P.G. DIPLOMA IN COMPUTER APLLICATIONS

Syllabus
Session (2016-2017)

KHALSA COLLEGE
AMRITSAR
-An Autonomous College

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P.G. DIPLOMA IN COMPUTER APPLICATIONS

SEMESTER – I

Sr. No.	Paper	Paper Name	Marks				Page No.
			Theory	Practical	Internal	Total	
1	Paper-I	PC Computing-I (MS Office) 2003	40	40	10 Th. 10 Prac.	100	2
2	Paper-II	PC Computing-II (Professional DTP)	40	40	10 Th. 10 Prac.	100	3
3	Paper-III	Fundamentals of Computer & Operating Systems	40	40	10 Th. 10 Prac.	100	4
4	Paper-IV	Database Management System through Oracle-10g & System Analysis & Design	40	40	10 Th. 10 Prac.	100	5
					Grand Total = 400		

P.G. DIPLOMA IN COMPUTER APPLICATIONS

PAPER–I: PC COMPUTING-I (MS Office) 2003

Time: 3 Hrs.   .
M.M: 100

Theory Marks: 40
Theory Internal Assessment Marks: 10
Practical Marks: 40
Practical Internal Assessment Marks: 10

Instructions for Examiners:
Eight questions are to be set. Candidates must be asked to attempt any five. Each question carries equal marks.

The Students can use only Non Programmable & Non Storage type calculator in the Subject/Papers.

UNIT I
MS-Word: Introduction to Ms-Office, Ms-Access, Ms Excel. Parts of window of word (Title bar, menu bar, status bar, ruler) , Creation of new documents, opening document ,insert a document into another document. Page setup, margins, gutters, font properties, A!ignment, page breaks, header footer deleting ,moving, replace, editing text in document. Saving a document, spell checker, printing a document. Creating a table, entering and editing, Text in tables. Changing format of table, height width of row or column. Editing, deleting Rows, columns in table. Borders, shading, Templates, wizards, Drawing objects, mail merge

UNIT II
MS-Power Point: Introduction to Ms power point. Power point elements (templates wizard Views, color schemes ,Exploring power point menu (opening & closing menus, working With dialogues boxes), adding text, adding title, moving text area, resizing text Boxes, adding pictures. Starting a new slide, saving presentation, printing slides .Views (slide View slide sorter, notes view, outline view) .Formatting & enhancing text formatting, Choosing transitions. Creating a graph, displaying slide show, adding multimedia .Slide transitions. Timing slide display, adding movies & sounds. Using a pick look Wizards to change format.

UNIT III
MS-Excel: Introduction to Worksheet/Spreads, Features of excel. Describe the excel Window, different functions on different data in excel, creation of graphs, editing it and formatting, changing chart type to 2d chart or 3d chart, creation of worksheet, adding, deleting, moving the text in worksheet, linking different sheets, sorting the data, querying the data, filtering the data (auto and advance filters), What-if analysis, printing a worksheet.

MS-Access: Introduction, Understanding Databases. Creating the tables. entering records in table, deleting table, modifying table fields, linking tables, Queries. Forms, formatting forms, relating a form to tables, Reports(building reports, formatting report. displaying the information of table using reports Adding Graphs to your reports. .

References:
1. PC Computing by R.K. Taxali.
2. PC Software by Rachpal Singh & Gurinder Singh.

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SEMESTER – I

PAPER–II: PC COMPUTING–II (Professional DTP)

Time: 3 Hrs.   .
M.M: 100

Theory Marks: 40
Theory Internal Assessment Marks: 10
Practical Marks: 40
Practical Internal Assessment Marks: 10

Instructions for Examiners:
Eight questions are to be set. Candidates must be asked to attempt any five. Each question carries equal marks.
The Students can use only Non Programmable & Non Storage type calculator in the Subject/Papers.

UNIT I

Photoshop 5.5
1. Introduction to Graphics, Vector Graphics & Bitmaps
2. Understanding Image Size & resolution
3; Relation between resolution, File sizes & output
4. Using menu & Palettes.
5. Concept of Path (Segment, Anchor, Curved, Closed, Open, Subpath)

UNIT II

Photoshop 5.5
1. Photoshop Tools (Pen, Pencil, Brush, History, Air, Eraser, Rubber stamp,Smudge, Dodge, Burn, Sponge), Masks & Histogram.
2. Acquiring &. Importing Images,
3. Concept of Lyres Channels & Path, Filters, Rendering Effects, Transformation, Strokes, Image Modes, Canvas & Images.
4. Using navigator & PhotoShop plugins.

Corel Draw-9
1. Concepts of vector graphics.
2. Color palate, Pasteboard, &. Print Page

UNIT III

Corel Draw-9
1. Using ruler unit's etc...
2. Corel Tools (Pick, Shape, Knife, Eraser, Zoom, Freehand, Natural Pen, Dimensions, Ellipse, Polygon etc.).
3. Transformations, Trimming, Wielding, Intersection of Objects, Snapping, Using Object Manager.
4. Giving effects, (Envelope, Adding Perspective, Contours, Blending Image.)

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SEMESTER – I

PAPER–III: FUNDAMENTALS OF COMPUTER & OPERATING SYSTEMS

Time: 3 Hrs.   .
M.M: 100

Theory Marks: 40
Theory Internal Assessment Marks: 10
Practical Marks: 40
Practical Internal Assessment Marks: 10

Instructions for Examiners:
Eight questions are to be set. Candidates must be asked to attempt any five. Each question carries equal marks.
The Students can use only Non-Programmable & Non-Storage type calculator in the Subject/Papers.

UNIT I

Fundamentals of Computer:
Introduction to computer, Applications of computer, Components of computers, Input-output devices (key boards, mouse, track ball, light pen, cards, printers, plotters, scanners), Secondary storage devices (floppy disk, magnetic disk, Winches er disk, optical disk) Types of software, Translators (compiler, interpreter, assembler), Introduction to data communication and network.

Introduction to Windows Vista:
Parts of window screen (Desktop, window, icons), start menu, Taskbar settings, application & document window, anatomy of a window (Title bar, minimize, maximize button, control box, scroll bars, scroll buttons, scroll boxes), Window explorer (expansion, collapsing of directory tree, copying, moving, deleting files, folder, creating folders), About desktop icons (recycle bin, my computer, network neighborhood, briefcase), folder, shortcut creation, setting of screen saver, color settings, wallpaper, changing window appearance.

UNIT II

Disk Operating System:
Meaning of operating system, its functions, batch systems, real systems, multi programming, multitasking, single, multi user systems. Define dos, Structure of Ms-Dos (description of booting files, steps to boot the system), hot & cold booting internal command (cls, dir, date, time, vol, ver, copy con, type, ren, del, md, rd, d, path, prompt), external commands edit, attrib, backup, restore, chkdsk, diskcopy, dskcomp, deltree, edit, format.

UNIT III

Introduction to Unix:
Explain the features of Unix system. Structure of Unix (Kernel, shell), Unix file system (data blocks, list, superblock, bootblock), Types of files (ordinary files, directory, special files), types of users (0-2), simple commands (cat, Is, In, chmod, mail, who, who am I, cal pwd, date, ps, mkdir, cd , rmdir, rm , tput, clear). Piping, filters, batch processing, shell programming
(Echo, read, case constructs). VI editor (opening it, inserting, modifying, deleting, saving files). Types of shells (bourne, c, r shell. Login & logout of unix session).

References:
1. PC Software: By Rachpal Singh & Gurinder Singh.
2. Computer Fundamental: By Peter Norton.

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SEMESTER – I

PAPER–IV: DATABASE MANAGEMENT SYSTEM THROUGH ORACLE-10g & SYSTEM ANALYSIS & DESIGN

Time: 3 Hrs.   .
M.M: 100

Theory Marks: 40
Theory Internal Assessment Marks: 10
Practical Marks: 40
Practical Internal Assessment Marks: 10

Instructions for Examiners:
Eight questions are to be set. Candidates must be asked to attempt any five. Each question carries equal marks.

The Students can use only Non-Programmable & Non-Storage type calculator in the Subject/Papers.

UNIT I

Basic Concepts:
An overview of Database Management, (database, database system, why database, data independence). An architecture for a database system (levels of the architecture, mapping, DBA), Introduction to Relational database systems.
Relational Model:
Domain and relations, Relational data integrity
.

UNIT II

System Analysis and Design:
System development life cycle, System development tools.
ORACLE 10g:
SQI. *PLUS
      Introduction to Oracle 10g
      SQL- DOL, DML, DCL
      Join methods & Sub query, Union, Intersection, Minus, Tree Walking
      Built in Functions, Views, Security amongst users, Sequences, Indexing, Object
      Oriented Features of Oracle 10g

UNIT III
PL/SQL

      Introduction to PL/SQL
      Cursors- Implicit & Explicit
      Procedures, Functions & Packages
      Database Triggers

References:
Database Systems Concepts by Silberschatz, Korth & Sudarshan,
International Editions, Computer Science series-1997.
An Introduction of Database System by C.J. Date (Addison-Wesley Publishing co.)
SQL/PL/SQL. The Programming Language of Oracle by Ivan Bayross
(BPB Publications

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Semester- II

Sr. No.	Paper	Paper Name	Marks				Page No.
			Theory	**Practical**	**Internal**	**Total**	
1	**Paper-I**	Network Concepts and Management (Hardware, Software, setting in LINUX/UNIX/NT environment	40	40	10 Th. 10 Prac.	100	7
2	**Paper-II**	Programming in C	40	40	10 Th. 10 Prac.	100	8
3	**Paper-III**	Introduction to Scripting Languages, Web Designing & Uses of Internet	40	40	10 Th. 10 Prac.	100	9
4	**Paper-IV**	Programming in Visual Basic with Active X	40	40	10 Th. 10 Prac.	100	10
					Grand Total = 400		

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SEMESTER – II

PAPER–I: NETWORK CONCEPTS AND MANAGEMENT
(HARDWARE, SOFTWARE, SETTING IN LINUX/UNIX/NT ENVIRONMENT)

Time: 3 Hrs.

M.M: 100
Theory Marks: 40
Theory Internal Assessment Marks: 10
Practical Marks: 40
Practical Internal Assessment Marks: 10

Instructions for Examiners:
Eight questions are to be set. Candidates must be asked to attempt any five. Each question carries equal marks.
The Students can use only Non-Programmable & Non-Storage type calculator in the Subject/Papers.

UNIT I

Introduction:
Network H/W and Software requirement~ Network topologies, OSI reference model, TCP/IP model.

Design Issues: ISDN, ATM, Routers,hub, switches.

UNIT II

Network security:
Data compression techniques, cryptography, IP addressing schemes.
NT administration:
Account policies, creating a user account, group membership, administration of share through server manager. Primary Domain controller, backup, domain controller.

UNIT III

Unix:
Network Operating System: Architecture, Shell, Kernel & File System

Introduction to Linux:

Comparative study of NT server, Unix and Linux.

References:

1. Tannanbrum: Computer Network, Prentice Hall, 1992, 3rd.
2. Robert Reinstein, et.al: Windows NT Trouble Shooting and Configuration, Techmedia.

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SEMESTER – II
PAPER–II: PROGRAMMING IN C

Time: 3 Hrs.

M.M: 100
Theory Marks: 40
Theory Internal Assessment Marks: 10
Practical Marks: 40
Practical Internal Assessment Marks: 10

Instructions for Examiners:
Eight questions are to be set. Candidates must be asked to attempt any five. Each question carries equal marks.
The Students can use only Non Programmable & Non Storage type calculator in the Subject/Papers.

UNIT I
Fundamentals of C:
Introduction of C, Data Types, Operators, their precedence, expressions and their evaluation.
Input/output Functions:
Formatted I/O, Character I/O & String I/O Functions.
Control Structures:
Taking decisions using if, if-else, switch constructs and Conditional Operator, Description of break and continue Statements. Performing loops using for, while, do-while Constructs.
Functions:
Library Functions vs User-Defined Functions, Declaring (Prototyping) and defining User-Defined functions, ways of passing parameters to functions, Recursive functions, Storage Classes.

UNIT II
Arrays & String:
What are Arrays?, Declaring arrays, initializing arrays, processing of arrays, passing arrays arguments to functions. What are Strings? How strings are handled in C? String functions, arrays of string.
Pointers:
What is a pointer variable? Declaring pointers, accessing values via pointers, pointer arithmetic, pointer to strings, passing arguments using pointers.

UNIT III
Structure and Unions.
Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, Use of assignment Statement for structures, array of structures, nested structures, Unions; Declaring a Union, Accessing elements of a type union.

Managing Data Files:
Processing a file, Standard Input/Output, System Level I/O, File updating

References:
1. Yashwant Kanetkar: Let us C, BPB Publications, New Delhi.
2. R.S.Salaria : Application Programming in C, Khanna Book Publishing Co.(P) Ltd., Delhi.

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SEMESTER – II
PAPER–III: INTRODUCTION TO SCRIPTING LANGUAGES
WEB DESIGNING AND USES OF INTERNET

Time: 3 Hrs.

M.M: 100
Theory Marks: 40
Theory Internal Assessment Marks: 10
Practical Marks: 40
Practical Internal Assessment Marks: 10

Note: The paper setter is required to set eight questions in all and the candidates will be required to attempt any five questions out of these eight questions. All questions will carry equal marks.

The students can use non-programmable and non-storage type calculators.

UNIT I

HTML

Structure of HTML, Tags, Character Entities, Hyperlinks, Frames, Tables, Lists, Forms, Limitations of HTML.

UNIT II

Front Page 2000

Features, Creating a Web Site using Wizard, One / Two / Three Column Body, Front Page Window, Various Toolbars of Front Page, Adding Clip Art, Thumbnails, resampling an Image, Beveling & Cropping an Image, Creating Bookmarks, Adding an E-mail Hyperlink, Tables, Marquee, Counter, banner, Hover Buttons, Creating a Web Page Using a Template, Themes, Forms.

UNIT III

Internet & its Use

Types of Internet Connectivity, World Wide Web, E-mail, Telnet, Filer Transfer Protocol, IRC, Virtual Reality, Web Publishing, Web Hosting, Cyber Crime, Types of Cyber Crimes, Cookies, Virus, Trojan Horse, Worm, Danger of Virus.

References:

1. Internet Applications and Web Designing by A.P. Publishers.
2. HTML, DHTML, Java Script, Perl, CGI by BPB Publications.
3. Learning to Use Internet by BPB Publications.

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SEMESTER – II
PAPER–IV: (Option-i): PROGRAMMING IN VISUAL BASIC with ACTIVE–X

Time: 3 Hrs.   **M.M: 100**
Theory Marks: 40
Theory Internal Assessment Marks: 10
Practical Marks: 40
Practical Internal Assessment Marks: 10

Instructions for Examiners:

Eight questions will be set and the candidate will have to attempt any five.

The students can use only Non Programmable & Non Storage type calculator in the Subject/papers.

UNIT I

Introduction to VB Environment

VB Applications

Controls Menus, Tool Bar and Dialogue Boxes

Testing and Debugging

UNIT II

Working with Files

Data Access Objects (DAO)

Remote Data Objects (RDO)

Active X Data Objects (ADO)

UNIT III

Data Reports

OLE -Control & Automation Server

Active X -CONTROLS,EXE, DLL, Document, Wizards

Minor Project

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