-104

Theory Max. Marks: 50

Theory Min. Marks: 17

COURSE OBJECTIVE:-

1. To understand the basic knowledge of MS Windows.
2. To understand the Office Packages.
3. To understand the MS Access.
4. To understand the MS Outlook Express.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	MS PowerPoint: Introduction & area of use; Working with MS PowerPoint; Creating a New Presentation; Working with Presentation; Using Wizards; Slides & its different views; Inserting, Deleting and Copying of Slides; Working with Notes, Handouts, Columns & Lists; Adding Graphics, Sounds and Movies to a Slide.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on MS-PowerPoint.
Unit – II	Working with PowerPoint Objects- PowerPoint Objects Insert WordArt and other objects like shapes, clipart, charts and Smart Arts, symbol in PowerPoint, Designing & Presentation of a Slide Show; Master slide, Adding custom animation and effects in your presentation, Add time to your slide, Slide Sorting, Printing Presentations, Notes, Handouts with print options, Package your presentation for CD.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – III	MS-Access – Getting Started, Adding and Changing Data, Simple Queries, Creating Append Queries, Creating QBE Queries, Multi-table QBE Queries, SQL Queries.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Group projects String Manipulations
Unit – IV	Outlook Express - introduction, WHAT IS outlook express?, Features of Outlook Express, starting outlook express, Concepts of CC and BCC, Email Address, Reading a received message , composing message, Replying And Forwarding Messages, Attaching files, Creating Signature In Outlook Express, Formatting message text, What is MIME?, Applying stationery.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Quiz competition based on aptitude questions on outlook Express
Unit - V	Inserting a hyperlink or HTML page into a message, Flagging an e-mail or news message, Importing messages from other e-mail programs, What are newsgroups?, Adding a newsgroup account, Switching between e-mail and news reading, Identities (Multiple Users on A Single Computer), Adding a new identity, Managing Contacts With Outlook, creating addresses, Importing an address book from another program, Using keyboard shortcuts in Outlook Express	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Group discussions on Use of HTML

COURSE OUTCOMES: –

After studying this student will be able to know about terms and concepts of Microsoft suite completely.(like MS-Excel, MS-Access and Outlook express)

COURSE CODE: 2TDCA-104

Text Books:

- MS-Office 2010 Mr. Kalpesh Patel (Computer World (2014))
- PC Software MS Office Naik Nitin K (Kamal Prakashan)

Reference Books:

- Introducing Windows 10 for IT Professionals Ed Bott (Microsoft Press)
- GO! with Microsoft Windows 10 Introductory Gaskin & Vargas (Publisher: Pearson)
- Microsoft Office 2010 a Complete Guide Blokdyk Gerardus (5starcooks

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Computer Operator, Office Assistant, Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Learn basic's of MS- Power Point, MS – Access and outlook Express to improve their skills	No Poverty, Quality Education, Industry Innovation and Infrastructure.	Can start own Computer Assistance services.

SEMESTER- 1st

Course: DCA

SUBJECT: COMMUNICATION SKILLS & PERSONALITY DEVELOPMENT

Subject Code: 2TDCA-105

Theory Max. Marks: 50

Theory Min. Marks: 17

COURSE OBJECTIVE:-

1. To understand how to communicate effectively and appropriately in real-life situation.
2. To use English effectively for study purpose across the curriculum.
3. To develop and integrate the use of the four language skills i.e. Reading, Listening, Speaking, Writing

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	English Language - Listening, Speech, Pronunciation, Reading, Spelling, Writing Right Nouns : Countable and Uncountable, Pronouns : Personal, Relative and Others, Articles The Parts of Speech, The Prepositions, Clauses : Coordinate, Subordinate, Relative Adverbs, Adjectives and Adjective Phrases, Verb.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – II	The Model Auxiliaries, Adverb, Adverb Phrases Comparisons and Intensification, Linking Devices, Subject Verb Agreement, Tenses, Common Errors, Word Building, Vocabulary Developing Ability of Question and Answer, Body Language and Its Use in Speaking, Group Discussions, Interview Skills.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Case studies to understand organization of laptop like Dell, Lenovo etc.
Unit – III	Composition - Making a Technical Report, E-Mails and Text Messages Composing, Letter Writing, Paragraph Writing, E-mail Writing, Writing Resume, Writing a Cover Letter Personality development: Soft Skills Development, Body Language, Behavioral and Symptomatic Soft Skills, Etiquette and Manners, Positive Thinking, Motivation, Goal setting, Team building, Self Confidence, Leadership Skills, Time Management.	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – IV	Introduction to Personality a) Basic of Personality b) Human growth and Behavior c) Theories in Personality d) Motivation Communication skills and Personality Development a) Intra personal communication and Body Language b) Inter personal Communication and Relationships c) Leadership Skills d) Team Building and public speaking	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Performed GD for student skill development
Unit - V	Techniques in Personality development I a) Self confidence b) Mnemonics c) Goal setting d) Time Management and effective planning Techniques in Personality Development II a) Stress Management b) Meditation and concentration techniques c) Self hypnotism d) Self acceptance and self growth	Usage of ICT :-Power Points, PDF, Video lectures, Black board

COURSE OUTCOMES: -

After study this student will be able to know about how to become active readers, what are the writing skills and process. Learn about oral communication skills.

Text Books:

- A Practical English Grammar A.J. Thomson & A.V. Martinet (New Delhi OxfordUniversity)
- Written Communication in English Sarah Freeman (New Delhi : OrientBlackswan)

Reference Books:

- Essential of English grammer and composition Rajendrsa Pal

- Fundamental of English grammer N.C Sinha
- A comprehensive of English grammer Rajkumar Sharma

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Development of the personality by personality development using improved english	NoPoverty,Quality Education, Decent Work and Economic Growth	Can start their own PD training calsses

SEMESTER- 2nd

Course: DCA

SUBJECT: INTRODUCTION TO INTERNET & WEB TECHNOLOGY

Subject Code: 2TDCA-201

Theory Max. Marks: 50

Theory Min. Marks: 17

COURSE OBJECTIVE:-

1. To understand concept of Internet
2. To understand the web technology terminologies.
3. To develop and integrate the use of current trends on internet technology
4. To understand firewall and HTML programming

Syllabus:-

Unit	Unit wise course contents	Methodology Adopted
Unit – I	Introduction To Internet- introduction, , growth of internet, internet service provider, anatomy of internet, Arpanet and internet history of the world wide web, services available on internet web , basic internet terminologies, net etiquette, applications, commerce on the internet, governance on/through the internet, impact of internet on society. TCP/IP - Internet Technology And Protocols-introduction, switching technology , internet protocols, overview of TCP/IP reference model, introduction to TCP/IP, routers, internet addressing scheme.	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – II	Internet Connectivity - connectivity types, level one connectivity, level two connectivity, level three connectivity, hardware requirements, modems, narrow-band/phone-line dialup modems, software requirements, modem configuration:, telephone line options, making a dial-up connection, protocol options, service options, news services, desktop alerts Internet Network- computer networks, applications of networks, common terminologies :, interoperability, network security, the need for security, common threats, security barriers in network pathways, network components : communication media, network devices, types of network : client / server & peers, addressing in internet, domain name system (DNS), domain name and their organization, network topology, internet vs. Intranet. Services Of Internet (Definition And Functions) - introduction, file transfer protocol, ftp related terminologies, ftp servers and authentication, public and private software services, ftp clients, types of ftp client software, displaying files , remote login, chat programs, connecting to a server, search engines.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on Computer Networks, Group discussions on Internet Pros and Cons. Individual presentations on Network Devices
Unit – III	Electronic Mail - introduction, what is an e-mail?, email networks and servers, merits of e-mail, limitations, e-mail protocols, structure of an e-mail, e-mail address, Microsoft internet explorer and outlook express, applying stationary, web based emails, working with yahoo, starting the mail program , creating signature in outlook express, creating signature in yahoo, email encryption, why email encryption?, digital certificate. Current Trends On Internet -current trends of internet:, languages used on the internet, internet phones, internet video / internet tv, streaming video & audio, collaborative computing, e-commerce, technical and organizational aspects Web Publishing- overview, SGML (standard generalized markup language), what is the need of a website? , types of web sites, components of web publishing , domain name planning and registration,choosing a web host and signing up for an account, web hosting, web design and development, testing your website, promotion of the site, registering your site with a search engine, publishing tools, html editor, image editor, program to transfer your files to a web server, uploading web pages using Cute ftp.	Usage of ICT :-Power Points, PDF, Video lectures, Black board

Unit – IV	World Wide Web- introduction , evolution of the www, basic features, mechanism of the world wide web, search and meta-search engines, searching the web, using boolean operators in your searches, using advanced , using a metasearch engine, site specific search tools, web protocols, hyper text transfer protocol (http), web server Browsers , introduction, www web browsers, Mozilla Firefox browser, the opera browser, google chrome, what are bookmarks?, adding folders, favorites, deleting favorite folders and pages, history, progress indicator, customizing internet explorer, turning off graphics to display all web pages faster, customizing the toolbar, copying, saving and printing in internet explorer, printing an image from a web page, printing a web page, cookies, what is cache setting ?, internet explorer, the standard toolbar, internet explorer keyboard shortcuts. Hyper Text Markup Language Programming Basics - introduction, html editors, elements of html, definition lists , compact attribute, nested list, type attribute, html links, using alt attribute, background graphics, html document tables, creating tables within tables, html frames, html rules, introduction of multimedia, meaning of multimedia, what is multimedia ?, identifying multimedia elements, audio on the web, video on the web.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit - V	Internet Security Management Concepts, Information Privacy And Copyright Issues - overview , basic security concepts, security events, measures for check threats, firewalls , monitoring tools, security analysis tools, cryptography , information privacy, copyrights and the internet, copyright legislation in India, key points of copyright, encryption & decryption - cryptography, terminology Firewalls - firewalls, firewall design principles, firewall attributes, firewall strengths and weaknesses, types of firewalls, comparison of firewall types, DMZ DNS server, VLAN	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Quiz competition on aptitude question on C++, Project making competition using HTML

COURSE OUTCOMES:-

After study, the student will be able to know about Internet, Internet connectivity and services of internet, internet security management and firewalls.

Practical:

1. WAP which shows headings five time in ascending order. Align the heading also.
2. Write a program which show four paragraph under four headings.
3. Write a program for formatting the text & marked highlighted text.
4. Write a program for some text using CSS technique.
5. Write a program to insert an image in a page.
6. Write a program to make a table for any company employee's data record.
7. Write a program to make forms for different uses.
8. Write a java script to print the heading and paragraph & also create a button
9. Write a program to upload video on web page.
10. Write a program to change the back ground of any page.
11. Write a program to create a link between page.

Text Books:

- Internet & Web Design, A. Mansoor , Pragya Publications.

Reference Books:

- Learn HTML in a weekend Steven E. Callihan, PHI
- Using HTML, Lee Anne Phillips , PHI
- SAMS Teach Yourself Javascript in 24 Hrs. Michael Moncur, TechMedia
- "Programming In Java", 2nd Edition, E. Balaguruswamy, TMH Publications ISBN 0-07-463542-5
- "Peter Norton Guide To Java Programming", Peter Norton, Techmedia Publications ISBN 81-87105-61-5
- JAVA, How to Program, Deitel&Deitel, PHI, Pearson

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
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Network administrator, network service provider, network engineer, Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Computer networking, maintenance of network, implementation of Network, Organizing and Planning Networks	No poverty, Quality Education, Decent Work and Economic Growth	Can start own Computer Network assistance
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SEMESTER- 2nd

Course: DCA

SUBJECT: INTRODUCTION TO FINANCIAL ACCOUNTING WITH TALLY

Subject Code: 2TDCA-202

Theory Max. Marks: 50

Theory Min. Marks: 17

COURSE OBJECTIVE:-

1. To understand the concept of Financial Accounting
2. To understand the knowledge about Tally.
3. To develop and integrate the use of Accounting
4. To understand Cheque Printing, Multi Account Printing etc.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	Accounting, Meaning Of Accounting, Objectives Of Accounting, Important Terms, Accounting Equation, Rules Of Debit And Credit- Journal & Ledger, Journal, Ledger, Cash Book, Subsidiary Books, Financial Statement, Trading & P&L A/C, Balance-sheet, Inventory, Adjustment Entries, Bill Of Exchange Installing Tally 9, Introduction, Tally 9.0 (Release 1.0), Major Enhancements In Tally 9, Minor Enhancements In Tally 9, Multilingual Business Accounting And Inventory Management Features, Performance And Implementation Features, Accounting And Inventory Control Features, Installing Tally 9.0, Application Directory, Data Directory, Configuration Directory, Language Directory, Activating Tally, Activating Tally Gold For Multi User, Registering Tally, Validating Tally, Tally Data Migration Tool, Uninstalling Tally 9	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – II	ABC of Company, Creation Of New Company Selection Of New Company Deletion Of Company Alteration Of Company Shut A Company Company Features, Features Of Company Accounting Features Inventory Features, , Statutory Features Tally Screen Components, Title Bar, Button Bar, Calculator, Working Are, Quitting, Gateway Of Tally, Current Status Area. Configuration, General, Numeric Symbols, Accts/Inventory Info, Printing, Connectivity, Licensing, Shop, Quit Budget, Introduction, Budget, Creating Budget, Alter A Budget, Delete Budget, Display Budget/ Budget Variance, Scenarios Job Costing, Introduction, Enabling Or Configure Job Costing In Tally, Master Creation For Job Costing, Voucher Type And Voucher Class, Job Cost Reports	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – III	Reports, Introduction Accounting Reports, Trial Balance, Balance Sheet, Profit & Loss, Cash Flow Statement, Fund Flow Statement, Ratio Analysis, Day Book, Cash/Bank Book Sales Register Purchase Register Outstanding Interest Cost Centers Job Work Analysis Statistics Inventory Reports. Accounts Groups & Ledgers, Introduction Accounts Group Multiple Group Creation Display Group Alter Group Multiple Ledgers Display Ledger Alter Ledger Voucher Types. Payroll Accounting, Introduction, To Activate Payroll In Tally 9, Payroll Menu, Display Pay Heads, Multiple Group Creation, Employee Creation, Salary Detail, Attendance, Attendance Type, Voucher Creation.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Group projects on Tally
Unit – IV	Export & Import, Introduction, Export, Import, ODBC Compliances. Cost Centre, Introduction Cost Centre, Creating Cost Centre, Display Cost Centre, Alter Cost Centre Cost Category, Create Cost Categories, , Display Cost Categories, Alter Cost Categories Voucher Entry Cost Centre Class, Creating Cost Centre, Invoice Entry Using Cost Centre Reports Related To Cost Centre. Foreign Currencies, Introduction Foreign Currency, Create Foreign Currency, Alter Foreign Currency, Display Foreign Currency, Exchange Rate Entry	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on advancement of accounting using Tally

	Voucher Entry Using Foreign Currency Voucher Entry through Forex Journal Voucher Class Reports Related To Foreign Currency. Interest, Introduction, Interest, Simple Mode, Interest On Outstanding Balances, Reports On Interest Calculated On Outstanding Balances, Advanced Parameter Mode, Interest Calculation Transaction By Transaction/Voucher Interest At Fixed Rate, Voucher Interest At Variable Rate, Statement Of Interest Due On Invoice, Interest Reports, Interest Voucher Class.	
Unit - V	Printing, Introduction Cheque Printing, Multi Account Printing, Printing Options General, Purchase Printing, Sales Transaction, Receipt Voucher, Journal/Contra, Debit/Credit Note, Reminder Letter, Confirmation Statement Reports Printing Button Related Bank Reconciliation, Introduction, Bank Reconciliation In Tally 9, Configuration Of Bank Reconciliation. Security Control, Introduction Security Levels Access Type, Backup & Restore, introduction, Group Company, Create a Group Company, Alter a Group Company, Tally Audit, Splitting Company Data Inventory, Introduction Stock Group Stock Item Stock Categories Godowns Units Of Measures Rate Of Duty Inventory Vouchers Reorder Level Inventory Reports Inventory Info Inventory Books Statement Of Inventory Batch Wise Details Price List	Usage of ICT :-Power Points, PDF, Video lectures, Black board

COURSE OUTCOMES:-

After study, the student will be able to know about Accounting, Company, Company Features, Features of Company Accounting, Interest Calculation Transaction and Cheque Printing, Multi Account Printing

Reference Book:

1. Implementing Tally 6.3 by Nadhani; BPB Publications
2. BPB Tally 6.3 by BPB Editorial Board (Hindi) BPB Publications
3. Tally 9 (Level 2) Traders Accounting BY ASOK.K.NADHANI
4. Official Guide to Financial Accounting Using Tally. ERP 9 with
5. GST by Tally Education

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Training and Support in Institutions/universities Research and Academics System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Logical reasoning, analysis of data, Organizing and Manipulating Data.	Quality Education, Decent Work and Economic Growth	Can start own Accountant consultancy

SEMESTER- 2nd

Course: DCA

SUBJECT: PROGRAMMING IN C

Subject Code: 2TDCA-203

Theory Max. Marks: 50

Theory Min. Marks: 17

COURSE OBJECTIVE:-

1. To understand the basic knowledge of programming concepts.

2 To understand the C language & its concepts.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	Principles of Programming, Introduction to Programming, Program Concept, Characteristics of Programming, Stages in Program Development, Tips for Program Designing, Programming Aids, Algorithms, Notations, Design, Flowcharts, Symbols, Rules Programming Techniques and Logic, Introduction, Introduction to programming techniques, Top-down approach or technique, Bottom-up approach or technique, Unstructured technique of programming, Structured technique of programming, Modular technique of programming, Comparative study of programming techniques, Cohesion , Coupling, Debugging , Syntax Errors, Logical Errors, Data Entry Errors, Linker Errors, Runtime Errors, Program Testing	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – II	Turbo C IDE, Turbo C IDE (Integrated Development Environment), Main Menu Bar, File Options, Edit option, Run option, Compile option, Project option, Options option, Debug option, Break/watch option, Edit Window, Message Window, Status bar, Editing, Compiling and Running a C Program, Features of C language, C language standards, Standardization , Successors of C language Introduction to 'C', Introduction, Structure of a C program, 'C' Tokens, Keywords, Identifiers, 'C' Constants, Variables in C, Data Types, Derived Data Types : , Operators, Precedence and Associativity of operators, Hierarchy of operators at a glance, Expression & its Evolution, Type conversion in expressions , (Implicit and Explicit type conversion)	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – III	Decision Making and Branching, Introduction, Sequential statements, Unformatted I/O functions, Formatted input using scanf () function, Formatted output using print(), Branching statements, The if-else statement, The nested if-statement, The switch statement. Looping Statements, Introduction, for-statement, while-statement, do-while statement, Difference between while-loop and do-while loop, Nested loops, Jumps in loops.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – IV	Arrays, Introduction, Single-dimensional arrays, Reading and writing single dimensional arrays, Examples of Complex Programs, Searching, Sorting, Two-dimensional arrays (Multi-dimensional arrays), Reading-writing two-dimensional arrays, Manipulation in two-dimensional arrays, Strings, Concepts of string, Strings in C language, String variable, Initializing strings, String input/output functions, Arrays of strings, String handling functions, Memory formatting User Defined Functions, Introduction, Elements of user-defined functions, Categories of functions, Passing parameters to functions, Programming Examples, Arrays in functions, Nesting of Functions, Recursion, Command Line Arguments , Storage Classes	Usage of ICT :-Power Points, PDF, Video lectures, Black board

Unit - V	Structure and Union, Introduction to structures, Structure and its definition, Structure declaration, Tagged Structure, Structure variables, Type-Defined Structure, Structure initialization, Accessing structures, Nested structures, Array of structures, Structures and functions, Sending individual members, Sending the whole structure, Passing structures through pointers, Uses of structures, Union and its definition Pointers, Introduction, Pointer concepts, Pointer variable, Accessing variables through pointers, Pointer declaration and Definition, Initializing a pointer variable, Pointers to Pointers, Compatibility, Pointer applications, Pointers and other operators, Memory allocation functions, Memory map of C program, Memory management functions	Usage of ICT :-Power Points, PDF, Video lectures, Black board
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COURSE OUTCOMES:-

Practicals:

1. Write a C Program to add two integer numbers.
2. Write a C Program to Check Whether a Number is Even or Odd.
3. Write a C Program to Check Whether a Number is Positive or Negative or Zero.
4. Write a C Program to Display Fibonacci Series.
5. Write a C Program to Reverse a Number.
6. Write a C Program to Check Whether a Number is Palindrome or Not.
7. Write a C Program to Make a Simple Calculator to Add, Subtract, Multiply or Divide Using switch...case.
8. Write a C Program to Calculate Factorial of a Number Using Recursion.
9. Write a C Program to Calculate Average Using Arrays.
10. Write a C Program to Add Two Matrix Using Multi-dimensional Arrays.
11. Write a C Program to Swap Numbers in Cyclic Order Using Call by Reference.

Reference Books:

- Programming In C , . Balaguruswamy, TMH Publications
- “ Programming With C ”, Gottfried, Schaum’s Outline Series, TMH Publications
- “ program design ”, Peter Juliff, PHI Publications
- “Let us c”, Yashwantkanetkar,

Text Books:

- “ Thinking In C ”, Mahapatra, PHI Publications
- “Introduction To Computers And Information Technology ”, Anurag Seetha, Ram Prasad & Sons, Bhopal.
- “Computers Today ”, S.K. Basandra, Galgotia Publications
- Illustrate the flowchart and design an algorithm for a given problem and to develop C programs using operators
- Develop conditional and iterative statements to write C programs
- Exercise user defined functions to solve real time problems
- Exercise files concept to show input and output of files in C

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Assistant Programmer, Software developer, Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	To create applications that will run on a wide variety of hardware platforms., Problem Solving	No, Poverty, Quality Education, Decent Work and Economic Growth, Industry Innovation and Infrastructure	Can teach and learn other computer languages.

SEMESTER- 2nd
Course: DCA
SUBJECT: DBMS WITH MS ACCESS

Subject Code: 2TDCA-204
Theory Max. Marks: 50
Theory Min. Marks: 17

COURSE OBJECTIVE:-

To understand the concept of Data Base Management

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	Introduction to Database, What is Database, why use a relational database, overview of database design, Data normalization(Determining tables, Determining fields, Determining relationships), Integrity rules (primary key/foreign key, one-to-many, many-to-many, one-to-one) Integrity rules many-to-many, one-to-one), Introduction to MS-access (objects, navigation)	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – II	Tables in database, create a table in MS-access- Data types, field properties, fields: names, types , properties-default values, format, caption validation rules, data entry add records, delete records and edit text sort, find/replace, filter/select, rearrange and freeze columns ,Edit a tables-copy, delete, import, modify table structure, find, replace	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – III	working with query, setting up relationship-define relationships, add a relationships, set a rule for referential integrity, change the join type, delete a relationships, save relationships, query and filter-difference between query and filter, filter using multiple fields AND, OR and advance filter queries, create query with one table, find record with select query, find duplicate record with query, find unmatched record with query, run query, save and change query	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – IV	working with forms, introduction to basic form types, Basic forms: tabular, columnar, datasheet/main subforms, add headers and footers, add fields to forms, add text to forms, use label option and buttons, checkbox, combobox list box, form wizards, create templates	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit - V	working with reports, Introduction to reports, types of reports: single column, tabular, Reports groups/total, single table reports, multi table reports, preview report, print report, creating reports and labels, wizards	Usage of ICT :-Power Points, PDF, Video lectures, Black board,

Course Outcomes:-

After study this student will be able to know about programs based upon data base with access concepts, query commands .

Reference Books:

- MS Office XP complete BPP publication ISBN 8 1-7656-564-4
- MS Access fast & easy by faithewempen PHI.
- “Programming In C ”, E. Balaguruswamy TMH Publications
- “ Programming With C ”, Gottfried, Schaum’s Outline Series, TMH Publications
- “ program design ”, Peter Juliff, PHI Publications
- “Let us c”, Yashwantkanetkar,

Text Books:

- Database Systems : Concepts, Designs and Application Shio Kumar Singh
- Introduction to Database Management Systems Atul Kahate

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Data administrator, database developer, database trainer, oracle engineer, Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Query processing, Database handling, Organizing and Planning Database, Handling data and query processing.	No poverty, Quality Education, Decent Work and Economic Growth, industry innovation and infrastructure	Can start own Data handling company.

SEMESTER- 2^d

Course: DCA

SUBJECT: PROJECT REPORT

Subject Code: 2TDCA-205

Theory Max. Marks: 50

Theory Min. Marks 17

COURSE OBJECTIVE:

PATTERN :

A two-three weeks project topic will be assigned to each of the student in a group on the related topics studied in the Semester on which student shall prepare a project report and submit to the University. Detailed Guidelines related to the Minor project can be obtained in the contact-class or can be downloaded from the website.

All the candidates of DCA are required to submit a project-report based on the work done by him/her during the project period. A detailed Viva shall be conducted by an external examiner based on the project report.