1 ADCA-1

1 ADCA-1

Maharishi's Vedic Science-I

UNIT- I

- Meaning & Importance of Guru Pujan.
- Meaning of Meditation, Mann, Intelligence, Chitta, Ego, Thought.

UNIT- II

- Name of forty areas of Vedic Science and their expression in Human Physiology and character-istics of consciousness.

UNIT- III

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

UNIT- IV

- Yogasana, Type of Yogasana (Surya Namaskar)

UNIT- V

- Transcendental Meditation-A general Introduction.
- TM-Siddhi Programme

Suggested Readings:

- Chetna- His Holiness Maharishi Mahesh Yogijee
- Maharishi Sandesh - 1 and 2, II- His Holines Maharishi Mahesh Yogijee
- Scientific Yog Ashanas- Dr. Satpal

1 ADCA-2

FUNDAMENTAL OF COMPUTERS AND INFORMATION TECHNOLOGY

Unit-I

Introduction to Computer and Information Technology

- History of development of computers.
- Computer system concept
- Characteristics
- Capabilities and limitation
- Types of computers-Analog, Digital, Hybrid, General, Special Purpose, Micro Mini, Super.
- Types of computers-Analog, Digital, Hybrid, General, Special Purpose, Micro Mini, Super.
- Generations of computers Mainframe,
- Personal Computer (PCs) IBM PCs, characteristics, PC/PCXT/PCAT-configurations, Pentium and Newer PCs specifications and main characteristics.
- Types of PC/Es-Desktop, Laptop, Notebook, Palmtop, workstations etc. their characteristics.

Computer Organization and working

- Basic components of a computer system-control unit, ALU, Input/Output functions and characteristics, memory- RAM, ROM, EPROM, PROM and other types of memory.

Computer Organization and working

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Unit-II

Input Device

- Keyboard, Mouse, Trackball, Joystick, Digitizing tablet, Scanners, Digital Camera, MICR, OCR, OMR, Bar-code Reader, Voice Recognition, Light pen, Touch Screen.

Output Device

- Monitors-characteristics and types of monitor-Digital, Analog, Size, Resolution, Refresh Rate, Interlaced/Non Interlaced, Dot Pitch, Video Standard-VGA, SVGA, XGA etc.
- Printers-Daisy wheel, Dot Matrix, Inkjet, Laser, Line Printer.
- Plotter.
- Sound Card and Speakers.

Storage Device

- Storage fundamentals-Primary Vs Secondary
- Data Storage and Retrieval methods-Sequential, Direct and Index Sequential.
- Various Storage Devices- Magnetic Tape, Magnetic Disk, Cartridge Tape, Data Drives. Hard Disk Drives, Floppy (Winchester Disk), Disks, Optical Disks, C.D., VCD, CD-R, CD-RW, Zip Drive.

Unit-III

Computer Software

- Need, Types of Software-System Software, Application software.
- System Software-Operating System, Utility Program, Programming languages, Assemblers, Compilers and Interpreter.
- Operating System-Function, Type-Batch, Single, Multiprogramming, Multiprocessing.
- Programming languages-Machine, Assembly, High Level, 4GL their merits and demerits.
- Application Software-Word-processing, Spreadsheet, Presentation Graphics, Data Base Management Software, characteristics, Uses and examples and area of application of each of them.

Number System

- Data representation in computers.
- Number System of computers-Binary, Octal, Hexa-Representation & their conversion.
- Coding System=ASCII, BCD, EBCDIC etc.

Unit-IV

Computer Virus

- Virus working principals
- Types of viruses
- Virus detection and prevention
- Viruses on network

Data Communication and Networks

- Analog and Digital Signals
- Modulations-Amplitude Modular (AM), Frequency Modulation (FM) Phase Modulation (PM)
- Communication Process
- Direction of Transmissions Flow-Simplex, Half Duplex, Full Duplex..
- Communication Process
- Direction of Transmissions Flow-Simplex, Half Duplex, Full Duplex.
- Communication Software
- Communication Protocols
- Communications Channels-Twisted, Coaxial, Fiber Optic, Serial and Parallel Communication.
- Modem-Working and characteristics.
- Type of Connections-Dialup, Leased Lines, ISDN.
- Type of Network-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 Gatways.
- Use of Communication in daily life.

Unit-V

- 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.
  - DISKCOMP, DOSKEY, TREE, MOVE, LABEL, APPEND, FORMAT, SOFT FDISK, BACKUP, EDIT, MODE, ATTRIB, HELP, SYS ETC.
  - Executable V/s Non executable files in DOS

Text & Reference Book :

- Introduction to Computers and Information Technology by Anurag Seetha, Ram Prasad & Sons, Bhopal.
- Computer Today by. S.K.B. Basandra, Galgotia Publication.
- Fundamentals of Information Technology by Alexis Leon & Mathews Leon, Vikas Publishing House, New Delhi
- DOS Quick reference by Rajeev Mathur, Galgotia Publication.

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1ADCA-2
Foxpro Programming (2.5/2.6)

Unit-I

FoxPro- The Rdbms for PC

- FoxPro-Versions, features, requirement of Hardware and Software.
- FoxPro- Menuu System, Working with Foxro
- Creating Database File Some common operations on data CREATE LIST, APPEND, CLOSE, QUIT
- FoxPro-Data Types

Viewing and Editing Data

- Data Displaying and Monitoring Commands- DISPLAY, LIST, LOCATE, EDIT, CHANGE, BROWSE, REPLACE, DELETE, RECALL PACK (All Commands with various Option)

Modify Structure, MEMO Field and File Utilities-

- File utilities in FoxPro-DISPLAY DIRECTORY, COPY DELETE RENAME

Unit-II

Sorting and Indexing of Database Files

- Sorting & Disadvantages of Sort
- Indexing Vs Sorting, Single & Multiple Key
- Indexing, FIND, SEEK, Rushmore Technology.

Unit-III

Printing Reports and Labels

- FoxPro Report- its creation, features & Utilities, Preview, Printing Custom Report, grouping & Sub grouping.
- FoxPro Label- Designing & Printing

Memory Variables, Date & Time Functions and Keyboard Macros

- Memory Variables-Creation and Uses, Simply Vs Array
- Saving and Restoring Memory Variables
- ?/??/??? Commands
- Time & Data Functions and Commands, Date Arithmetic
- Converting Defining Function Keys
- Keyboard Macros- Creating and Using.

Mathematical Commands and Functions

- Arithmetic Operations, Mathematical Functions, Mathematical Commands, Statistical Function.

Unit-IV

Programming with Foxpro

- Concepts of FoxPro commands file, Modify Commands
- Conditioning, Branching and Looping within Program files with Do-While Enddo, If- Endif, Scan-Endscan, For-Endfor, Docase-Endcase, Text-Endtext.

Executing Commands from other command files, Macro Substitution.
Error Conditions and Program Debugging Aids

- Common Error Massages
- Debugging techniques and commands

Unit-V

Multiple Data Files

- Concept of Multiple Database Files-Using multiple database file
- Retaining the database-SET RELATION, UPDATE, APPEND FROM, COPY TO, JOIN, Relation Query by Example and SQL.

Custom Screens & User Define Functions & Other Tools

- Create Custom Screen with @_GET, @EDIT, @SAY_GET_READ, Creating Box & Lines, User Define Functions, Custom Screen Designing and their Use, FoxDoc for Documentation.

Text & Reference

- Foxpro Made Simple by R.K. Taxali, BPB Publication.
- Mastering Foxpro 2.5 BPB Publications
- Foxpro 2.6 for Dummies-Pustak Mahal

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1 ADCA-4
PC-PACKAGE FOR MEDIA
(Windows, MS-Word & Excel)

Unit-I

- Introduction to Word Processing.
- Introduction to MS Word: features, Creating, Saving and Opening documents in Word, Interface, Toolbars, Ruler, Menus, Keyboard Shortcut.
- Editing a Document- Moving, Scrolling in a document, Opening Multi document windows, Editing Text-Selecting, Inserting, Deleting, Moving text.
- Previewing documents, Printing documents- Print a document from the standard toolbar, Print a document from the menu, Shrinking a document to fit a page, Reduce the number of pages by one.
- Advanced Features 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 lebels Wizards and Templates, Handling Graphics, tables and charts, Converting a word document into various formats like- Text. Rich Text Format, Word Perfect, HTML etc.

Unit-III

- 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 shortcuts
- Working with single and multiple workbook- coping, renaming, moving, adding and deleting, coping entries and moving between worksheets.
- Working with ranges- creating, editing and selecting ranges
- Formatting of worksheet- Auto format, changing alignment, character styles, column width, data format, borders & colours, currency sign.

Unit-IV

- **Working with formulas & cell referencing**
  - Autosum
  - Coping formulas
  - Absolute & Relative addressing

- Previewing & Printing worksheet- Page setting, Print titles, Adjusting margins, Page break, headers and footers.
- Graphs and charts- using wizards, various charts type, formatting grid lines & legends, previewing & printing charts.
- Database- creation, sorting, query & filtering a database
- Functions- Database, Date and Time, Maths & Trigonometry, Statistical, Text and Logical functions
- Creating and Using Macros
- Multiple worksheets- concepts, creating and using

Unit-V

- Features and carious versions
- Creating presentation using Slide master and templates in various colour scheme
- Working with different views and menus of power point
- Working with slides- Make new slide, move, copy, delete, duplicate, lay outing of slide, zoom in or out of a slide.
- Editing and formatting text: Alignment, Editing, inserting, deleting, selecting, formatting of text, find and replace text, bullets, footer, paragraph formatting, spell checking.
- Printing presentation- Print slides, notes, handouts and out lines.
- Inserting Objects- Drawing and inserting objects using Clip Arts, pictures and charts.
- Slide sorter, slide transition effects and other animation effects.
- Presenting the show-making stand alone presentation. Pack and go wizards.

Text and Reference Books :

- Learning Word 97 for Windows by Rajeev Mathur, BPB Publication
- Learning Word 97 for Windows by Rajeev Mathur, BPB Publication
- A First course in Computers by Sanjay Saxena, Vikas Publishing House Pvt. Ltd. New Delhi.
- Microsoft Office 97 by Gini Courter & Annette Marquis, BPB Publishing
- Office 97 Interactive Course by Greg Perry, Tech media.

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1 ADCA-5
TALLY

Unite-I
- Introduction, Importance and scope.
- Concept & conservation : Generally accepted accounting principles- Double entry framework, The accounting equations, Journals.

Unite-II
- Ledgers, Purchase book, Cash book, Petty cash book.
- Preparation of trail balance with help of ledgers

Unit-III
- Preparation of bank reconciliation statement. Preparation of subsidiary books.
- Definition & classification of revenue & expense.

Unit-IV
- Profits and loss account.
- Balance sheet- Schedule VI-Form of presentation of company final accounts.

Unit-V
- Ratio analysis funds flow statement and cash flow statement.

Text and Reference Books :

- Introduction to Tally 4.5, BPB Publication.
- Introduction to Tally 4.5, Window Based , BPB Publication.

SEMESTER-II
Maharishi's Vedic Science-II

UNIT-I
- Classical and Scientific introduction of forty areas of Vedic Science.
- First and Last Verse of forty areas.

UNIT-II
- Third Law of Thermodynamics.
- Miessener's effect.
- Maharishi's Effect- Society, Environment, Behaviour and effect on moral value.

UNIT-III

- Pradhavansasabhav, Atantabhav, Annyonabhav, Pragbhav.
- Meaning of "Yogastha Kuru Karmani".
- Meaning of "Gyanam Chetanayam Nihitam".

UNIT-IV

- Theory of Karma-Prarabadha, Kriyamana, Sanchieta.
- Theory of Invincibility.

UNIT-V

- Theory of Ayurved.
- Theory of Dincharya & Ritucharya.

Suggested Readings:

+ Maharishi Sandesh Part -I, II.
+ Chetna Vigyan- His Holiness Maharishi Mahesh Yogijee

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2 ADCA-7
CONCEPT OF 'C' PROGRAMMING
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Unit-I

Background of C

- C as Structured Programming Language
- Definition of Structured Sub-Programs and Modules, Top Down Designing, Identifiers, Constant, Variable
- Data Types, Initialization of Variables, Floating Point Data type, Declaration and Assigning Variables and Defining Symbolic Constants.

Unit-II

Operators & Expressions :

- Arithmetic, Relational and Logical Operators,
- Assignment, Increment, Decrement, Conditional Operators, Bit wise and Special Operators,
- Arithmetic Expression and their Evaluation
- Precedence of Operators and Associatively, Type Conversion and Mathematical Functions, Reading and Writing a Character, Arithmetic with Character, Formatting Input & Output-Different Formation Symbols and their meaning.

Unit-III

Decision Making, Branching & Looping.

- The If Statement, IF-ELSE and ELSE-IF Statement, NESTED-IF.
- The Switch set Statement -Case, Break, Default, The ? :" Operator, The Go To Statement.
- The While Statement, Do-While Loop, The FOR Statement-Nested FOR Loops.

Unit-IV

Arrays

- One & two Dimensional array, Initializing Arrays, Declaration and Initialization String Variables, Variable Length, Reading Writing Strings-Coping of Strings, Arithmetic Operators and Character-getc(), getchar(),, Comparison and Table of Strings-Strcmp(), strcpy ()

Unit-V

User Defined Functions :

- Form of C Functions, Return value and calling a Functions Argument and Parameters.
- Nested and Recursion, Block Structure.
- Functions with Array, Arrays as Functions Arguments.

Pointers and Structure :

- The & and * Operators, Pointer Expression,
- The Dynamic Memory Allocation
- Pointers vs Arrays, Pointers to Pointers, Functions Returning Pointers.
- Basic of Structures, Structure Pointers, Unions.

Data Files.

- Opening & Closing Data file, Creating a Data File.
- Processing a Data File, Unformatted a Data File.

Suggested Reading

- Programming in C- Gotffried
- C Programming _Ricchi
- Sprit of C- Morris Cooper

2ADCA-8
PAGEMAKER

Unit-I
- Introduction to Adobe Page Maker
- Why Page maker popular in publication
- Toolbox, Styles, Menus, Templates
- Different Page Layouts
- Importing Text
- Auto flow

Unit-II
- Text frames & Text block
- Story Editor & Layout view
- Spell Check & find & Replace
- Attribute settings. Alignments, Grids, and Guides etc.
- Working with text and graphics
- Tab setting
- Columns & Gutters

Unit-III
- Import & Export of files
- Placing Texts 7 Graphics
- Styles & Palettes
- Bullets, Masking
- Fonts : PostScript Fonts, True Type Fonts, Bit Stream & Vector fonts
- Column Balancing, Breaks
- Windows & Orphan lines
- Reverse Text
- Text Wrapping
- Revert Command
- Drop Caps
- Printing Options
- Control Palette

Unit-IV
- Clips & Image Files
- Key Board Controls
- OLE & Embedding
- Linking

- Plugins
- Mathematic Equation
- Table Editor
- Printing option
- Filters, Layers, PDF files
- Frame Options
- Headers & Footers

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2 ADCA-9
INTRODUCTION TO MULTIMEDIA & INTERNET

UNIT-I
Internet
- Evolution, Protocols, Interface Concepts, Internet, Vs Internet, 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, merits, address, Basics of Sending & Receiving, E-mail Protocols, Mailing List, free E-mail services.

UNIT-II
World Wide Web (WWW)
- History, Working, Web Browsers, Its functions, Concept of Search Engines, Searching the Web, HTTP, URLs, Web Servers, Web protocols.

UNIT-III
World Wide Web (WWW)
History, Working, Web Browsers, Its functions,

UNIT-IV
Multimedia
History, Definitions, Standards, MPCL, MPC2 Components, Use of Multimedia in Business, School, Public Places and at home..

Multimedia Building Blocks
Sound, Images, Video, Graphic Animation, Audio/Video.

Multimedia Hardware
Sound Cards, Sound Card Applications, Sound Cards Concepts & Terms Video Cards, Video Concepts and Terminology.

UNIT-V

Multimedia Software
History, Definitions, Standards, MPCL, MPC2 Components, Use of Multimedia in Business, School, Public Places and at home..

Multimedia Building Blocks
Sound, Images, Video, Graphic Animation, Audio/Video.

Multimedia Hardware
Sound Cards, Sound Card Applications, Sound Cards Concepts & Terms Video Cards, Video Concepts and Terminology.

Text & Reference Books :

- O Level Module- M1.2-Inernet & web page designing by V.K.Jain-BPB Publications.
- Internet for Everyone-Alexis Leon and Mathews Leon, Vikas Publishing Hosue Pvt. Ltd, New Delhi.
- Internet for Dummies-Pustak Mahal, New Delhi.
- A Bignner's Guide to HTML available at -http://www.ncsa.uiuc.edu/general/Internet/WWW/ HTML Primer All.html.

2ADCA-10
COMPUTER LAB-II

2 ADCA-12
Project Work.