

# **FACULTY OF COMPUTER SCIENCE & IT**

## **SYLLABUS FOR**

### **Diploma in Computer Applications**

**(Semester I-II)**

**(Under Continuous Evaluation System)**

**Session: 2020-21**



**The Heritage Institution**

**KANYA MAHA VIDYALAYA  
JALANDHAR  
(Autonomous)**

**PROGRAM SPECIFIC OUTCOMES**  
**Diploma in Computer Applications**

**Session 2020-21**

After completing the Diploma Course in Computer Applications the Students will be able to:

PO1: Comprehend the fundamentals of computer system and its basic components- Hardware & Software.

PO2: Get familiar with various concepts of computer networks, communication media and use of numerous internet applications efficiently for personal as well as professional purpose.

PO3: Manage all office automation tasks from word processing to making presentations, from handling worksheets to managing databases in an efficient manner.

PO3: Perform DTP (Desktop Publishing) applications to design or edit photos.

# Kanya Maha Vidyalaya, Jalandhar (Autonomous)

## SCHEME AND CURRICULUM OF EXAMINATIONS OF ONE YEAR DIPLOMA PROGRAMME

### DIPLOMA IN COMPUTER APPLICATIONS

Session 2020-21

Diploma in Computer Applications Semester – I							
COURSE CODE	COURSE NAME	Course Type	Marks				Examination Time (in Hours)
			Total	Ext.		CA	
				L	P		
DCAM- 1111	Information Technology and Operating System	C	100	50	30	20	3+3
DCAM - 1112	PC Computing–I (Back Office Operations)	C	100	50	30	20	3+3
	Total		200				

Note:

C - Compulsory

# Kanya Maha Vidyalaya, Jalandhar (Autonomous)

## SCHEME AND CURRICULUM OF EXAMINATIONS OF ONE YEAR DIPLOMA PROGRAMME

### DIPLOMA IN COMPUTER APPLICATIONS

Session 2020-21

Diploma in Computer Applications Semester - II							
COURSE CODE	COURSE NAME	Course Type	Marks				Examination Time (in Hours)
			Total	Ext.		CA	
				L	P		
DCAM - 2111	Database Management System	C	100	50	30	20	3+3
DCAM -2112	PC Computing–II (Professional DTP)	C	100	50	30	20	3+3
	Total		200				

Note:

**C - Compulsory**

*Diploma in Computer Applications Semester – I*

**Session 2020-21**

**COURSE CODE: DCAM–1111**

**INFORMATION TECHNOLOGY AND OPERATING SYSTEM**

**Course Outcomes:**

After passing this course the student will be able to:

CO1: develop a basic understanding of technologies used in the Internet and effective use of Internet tools including current web-based applications, e-mail, search strategies and basic web authoring.

CO2: learn essential operating system skills including how to use, setup, configure, troubleshoot and maintain a current microcomputer operating system.

CO3: learn about various hardware devices, computer languages, system and application software.

*Diploma in Computer Applications Semester – I*

Session 2020-21

**COURSE CODE: DCAM–1111**

**INFORMATION TECHNOLOGY AND OPERATING SYSTEM**

**Examination Time: (3+3) Hrs.**

**Max. Marks: 100**

**Theory: 50**

**Practical: 30**

**CA: 20**

**Instructions for Paper Setter -**

Eight questions of equal marks (10 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

**UNIT I**

**Fundamentals of Computer:** Introduction to computer, Components of computers (Input unit, Output Unit, Memory Unit & CPU), Types of software, Translators (compiler, interpreter, assembler), Programming languages (Machine, assembly, high level languages).

**UNIT II**

**Information Concepts and Processing: Evolution** of Information Processing, Data Information Language, Communication and Network, Client Server Systems, Computer Networks (LAN & WAN)

**UNIT III**

**Internet:** Understanding the Internet, WWW, E–mail Basics, Browsing the Web.

**Operating System:** Introduction to Operating System, Types of Operating System (Single User Systems, Multi User Systems), Booting a System.

**UNIT IV**

**Disk Operating System:** Introduction to DOS, Structure of DOS, 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).

**References/Textbooks:**

1. *Anshuman Sharma, Fundamentals of Information Technology, Lakhanpal Publishers, 5<sup>th</sup> Edition.*
2. *Rachhpal Singh & Gurvinder Singh, PC Software, Kalyani Publisher, 2009.*
3. *Peter Norton, Peter Norton's Computing Fundamentals, McGraw-Hill Technology Education, 2006.*

Note: The latest editions of the books should be followed.

***Diploma in Computer Applications Semester – I***

**Session 2020-21**

**COURSE CODE: DCAM–1112**

**PC COMPUTING–I**

**(BACK OFFICE OPERATIONS)**

**Course Outcomes:**

After passing this course the student will be able to:

**CO1:** work on Spreadsheet application for office tasks.

**CO2:** create effective presentations, can apply designs to enhance the look of the presentation, print a presentation.

**CO3:** understand Word Processor, Create, Edit and Format documents, Work with Tables, Import and Export data between Files, Save, Protect and Print documents.



***Diploma in Computer Applications Semester – I***

**Session 2020-21**

**COURSE CODE: DCAM–1112**

**PC COMPUTING–I**

**(BACK OFFICE OPERATIONS)**

**Examination Time: (3+3) Hrs.**

**Max. Marks: 100**

**Theory: 50**

**Practical: 30**

**CA: 20**

**Instructions for Paper Setter -**

Eight questions of equal marks (10 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

**UNIT–I**

**Introduction to Windows:** 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), Window explorer (copying, moving, deleting files, folder, creating folders), About desktop icons (recycle bin, my computer), shortcut creation.

**UNIT–II**

**Word Processing:** Introduction to word processing & its features, parts of window of word processing (Title bar, menu bar, status bar, and ruler), understanding the ribbon, use of office button and quick access toolbar, 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 and width of row/column editing, adding and deleting rows/columns. Adding picture, page colors and watermarks, borders, shading, drawing objects.

**UNIT III**

**Presentation:** Introduction to presentation, exploring menus, starting a new slide, saving presentation, moving/rearranging slides, printing slides. Applying theme to presentation, views (slide view, slide sorter, notes view, outline view), formatting & enhancing text. Creating a graph,

displaying slide show, adding multimedia. Slide transitions, applying Animation, Timing slide display, adding movies & sounds, using a pick look wizards to change format.

## UNIT IV

**Spreadsheet:** Introduction to worksheet/spreadsheet, features, creating a new workbook, different functions on different data in excel, creation of graphs, editing it and formatting, changing chart type, creation of worksheet, adding, deleting, moving the text in worksheet, sorting the data, querying the data, filtering the data (auto and advance filters), What-if analysis, open an already existing workbook, saving workbook, printing a worksheet, closing the workbook & exiting.

### References/Textbooks:

1. *Anshuman Sharma, A book of Fundamentals of Information Technology, Lakhanpal Publishers, 5<sup>th</sup> Edition.*
2. *Prof. Satish Jain, M. Geetha, Kratika, BPB's Office 2010 Course Complete Book, BPB Publications, 2017.*
3. *Joyce Cox, Joan Lambert and Curtis Frye, Microsoft office Professional 2010 Step by Step, Microsoft Press, 2010.*
4. *V. Rajaraman, Neeharika Adabala, Fundamentals of Computers, PHI Learning, 2015.*
5. *P.K. Sinha, Computer Fundamentals, BPB Publications, 2004.*

Note: The latest editions of the books should be followed.

*Diploma in Computer Applications Semester – II*

**(Session 2020-21)**

**COURSE CODE: DCAM - 2111**

**DATABASE MANAGEMENT SYSTEM**

**Course Outcomes:**

After the completion of this course, the student will be able to:

CO1: Comprehend various terms like data, database and database models.

CO2: Apply SQL to formulate queries and design basic level of database.

CO3: Comprehend the use of Programming Language constructs like function, procedure, packages, etc. in database.

*Diploma in Computer Applications Semester – II*

**(Session 2020-21)**

**COURSE CODE: DCAM-2111  
DATABASE MANAGEMENT SYSTEM**

**Examination Time: (3+3) Hrs.**

**Max. Marks: 100**

**Theory: 50**

**Practical: 30**

**CA: 20**

**Instructions for Paper Setter -**

Eight questions of equal marks (10 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

**UNIT-I**

Introduction to Database Management System, Components of DBMS, Three-level architecture, Data Mapping.

**UNIT-II**

Data Models (Hierarchical Model, Network Model and Relational Model).

**Normalization of Data:** First, Second and Third Normal form

Introduction to RDBMS, Types of Keys.

**UNIT-III**

**ORACLE 10g:** Introduction to Oracle 10g

SQL– DDL, DML, DCL, Join methods & Sub query, Union, Intersection, Minus, Built in Functions, Views, Security amongst users, Sequences, Indexing Object Oriented Features of Oracle 10g

**UNIT-IV**

**PL/SQL:** Introduction to PL/SQL, Relationship between SQL & PL/SQL, Advantages, block structure, Valuable and Constant declaration, Declaration using attributes %type attribute, control statements.

**References/Textbooks:**

1. *Silberschatz, Korth & Sudarshan, Database Systems Concepts, McGraw-Hill Inc.(2020), 7<sup>th</sup> edition.*
2. *C.J. Date, An Introduction of Database System, Addison-Wesley Publishing co.(2003), 8<sup>th</sup> edition.*
3. *Anshuman Sharma, Fundamentals of DBMS, Lakhanpal Publishers (2016), 4<sup>th</sup> edition.*
4. *Raghu Ramakrishnan, Johannes Gehrke, Database Management Systems, McGraw Hill Education (2014), 3<sup>rd</sup> edition.*
5. *Atul Kahate, Introduction to Database Management Systems, Pearson (2004), 1<sup>st</sup> edition.*
6. *Ivan Bayross, SQL/PL/SQL. The Programming Language of Oracle, BPB Publications (2010), 4<sup>th</sup> edition.*

*Diploma in Computer Applications Semester – II*

**(Session 2020-21)**

**COURSE CODE: DCAM - 2112**

**PC COMPUTING–II**

**(Professional DTP)**

**Course Outcomes:**

After passing this course the student will be able to:

**CO1:** Comprehend the raster and vector graphics, image resolution, menu and various palettes, concept of path and dimensions.

**CO2:** Apply simple graphic design tools and techniques like masks and histogram, acquiring and importing images.

**CO3:** Acquire knowledge of layer channels and path, filters, rendering effects, transformation, image modes, canvas and images, using navigator and photoshop plugins.

*Diploma in Computer Applications Semester – I*

**(Session 2020-21)**

**COURSE CODE: DCAM - 2112**

**PC COMPUTING–II**

**(Professional DTP)**

**Examination Time: (3+3) Hrs.**

**Max. Marks: 100**

**Theory: 50**

**Practical: 30**

**CA: 20**

**Instructions for Paper Setter -**

Eight questions of equal marks (10 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

**UNIT-I**

**Photoshop:** Introduction to Graphics, Vector Graphics and Bitmaps, Understanding Image Size and Resolution, Using Menu and Palettes.

**UNIT II**

**Photoshop Tools:** Marquee Tool , Move Tool , Lasso Tool (Polygon, Magnetic, Magic Wand Tool), Crop Tool ,Healing Brush Tool ,Patch Tool, Brush Tool, Pencil Tool, Clone Stamp Tool, Pattern Stamp Tool, History Brush Tool, Art History Brush, Eraser Tool ( Background, Magic Erases Tool), Gradient Tool , Blur Tool , Smudge Tool, Sharpen Tool, Dodge Tool, Burn Tool, Sponge Tool Path Selection Tool , Text Type Tool , Pen Tool ,Rectangle Tool , Eyedropper Tool, Hand Tool, Zoom Tool.

**UNIT-III**

**Modes:** Color Modes (Grayscale, RGB, CMYK), Channels and Paths (Creating Paths via Selections, via Pen Tools), Concept of Layers, Creating/ Adding Layers, Duplicating Layer, Deleting Layer, Layers Palette Menu, Quick & Layer Mask and Histogram.

**UNIT-IV**

**Effects:** Filters, Transformation (Scaling, Rotating, Skewing, Distorting, Perspective, Flipping, Absolute, Free Transform).

## References/Textbooks:

1. *Steve Caplin, How To Cheat In Photoshop CC: The Art of Creating Realistic Photomontages by Routledge (2013), 1<sup>st</sup> edition.*
2. *Lisa DaNae Dayley, Brad Dayley, Adobe Photoshop CC Bible, Wiley (2013), 1<sup>st</sup> edition.*
3. *Manohar Singh, Jaspreet Thind, Tejinder Thind, Uminder Kaur, PC Computing II Photoshop 5.5 & Corel Draw 10 Professional DTP, AP Publishers (2008), 1<sup>st</sup> edition.*
4. *Saish Jain, Photoshop CS6 Training Guide, BPB Publications (2014).*
5. *Natallia Geisen, Photoshop for Beginners: Learn the Basics of Photoshop in Under 10 Hours! (Graphic Design, Photo Editing, Adobe Photoshop, Digital Photography), Createspace Independent Pub (2016).*
6. *Martin Evening, Adobe Photoshop CS6 for Photographers: A professional image editor's guide to the creative use of Photoshop for the Macintosh and PC, Routledge (2012) 1<sup>st</sup> edition.*