Maharishi Mahesh Yogi Vedic Vishwavidyalaya

DIRECTORATE OF DISTANCE EDUCATION

Syllabus

DIPLOMA IN COMPUTER APPLICATION (DCA)

w. e. f. July 2012

DCA SEMESTER - I

S. No.	Paper Code	Paper No.	Paper Name	Marks
1.	1DDCA1	I	Maharishi Vedic Science – I	100
2.	1DDCA2	II	Fundamental of Computer and Information Technology	100
3.	1DDCA3	III	PC Packages	100
4.	1DDCA4	IV	Programming Methodology and C Programming	100
5.	1DDCA5	V	Desk Top Publishing (DTP)	100
6.	1DDCA6	VI	Practical – 1DDCA3, 1DDCA4 and 1DDCA5	100

DCA SEMESTER - II

S. No.	Paper Code	Paper No.	Paper Name	Marks
1.	2DDCA1	I	Maharishi Vedic Science – II	100
2.	2DDCA2	II	Internet and Web Page Designing	100
3.	2DDCA3	III	Programming in Visual Basic	100
4.	2DDCA4	IV	DBMS using MS Access	100
5.	2DDCA5	V	Computerized Accounting	100
6.	2DDCA6	VI	Practical – 2DDCA3, 2DDCA4 and 2DDCA5	100
7.	2DDCA7	VII	Project	100

FUNDAMENTALS OF MAHARISHI VEDIC SCIENCE

(MAHARISHI VEDIC SCIENCE – I)

UNIT - 1

Meaning & importance of Guru Pujan.

Meaning of meditation, Mann, Intelligence, Chita, Ego, Thought .

UNIT - II

Name of forty areas of Vedic Science and their expression in Human Physiology and characteristics of consciousness.

Consciousness, types of consciousness, characteristics of higher stages of consciousness.

UNIT - III

Maharishi's Yoga, Transcendental Meditation- a general Introduction, Types of Speech, TM Sidhi Programme, Principle of Yoga Asanas and their Concept.

UNIT - IV

Introduction: Maharishi Vedic Management.

Fundamental elements of Vedic Management –Totality

Management of Science and Art .

UNIT - V

Vedic Management and Leadership.

The Idea Leadership is based upon the Totality of Employee's Style

Suggested Readings:

- ➢ Chetna –His Holiness Maharishi Mahesh Yogi Jee
- ➢ Maharishi Sandesh - 1 and 2 , II-His Holiness Maharishi Mahesh Yogijee
- ➢ Scientific Yoga Ashanas –Dr. SatPal.
- ➢ Dhyan Shailly by Brahmchari Dr. Girish Ji

FUNDAMENTALS OF COMPUTER AND INFORAMATION TECHNOLOGY

UNIT-1

Introduction to computer and information technology : History of development of computers, computer system concept , characteristics, capabilities and limitation , types of computer – analog, digital, hybrid, general, special purpose, micro, mainframe, super, generation of computer, personal computer (PCs) –IBM PCs, characteristics, PC/PCXT/PCAT-configurations, Pentium and Newer PCs specification and main characteristics, types of PCs-Desktop, Laptop, Notebook, Palmtop, Workstation etc , their characteristics.

Computer Organizations and Working: Basic component of a computer system –control unit, ALU, INPUT /Output function and characteristics, memory –RAM, ROM, EPROM, PROM and other types of memory.

UNIT-II

Input Devices: Keyboard, Mouse, Trackball, Joysticks, Digitizing tablet, Scanner, Digital Camera, MICR, OCR, OMR, BAR-CODE Reader, Voice Recognition, Light Pen, and Touch Screen.

Output Devices: Monitor –characteristics and types of monitor –digital, analog size, resolution, refresh rate, Interlaced /Non Interlaced, Dot Pitch, Video Standard –VGA,SVGA,XGA etc, Printer –Daisy wheel, Dot Matrix, Inkjet, Laser, line printer , plotter, sound card and speakers.

UNIT-III

Storage Devices: Storage Fundamental –Primary VS Secondary, Data Storage and Retrieval method –Sequential, Direct and Index Sequential, Various Storage Devices –Magnetic Tape ,Magnetic disks, Cartridge Tape, data drives, hard disk drives, floppy (Winchester disks), Disks, Optical Disks, CD,VCD,CD-R,CD-RW, ZIP Drive.

Computer Software: Need, types of software –system software, application software, system software-operating system, utility program, programming Language, assemblers, compiler and interpreter.

UNIT-IV

Operating System: Function, types –Batch, Single, Multiprogramming, Multiprocessing. Programming languages- Machine, Assembly, High Level and 4GL. Merit and Demerits of Programming Languages.

Disk Operating System (Dos) Introduction History & version of Dos basic –physics structure of disk drive name , Fat ,File & directory structure and naming rules , booting process , Dos system files. Dos command: Internal –DIR , MD , CD,RD,COPY,DEL, REN , VOL,DATE,TIME,CLS,PATH, TYPE etc. External – CHKDSK, XCOPY, PRINT, DISKCOPY, DISKCOMP, DOSKEY, TREE,MOVE, LABEL, APPEND, FORMAT, SORT, FDISK, BACKUP, EDIT, MODE, ATTRIB , HELP, SYS ,etc Executable V/s Non executable file in Dos.

Number System: Data representation in computer, number system of computer –Binary, Octal, Hexa-Representation & their conversion, coding system –ASCII, BCD, EBCDIC etc.

UNIT-V

Data Communication and Networks: communication channels –twister, coaxial, fiber, optic. Types of Networks –LAN, WAN, MAN etc, Topologies of LAN –Ring, BUS, STAR, MESH and TREE topologies , components of LAN-media , NIC,NOS, Bridges, HUB, Routers Repeater and Gateway .

Computer virus: Virus working principles, types of viruses, virus detection and prevention, viruses on networks. Use of communication and IT in daily life.

An Introduction: Modern Science and Vedic Science, Unified field based computer Science.

Text & Reference Books:-

1. Learning Window 98 step by step by Rajeev Mathur , BPB Publication.
2. Learning Word 97 for Window by Rajeev Mathur , BPB Publication,
3. Learning Excel 97 for Window by Rajeev Mathur , BPB Publication.
4. A First Course in Computer by Sanjay Saxena , Vikas Publishing House New Delhi.
5. Microsoft Office 2000 by A. Mansoor by Pragya Publications.
6. Office 97 Interactive Course by Greg Perry, Tec media.
7. Microsoft Office 2000 by A. Mansoor by Pragya Publications.

PC PACKAGES

UNIT-I

Word-processing : MS-Word : Introduction to word processing, introduction to MS –Word: features, creating ,saving and opening document in word , interface , Toolbars , Ruler, Menus, Keyboard Shortcut, Editing a document – moving, scrolling in a document, opening multi document window, editing text selecting , inserting, delete , moving text, previewing document, printing document – Print a document from the standard toolbars, print a document from the menu , shrinking a document to fit a page, reduce the number of pages by one, formatting document: paragraph format, Aligning text and Paragraph, Border and shading, header and footer, multiple columns.

UNIT-II

Word-processing: Advanced Feature of MS Word: Find and replace, checking the grammar and spelling, formatting via find and replace, using the thesaurus, using Auto correct, Auto complete and Auto Text, Word count, Hyphenating, Mail merge, mailing labels Wizard and Templates, handing graphic, tables insert and modification, converting of tables, converting a word document into various formats like – Text, Rich Text Format, Word Perfect, HTML etc.

UNIT-III

Worksheet : MS-Excel : Worksheet basics, Creating worksheet, entering data into worksheet, heading information, data, text dates, alphanumeric, values, saving & quitting worksheet, opening and moving around in an existing worksheet, toolbars and menus , keyboard shortcut , working with single and multiple worksheet , coping, renaming, moving between work books, working with formulas & cell referencing – Auto sum, Coping formulas, absolute & relative addressing, working with range – creating editing and selecting range, formatting of worksheet – Auto format, changing –alignment, character styles, column width, date format , border & colors, currency sign.

UNIT-IV

Worksheet : MS-Excel: Previewing & Printing Worksheet- Page setting , print titles ,Adjusting margins, page break , headers and footer, graphs and chart – using wizard, various chart types, formatting grid lines & legends , previewing & printing charts , database – creation , sorting, query & filtering a database , function – database , date and times, maths & Trigonometry, statistical, Text and logical function, creating and using macros, multiple worksheet – concept, creating and using.

UNIT-V

MS PowerPoint: Introduction and area of use, working with MS PowerPoint, creating a new presentation working with presentation, using wizards, slides& different views, deleting coping slides, working with notes, handout, columns and list, adding graphics, sound and movies to a slide, working with power point objects designing and presentation of a slide show, printing and presentation, notes, Handouts with print options.

Outlook Express: Setup E-mail account with outlook, sending and receiving mail through outlook, concepts of CC,BCC, forwarding mail, draft message, formatting E-mail message, Concept of MIME protocol, attaching files and items into messages, inserting hyperlink using outlook editor and using send and receive group mails, opening received message, opening message with attachment, replying to mail forward message flagging for further action, setting email options, managing contacts with outlook, setting up multiple email accounts on single machine.

Reference Books:

- Window XP Complete Reference , BPB Publication
- MS Office XP Complete BPB Publication
- IT Tools and Applications Pragya Publications

PROGRAMMING METHODOLOGY AND C PROGRAMMING

UNIT - I

Program Concept, Characteristics of Programming, Various Stages in Program Development, Algorithms, Flow Charts, Programming Techniques – Top Down, Bottom Up, Modular, Structured, Features, Merits, Demerits and Their Comparative Study. Programming Logic - Simple, Branching, Looping, Recursion, Programming Testing & Debugging.

UNIT- II

Introduction to C Language, C Language Standards, Features of C, Structure of C Program, Introduction to C Compilers, Creating and Compiling C Programs, IDE, Features of Turbo C Compiler. Keywords, Identifiers, Variables, Constants, Scope and Life of Variables, Local and Global Variable, Data Types, Expressions. Operators - Arithmetic, Logical, Relational, Conditional and Bit Wise Operators, Precedence and Associativity of Operators, Type Conversion. Basic Input/Output Library Functions ,Character Input/Output getch(), getchar(). getche(), putchar(). Formatted Input/Output - printf() and scanf(), Mathematical & Character Functions.

UNIT- III

Declaration Statement, Conditional Statement - if Statement, if else Statement, Nesting of if... .else Statement, else if Ladder, The ?: Operator, switch Statement. Iteration Statements - for Loop, while Loop, do-while Loop. Jump Statements: break, continue, goto, exit(). Arrays - Concept of Single and Multi Dimensional Arrays Strings: Declaration, Initialization, Functions .

UNIT – IV

The Need of C Functions, User Defined and Library Function, Prototype of Functions, Prototype of main() Function, Calling of Functions, Function Arguments, Argument Passing: Call By Value and Call By Reference, Return Values. Nesting of Function, Recursion, Array as Function Argument, Command Line Arguments, Storage Class Specifier - Auto, Extern, Static, Register.

UNIT - V

Defining Structure, Declaration of Structure Variable, Type def, Accessing Structure Members, Nested Structures, Array of Structure, Structure Assignment, Structure as Function Argument, Function that Return Structure, Union.

TEXT & REFERENCE BOOKS:

- *BALAGURUSWAMY, "PROGRAMMINGIN C ", TMH PUBLICATIONS*
- *GOTTFRIED SCHAUMS OUTLINE SERIES, "PROGRAMMING WITH C ", TMH PUBLICATIONS*
- *MAHAPATRA, " THINKING IN C ", (PHI)PUBLICATIONS*
- *ANURAG SEETHA, "INTRODUCTION TO COMPUTERS AND INFORMATION TECHNOLOGY", RAIN PRASAD & SONS, BHOPAL*
- *S.K. BASANDRA, "COMPUTERS TODAY", GALGOTIA PUBLICATIONS.*
- *PETER JULIFF "PROGRAM DESIGN" PHI PUBLICATIONS*

DESK TOP PUBLISHING (DTP)

Unit - I

Introduction to DTP. Definition, Importance, characteristics. Use of DTP in publishing & Newspaper Printing. Various DTP Software. Bit stream & vector graphics. Printers –Dot Matrix, Inkjet and Laser. Introduction to offset printing technology. Typography – history , element , selection of fonts, point use of blank spaces and dashes, white spaces , various breaks ,Good designing and Easy readability . Different Measurement used in DTP printing

Unit - II

Introduction to Adobe PageMaker. Why Page Maker popular in publication. Toolbox , Styles, Menus, Templates. Page Orientation & Page Setup . Importing &Text block. Spell Check & find & Replace. Working with text and graphics. Columns & gutters. Different Page Layouts. Master page , page Numbering. Auto flow. Story Editor & Layout view. Attribute setting , Alignments , grids, and Guides etc. Tab setting.

Unit - III

Import & Export of files. Styles & Palettes. Using colors. Fonts: Post script font , true types fonts, bit stream & vector fonts. Column Balancing , Breaks. I Reverse Text. Reverse Command . Printing Options. Placing Text Graphic. Picture Editing . Bullets, Masking. Window & Orphan Lines. Text Wrapping. Drop Caps. Control PaletteClips & Image Files. OLE & Embedding . Plugging. Tables Editors . Filters , Layer , PDF files. Header & Footers. Key board Control. Linking . Mathematics equation. Printing Options. Frame options.

Unit - IV

Photoshop- History & introduction, the file menu, the tools, Drawing lines & shapes. Inserting picture and shapes, filling colors, text effects, working with layers, filters. Creating design patterns, Photoshop presentations -static & dynamic presentation. WEB & WEB GALLERY using internet explorer in photo shop. Creating animations using image ready, creating animations & presentations . Tips and tricks in Photoshop.

Unit - V

Corel draw –An overview, menus and tools. Drawing –lines, shapes .inserting-pictures, objects, tables, templates. Adding special effects, Exporting drawings, outlining & filling objects, inserting symbols & Clip arts. Working in Corel draw presentation –adjusting the position, resizing, positioning, merging, color shades & shadows .working with advanced effects, special interactive effects. Creating- business cards, pamphlets, banners, news papers, books. Shortcut keys in Corel draw.

Maharishi Vedic Science – II

UNIT – I

Classical and Scientific introduction about forty areas of Vedic Science.

UNIT – II

Third Law of Thermodynamics.

Miessener's effect.

Maharish's Effect-Society, Environment, Behavior and effect on moral value.

UNIT – III

Pradhavansabhav, Atantabhav, Annyonabhav, Pragbhav.

Meaning of "Yogastha Kuru Karmani"

Meaning of "Gyanam Chetanayam Nihitam"

UNIT – IV

Theory of Karma-Prarabadha, Kriyamana, Sanchieta.

Theory of Invincibility .

Introduction to Maharishi absolute theory of Government.

UNIT – V

Theory of Ayurved.

Theory of Dincharya & Ritucharya.

Text and Reference Books : -

Maharishi Sandesh Part – I, II

Chetna Vigyan- His Holiness Maharishi Mahesh Yogi Ji.

Dhyan Shailly by Brahmchari Dr. Girish Ji

INTERNET & WEB PAGE DESIGNING

Unit - I

Internet: Evolution, Protocols, Concept, Internet Vs Intranet, growth of Internet, ISP, Connectivity ,Dial-up, leased line, VSAT etc, URls, Domain names, Portals, Application.

E-Mail: Concept, POP and Web Based E-mail, merit, address basics of sending & Receiving, E-mail protocols, mailing list, and free E-mail services.

Unit - II

File transfer Protocols, Telnet & chatting: Data Transmission Protocols, Client /Server Architecture & its Characteristics, FTP & Its usages telnet Concept, Remote Logging, Protocols, Terminal Emulation Massage Board, Internet chatting –voice chat, text chat.

Unit - III

World Wide Web (WWW): History, Working, Web Brower, its function, Concept of Search Engine, Searching the web HTTP, URLS, Web Server, Web Protocols.

Unit - IV

Web Publishing: Concept , Domain name Registration , space on Host Server for web site, HTML, Design tools, HTML editor , Image editor , issues in web site creation & maintenance, FTP software for upload web site.

Unit - V

HTML: Concept of Hypertext , Version of HTML , Element of HTTML, syntax , head & body section Building HTML document , Inserting Text , Image , Hyperlinks , Background and color controls , different HTML tag , Tables , Tables layout and presentation use of size & Attributes , List types and its tags.

Text & Reference Books

1. Level Madul M. 1.2 Internet & Web page Designing by Y.K Jain, BPB Publication
2. Internet for Dummies –Pustak Mahal , New Delhi.
3. Internet & E-commerce A. Mansoor & Dr.Anrag Seetha ,Pragya Publication .

PROGRAMMING IN VISUAL BASIC

Unit-I

Integrated Development Environment of Visual Basic: Integrated Development Environment of VB, User Interface Designing, Basic of Event Driven Programming. From – designing, Showing & hiding.

Unit-II

Visual Basic Language: Data types, variable & Constant, arrays, dynamic array, array as function , collections, procedures, arguments passing , function return values.

Control flow statements: if –then –else, select case, looping statement: Do-loop, for-next, While-Wend, Nested Control Structure, Exit stmt.

Unit-III

Building Blocks of Visual Basic: Basic Active X Control & their Use –Textbox, list box, combo-box, scrollbar, slider & fire controls.

Graphic controls, Image Handling in VB, Coordinate System, Graphic method- Text Drawing, lines& shape, filling shape and grid methods.

Unit-IV

Components of visual Basic: Menu editor: pull down and pop-up menus, Multiple Document interface –parent & Child form & Methods.

Error handing: Types of Error, Error handing method and function.

Unit-V

Database Programming with VB: Database programming with VB-Data Control – method , Properties, Connectivity with database.

Ref. Books:-

Beginner's Guide to V.B. 6 by Reeta Sahoo

V.B. by Pragya Publication

DBMS using MS Access

UNIT–I
Introduction To Database Systems Purpose of Database System, View Of Data, Characteristics of Database Approach, Architecture for a Database System, Advantages and Disadvantages Of DBMS, Database Users and Administrator, Database Design and ER Model , Data Model Classification. Why use a Relational Database.

UNIT–II
Introduction to MS Access. Create a Table in MS Access -Data Types, Field Properties, Fields: names, types, properties--default values, format, caption, validation rules Data Entry, Add record, delete record and edit text, Sort, find/replace, filter/ select, rearrange columns, freeze columns. Edit a Tables- copy, delete, import, modify table structure, find, replace.

UNIT–III
Add a relationship, set a rule for Referential Integrity, change the join type, delete a relationship, save relationship Queries & Filter - difference between queries and filter, filter using multiple fields ,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.

UNIT–IV
Introduction to Forms Types of Basic Forms: Columnar, Tabular, Datasheet, Main/ Sub-forms, add headers and footers, add fields to form, add text to form use label option button, check box, combo box, list box Forms Wizard, Create Template, Navigation between forms.

UNIT–V
Introduction to Reports, Types of Basic Reports: Single Column, Tabular Report Groups/Total, single table report, multi table report preview report print report, Creating Reports and Labels, Wizard.

TEXT & REFERENCE BOOKS:
MS OFFICE XP COMPLETE BPB PUBLICATION ISBN 8 1-7656-564-4
MS ACCESS FAST & EASY BY FAITHE WEMPEN PHI .

COMPUTERISED ACCOUNTING

UNIT-I

Basic Concept of Accounting Financial Statements, Financial, Statements, Analysis, Cost Centre, Basic concept of Inventory, Tally Configuration & INI setup, Data Directory & Folder, Configuration, Single &Multiple User Tally Screen Components, Mouse / keyboard Convention &Key, Combination switching between screen areas, Quitting Tally. Maintaining Company data Create/Alter/Select/load/Close a Company, Chart of Account, Company Features, Configuration.

UNIT-II

Create, Alter & display Groups, Ledgers, All accounting voucher types and transactions ,create and Alter new Voucher types, Item and Account Invoice Transaction, Excise Invoice, Export Invoice, Transaction using Bill-wise detail create, Alter &Display Cost Center and Cost Categories, Cost centre& cost Category allocation in voucher entry, Creating Cost centre Class, Invoice entry in a Class situation, Create , Alter & Delete Foreign Currencies, Voucher entry using foreign currency Bank reconciliation, Interest calculation using simple &advance parameter, Interest calculation on outstanding balance &on invoices, Use of voucher class, adjustment of interest, Creation of voucher class Invoices entry in a class situation.

UNIT-III

Create, Alter & delete Budgets for groups, Ledger & cost center, Defining Credit Limit & Credit period, Display Budgets & variances, Create Alter &Delete a scenario. Enabling Job Costing in Tally, Master creation &configuration for job costing , creation of voucher types & Voucher class for stock Transaction , Creation of Transfer journal for transfer of stock between godowns, Consumption journal Transaction, Payment voucher , Go down summary Report , job Works Analysis , Material consumption summary . Report Like balance sheet , profit &loss account Ratio analysis, Trial Balance Account books Like cash /bank books, All Ledger Group summary &voucher , Sales , purchase &journal registers , cost centre &category summary , cost centre breakup, ledger & group breaker, outstanding receivables & payables, interest receivable &payable, statistics, cash &fund flow, day books, list of Accounts, Reversing journals, optional voucher, post –dates vouchers.

UNIT-IV

Create, Alter & Display Stock Group and Stock Item, Stock item behaviour using costing and market valuation method, other behaviour like treating all sales as new manufacture, treating all purchase as consumed, treating all rejection inward as scrap, ignoring negative balances, treating difference due to physical counting, Create Alter & display stock categories, Create, Alter, Display simple &compound units of measures, stock item using alternate units , Defining standard cost & selling prices , Defining Rate of duty, Defining MRP, Create ,Alter &Display

Godown, Allocation of item to the Godowns, All Inventory voucher types and transaction, Inventory detail in accounting voucher. Defining re-order Level, Transaction using tracking number, Use of batch –wise detail in accounting voucher, Additional cost detail in voucher, creating Bill of material, cost estimation, creating prices list & defining Prices levels, invoices using Prices List, Zero valued entries, Transaction in case of Different actual & billed quantities .Report Like Stocks summary, Inventory books Like Stock item, Group summary, Stock transfer, physical stocks register, Movement analysis, stock group & item analysis, stock category analysis, Ageing analysis, sales order & Purchase order books , Statement of inventory related to Godowns, categories, stocks query, Reorder status, Purchase & sales order summary, Purchases &sales bill pending, exception report stocks & Ledger, overdue receivables & payables, memorandum voucher, optional voucher, post –dated voucher, reversing journals.

UNIT-V

Cheque Printing, Common Printing options, Different printing formats, Multi-Account printing, Dynamic Report specific options. Creating Group company, Use of Tally vault, Using security control & defining different security Levels, Use of Tally Audit, Backs –Up & Restore, splitting company data, Export & Import of data, ODBC compliance, use of E-Mail, Internet publishing, Upload, Web browser & online help, Rewrite data.