P.G. DIPLOMA IN COMPUTER APPLICATIONS

Syllabus
Session (2020-2021)

KHALSA COLLEGE
AMRITSAR
-An Autonomous College

Note:

2. Subject to change in the syllabi at any time. Please visit the Khalsa College website time to time.

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	37	37	13Th. 13 Prac.	100	179
2	Paper-II	PC Computing-II (Professional DTP)	37	37	13 Th. 13 Prac.	100	180
3	Paper-III	Fundamentals of Computer & Operating Systems	37	37	13 Th. 13 Prac.	100	181-182
4	Paper-IV	Database Management System through Oracle-10g & System Analysis & Design	37	37	13 Th. 13 Prac.	100	183

P.G. DIPLOMA IN COMPUTER APLLICATIONS
SEMESTER – I

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

Time: 3 Hrs. . **M.M: 100**

Theory Marks: 37
Theory Internal Assessment Marks: 13
Practical Marks: 37
Practical Internal Assessment Marks: 13

Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry **1.5 marks** with answer to each question up to 10 lines in length. The total weightage being **09 marks**.

Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**

The total weightage of this section shall be **14 marks.**

Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**

The total weightage of this section shall be **14 marks**.

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, Alignment, 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

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 II

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.

P.G. DIPLOMA IN COMPUTER APLLICATIONS
SEMESTER – I

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

Time: 3 Hrs

M.M: 100
Theory Marks: 37
Theory Internal Assessment Marks: 13
Practical Marks: 37
Practical Internal Assessment Marks: 13

Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry **1.5 marks** with answer to each question up to 10 lines in length. The total weightage being **09 marks**.
Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**
The total weightage of this section shall be **14 marks.**
Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**
The total weightage of this section shall be **14 marks**.

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)

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 Layer Channels & Path, Filters, Rendering Effects, Transformation, Strokes, Image Modes, Canvas & Images.
4. Using navigator & Photoshop plugins.

Unit-II

Corel Draw-9

1. Concepts of vector graphics.
2. Color palate, Pasteboard, &. Print Page

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.)

P.G. DIPLOMA IN COMPUTER APLLICATIONS
SEMESTER – I

PAPER–III: FUNDAMENTALS OF COMPUTER & OPERATING SYSTEMS

Time: 3 Hrs. **M.M: 100**

Theory Marks: 37
Theory Internal Assessment Marks: 13
Practical Marks: 37
Practical Internal Assessment Marks: 13

Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry **1.5 marks** with answer to each question up to 10 lines in length. The total weightage being **09 marks**.

Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**

The total weightage of this section shall be **14 marks.**

Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**

The total weightage of this section shall be **14 marks**.

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.

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

P.G. DIPLOMA IN COMPUTER APLLICATIONS
SEMESTER – I

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

Time: 3 Hrs. **M.M: 100**

Theory Marks: 37
Theory Internal Assessment Marks: 13
Practical Marks: 37
Practical Internal Assessment Marks: 13

Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry **1.5 marks** with answer to each question up to 10 lines in length. The total weightage being **09 marks**.

Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**

The total weightage of this section shall be **14 marks.**

Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**

The total weightage of this section shall be **14 marks**.

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

System Analysis and Design:

System development life cycle, System development tools.

UNIT II

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

PL/SQL:

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

References:

1.Database Systems Concepts by Silberschatz, Korth & Sudarshan
2.An Introduction of Database System by C.J. Date (Addison-Wesley Publishing co.)
3.SQL/PL/SQL. The Programming Language of Oracle by Ivan Bayross (BPB Publications

P.G. DIPLOMA IN COMPUTER APLLICATIONS

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	37	37	13Th. 13 Prac.	100	185
2	Paper-II	Programming in C	37	37	13 Th. 13 Prac.	100	186-187
3	Paper-III	Introduction to Scripting Languages, Web Designing & Uses of Internet	37	37	13 Th. 13 Prac.	100	188
4	Paper-IV	Programming in Visual Basic with Active X	37	37	13 Th. 13 Prac.	100	189

P.G. DIPLOMA IN COMPUTER APLLICATIONS
SEMESTER – II

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

Time: 3 Hrs. **M.M: 100**

Theory Marks: 37
Theory Internal Assessment Marks: 13
Practical Marks: 37
Practical Internal Assessment Marks: 13

Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry **1.5 marks** with answer to each question up to 10 lines in length. The total weightage will carry **09 marks**.
Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**
The total weightage of this section shall be **14 marks.**
Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**
The total weightage of this section shall be **14 marks**.

UNIT I

Introduction:
Network H/W and Software requirement~ Network topologies, OSI reference model, TCP/IP model.
Design Issues: ISDN, ATM, Routers, hub, switches.
Network security:
Data compression techniques, cryptography, IP addressing schemes.

UNIT II

NT administration:
Account policies, creating a user account, group membership, administration of share through server manager. Primary Domain controller, backup, domain controller.
Unix:
Network Operating System: Architecture, Shell, Kernel & File System
Introduction to Linux:
Comparative study of NT server, Unix and Linux.

References:

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

P.G. DIPLOMA IN COMPUTER APLLICATIONS
SEMESTER – II

PAPER–II: PROGRAMMING IN C

Time: 3 Hrs. **M.M: 100**

Theory Marks: 37
Theory Internal Assessment Marks: 13
Practical Marks: 37
Practical Internal Assessment Marks: 13

Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry **1.5 marks** with answer to each question up to 10 lines in length. The total weightage being **09 marks**.

Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**

The total weightage of this section shall be **14 marks.**

Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**

The total weightage of this section shall be **14 marks**.

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.

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.

P.G. DIPLOMA IN COMPUTER APLLICATIONS
SEMESTER – II

PAPER–III: INTRODUCTION TO SCRIPTING LANGUAGES

WEB DESIGNING AND USES OF INTERNET

Time: 3 Hrs. **M.M: 100**

Theory Marks: 37
Theory Internal Assessment Marks: 13
Practical Marks: 37
Practical Internal Assessment Marks: 13

Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry **1.5 marks** with answer to each question up to 10 lines in length. The total weightage being **09 marks**.
Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**
The total weightage of this section shall be **14 marks.**
Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**
The total weightage of this section shall be **14 marks**.

UNIT I

HTML

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

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 II

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.

P.G. DIPLOMA IN COMPUTER APLLICATIONS
SEMESTER – II

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

Time: 3 Hrs. **M.M: 100**

Theory Marks: 37
Theory Internal Assessment Marks: 13
Practical Marks: 37
Practical Internal Assessment Marks: 13

Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry **1.5 marks** with answer to each question up to 10 lines in length. The total weightage being **09 marks**.
Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**
The total weightage of this section shall be **14 marks.**
Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry **07 marks.**
The total weightage of this section shall be **14 marks**.

UNIT I

Introduction to VB Environment
VB Applications
Controls Menus, Tool Bar and Dialogue Boxes
Testing and Debugging
Working with Files
Data Access Objects (DAO)

UNIT II

Remote Data Objects (RDO)
Active X Data Objects (ADO)
Data Reports
OLE -Control & Automation Server
Active X -CONTROLS,EXE, DLL, Document, Wizards
Minor Project