KADI SARVA VISHWAVIDYALAYA

PGDCA
Semester System Syllabus

w.e.f. JULY 2013

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION
(P.G.D.C.A. PROGRAMME)
P.G. REGULATIONS

[A] <u>P.G. REGULATIONS FOR P.G.D.C.A.</u>

R.PG.DCA 1

Candidate for admission to the 1 - Year Post Graduate Diploma in Computer Application (P.G.D.C.A.) Course must have passed a bachelor's degree examination under (10+2+3) pattern of this university examination or any other examination recognized as equivalent thereto by this University.

N.B.: Wherever Grade is awarded, equivalent percentage corresponding to the Grade will be ascertained from the degree awarding authority.

R.PG.DCA 2

The admissions to this course will be given on merit obtained in a Entrance Test conducted by this university.

R.PG.DCA 3

Candidate who has passed an equivalent examination from any other university or examining body and is seeking admission to the P.G.D.C.A. course shall not be admitted without producing the Eligibility Certificate from the Kadi Sarva Vishwavidhyalaya, Gandhinagar.

R.PG.DCA 4

The Intake shall be as decided by the university from the time to time. The reservation for admission shall be as per the norms of Govt. of Gujarat only.

R.PG.DCA 5

The duration of the programme shall be full-time one academic year. The academic year will be divided into two semesters for the purpose of instruction and examination. No candidate will be allowed to join any service/job during the course of the study.
The medium of the instruction will be English.

R.PG.DCA 6

No student shall be admitted to any semester examination for Post Graduate Diploma In Computer Application unless it is certified by the Principal of affiliated college / recognized institute that the student.
1. has attended the courses of study to the satisfaction of the Principal of affiliated college / recognized institute.
2. has maintained good conduct and character during the studies.
3. has attended at least 85% of theory lectures and practical sessions.

R.PG.DCA 7

Student desirous of appearing at any semester examination in whole/part must forward application in the prescribed form to the Registrar, through the Principal of the affiliated college/recognized institution or before prescribed date.

R.PG.DCA 8

For the purpose of internal assessment the Department shall conduct at least one test in each semester. When more tests are conducted the average of the tests will be considered, as Internal marks.

R.PG.DCA 9

In order to pass a Semester Examination a student has to obtain at least 40 % marks in Internal Examination in each subject.

R.PG.DCA 10

a. A student passing in at least two subjects in the First Semester will be permitted to Prosecute studies for the Second Semester.

b. Such student shall require to appear in the failed subjects of semester-I examination along with the examination of semester-II. No such student shall be allowed of appear in examination of semester-II only.

R.PG.DCA 11
(1) Standard of passing:

To Pass the examination, a candidate must obtained in each paper;-
(a) at least 40% of marks the University examination (i.e. minimum 28 marks out of 70 marks.
(b) 40% marks in the internal examination (i.e. minimum 12 marks out of 30 marks)
(c) Theory and practical shall be treated as a separate head.

(2) Award of class:

No student who has not passed the Semester I in one seating & Semester II in one seating shall be eligible for award of class, viz. First class with distinction, First class, second class as the case may be. Such student, on passing, shall be marked "PASS".

R.PG.DCA. 12

If a student failing in the course, shall be required to clear the examination within a **period of three years from the date of first admission** else such student will have to take admission de-novo and study as a regular student.

Rules for Grading – PGDCA Programme (KSV)

1. Theory Subjects and Practical Subjects are allotted credits as per the hours allocated to them per week (i.e. 1 hr = 1 Credit = 25 Marks).
2. To pass a subject in any Semester a candidate must obtain a minimum of 40% of marks under each head of the subject and minimum of 40% in the aggregate of that subject.
3. If a candidate fails in any heads of a subject, he has to appear for that particular head to pass. (That is, for example if candidate fails in midterm exam of a subject, he has to reappear for midterm of that subject.)
4. The performance of each candidate in all the subjects will be evaluated on 7 -point scale in term of Grade as follows:

Grading Scheme		%age according to Grade	Grade Points	Qualitative Meaning of Grade
1	A +	90-100	10	Outstanding
2	A	80-89	9	Excellent
3	A -	70-79	8	Very Good
4	B +	60 - 69	7	Good
5	B	50-59	6	Average
6	B -	40-49	5	Fair
7	F	Less Than 40	0	Fail
8	I	Incomplete		

Award of Class:

The class awarded to a student with his/her PGDCA course is decided by his/her final CPI as per the following table:

Distinction	CPI not less than 7.5
First Class	CPI less than 7.5, but not less than 6.5
Second Class	CPI less than 6.5, but not less than 5.5
Pass Class	CPI less than 5.5

SEMESTER PERFORMANCE INDEX (SPI)

- The performance of a student in a semester is expressed in terms of the Semester Performance Index (SPI).
- The Semester Performance Index (SPI) is the weighted average of course grade points obtained by the student in the courses taken in the semester. The weights assigned to course grade points are the credits carried by the respective courses.

$$SPI = \frac{g_1 c_1 + g_2 c_2 + \ldots}{c_1 + c_2 + \ldots}$$

Where $g_1, g_2 \ldots$ are the grade points obtained by the student in the semester, for courses carrying credits $c_1, c_2 \ldots$ respectively.

CUMULATIVE PERFORMANCE INDEX (CPI)

- The cumulative performance of a student is expressed in terms of the Cumulative Performance Index (CPI). This index is defined as the weightage average of course grade points obtained by the students for all courses taken since his admission to the program, where the weights are defined in the same way as above.
- If a student repeats a course, only the grade points obtained in the latest attempt are counted towards the Cumulative Performance Index.

5. For any Semester the maximum marks for the internal and external assessments shall be shown in the teaching and examination scheme. For the purpose of internal assessment, tests, quizzes, assignments or any other suitable methods of assessment may be used by a department.

6. Semester Passing Scheme :
   a For each semester examination, a candidate will be considered as pass/clear if he/she has secured "B-" OR above grade in all the subject(s) and overall grade point greater than 5.00.
   b For each semester examination, a candidate will be considered as fail if he/she has secured "F" grade in any or all of the subject(s).
   c If the candidate does not fulfill the subject requirements, he/she will be given I-grade and the candidate will have to complete the course requirement before the commencement of the next semester-end examination. If the candidate does not clear I grade in any subject, he/she will be considered fail – F grade.
   d Candidate has to clear his / her 'F' grade or 'I' grade, if any, in the next examination.

7. Following criteria would be followed for awarding the mark statement of any Semester:
- The Grade (Mark) sheet will contain separate grades for each of compulsory papers (subjects), Practical work, Project Work and overall grade for all the subjects combined.
- It will also contain percentage and the class obtained. The percentage will be calculated on the basis of cumulative performance index (CPI) obtained by candidate.
- CPI will be shown in each semester's Grade (mark) sheet for each end-semester examination.

8. Subject wise Grade and grade points will be calculated based on the Grading Scheme defined. For example –

Subject Code	Title of Subject	Theory	Practical	Internal	External	Total	Marks Obtained by Student	Credits	Obtained Credits	Total
THEORY										
PGDCA - 101	Problem Solving & Logic Development using C Programming	4	0	30	70	100	59	4	6	24
PGDCA – 102	Database Management System – I	4	0	30	70	100	55	4	6	24
PGDCA - 103	Internet & Web Development	4	0	30	70	100	61	4	7	28
PGDCA - 104	Office Communication Packages	4	0	30	70	100	57	4	6	24
PRACTICAL										
PGDCA - 105	Practical Based on PGDCA-101	0	4	20	30	50	38	2	8	16
PGDCA - 106	Practical Based on PGDCA-102	0	4	20	30	50	32	2	7	14
PGDCA - 107	Practical Based on PGDCA-103	0	4	20	30	50	28	2	6	12
PGDCA - 108	Practical Based on PGDCA-104	0	4	20	30	50	41	2	9	18
PGDCA - 109	DTP & Multimedia Packages	0	4	20	30	50	38	2	8	16
	Total :	**16**	**20**	**220**	**430**	**650**	**409**	**26**	**63**	**176**

Total Hours : 36   **Total Credits of Sem-I : 26**   **SPI 6.77**

Subject Code	Title of Subject	Theory	Practical	Internal	External	Total	Marks Obtained by Student	Credits	Obtained Credits	Total
THEORY										
PGDCA – 201	Object Oriented Programming	4	0	30	70	100	65	4	7	28
PGDCA – 202	Client Server Application	4	0	30	70	100	73	4	8	32
PGDCA - 203	Database Management System - II	4	0	30	70	100	83	4	9	36
PGDCA - 204	Computer Network & Maintenance	3	2	30	70	100	59	4	6	24
PRACTICAL										
PGDCA – 205	Practical Based on PGDCA-201	0	4	20	30	50	37	2	8	16
PGDCA - 206	Practical Based on PGDCA-202	0	4	20	30	50	31	2	7	14
PGDCA - 207	Practical Based on PGDCA-203	0	4	20	30	50	36	2	8	16
PGDCA - 208	Project	0	6	50	100	150	105	6	8	48
	Total :	**15**	**20**	**280**	**620**	**800**	**489**	**28**	**61**	**214**

Total Hours : 35   **Total Credits of Sem-II : 28**   **SPI   7.13**

SPI of SEM-I   **6.77**

SPI of SEM-II   **7.53**

CPI   **6.96**

Overall Percentage   **64.64**

9. To calculate the final grade of the course, CPI will be calculated as follows –

SEMESTER	Total Grade Points of SEM (SPI)
SEM-1	176
SEM-2	214

CPI: (Total Grade Points of Sem-1 + Total Grade Points of Sem-2) / (Total Credit of Sem-1 + Total Credit of Sem-2)

= (176 + 214) / (26 + 28)

= 7.22

Aggregate grade of PGDCA Course will be now – 'B+' as it falls in that range.

Overall Percentage = (CPI-0.5)*10

$$= (7.22-0.5)*10$$

$$= 6.72*10$$

$$= 67.2 \text{ %}$$

PGDCA SEMESTER – I

Subject Code	Subject Title	Credit	Teaching Scheme		Exam Scheme					
			Theory/ Practical	Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
					Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 101	Problem Solving & Logic Development using C Programming	4	3	1	3	70	-	-	30	100
PGDCA – 102	Database Management System – I	4	3	1	3	70	-	-	30	100
PGDCA – 103	Internet & Web Development	4	3	1	3	70	-	-	30	100
PGDCA – 104	Office Communication Packages	4	3	1	3	70	-	-	30	100
PGDCA – 105	Practical Based on PGDCA-101	2	4	-	-	-	4	30	20	50
PGDCA – 106	Practical Based on PGDCA-102	2	4	-	-	-	4	30	20	50
PGDCA – 107	Practical Based on PGDCA-103	2	4	-	-	-	4	30	20	50
PGDCA – 108	Practical Based on PGDCA-104	2	4	-	-	-	4	30	20	50
PGDCA – 109	DTP & Multimedia Packages	2	4	-	-	-	4	30	20	50
Total			**32**	**4**		**280**		**150**	**220**	**650**
Total hours			**36**							
Total Credits of semester			**26**							

PGDCA SEMESTER – II

Subject Code	Subject Title	Credit	Teaching Scheme		Exam Scheme					Total Marks
			Theory/ Practical	Tuto rial	Theory		Practical		Term Work + Sessional Marks	
					Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 201	Object Oriented Programming	4	3	1	3	70	-	-	30	100
PGDCA – 202	Client Server Application	4	3	1	3	70	-	-	30	100
PGDCA - 203	Database Management System - II	4	3	1	3	70	-	-	30	100
PGDCA - 204	Computer Network & Maintenance	4	3 / 2	1	3	70	-	-	30	100
PGDCA – 205	Practical Based on PGDCA-201	2	4	-	-	-	4	30	20	50
PGDCA - 206	Practical Based on PGDCA-202	2	4	-	-	-	4	30	20	50
PGDCA - 207	Practical Based on PGDCA-203	2	4	-	-	-	4	30	20	50
PGDCA - 208	Project	6	6	-	-	-	6	100	50	150
Total			**30**	**4**		**280**		**190**	**230**	**700**

Total hours	34
Total Credits of semester	28

PGDCA SEMESTER – I
PGDCA-101 : Problem Solving & Logic Development using 'C' Programming

Rationale: To develop the basic concepts of programming using world's most popular Middle Level Language through "C"

Learning outcomes:
- Able to create fundamentals of structure programming with basic structure
- Able to develop program In such a way that machine can take decision by programming
- Able to know importance of an array by real life example as well as technical problem solving.
- Able to develop functions and enrich their skill to library function and user define side.
- Able to develop a small type of data storing with File Handling
- Able to know the importance of reference process by pointer

Teaching and Evaluation Scheme: The objective of evaluation is not only to measure the Performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations which consist of Term Work such as class test, Quizzes, class participation, home assignments, presentation, Regular Attendance (i.e. Minimum 85%), Internal marks which consist of 30 (10 Term Work + 20 Sessional Exams) marks and External marks which consist of 70 for University examination.

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 101	Problem Solving & Logic Development using C Programming	4	3+1	3	70	-	-	30	100

University Examination Duration: 3 Hours.

Course Content:

UNIT-I :   **[17 Marks]**

Overview of C:

Importance of C, sample C programs, basic structure of C programs, programming style, executing C program.

Constants, Variables and Data Types:

Character set, C tokens, keywords and identifiers, constants, variables, data types, declaration of variables, assigning value to variable, defining symbolic constants.

Operators and Expression:

Operators - arithmetic, relational, logical, assignment, increment-decrement, conditional, bit-wise and special.

Arithmetic expressions, evaluation of expressions, precedence of arithmetic operators, type conversions in expressions, operator precedence and associativity, mathematical functions.

UNIT-II : [18 Marks]

Managing Input and Output Operators:

Reading and writing a character, formatted input-output.

Decision Making and Branching:

Decision making with IF statement, simple IF statement, the IF-ELSE statement, nesting of IF… ELSE statements, the ELSE IF ladder, the switch statement.

Decision Making and Looping:

Looping statements - WHILE, DO and FOR. Nesting and Jumps in loops.

UNIT-III : [17 Marks]

Arrays:

One-dimensional, two-dimensional and multidimensional arrays.

Handling of Character Strings:

Declaring and initializing string variables, reading string from terminal, writing string to screen, arithmetic operations on character, putting string together, comparison of two strings, string handling functions, table of strings.

User-Defined Functions:

Need for user-defined functions, the form of c function, return values and their types, calling a function, category of functions, no arguments and no return values, arguments with return values, handling of non-integer functions, nesting of functions, recursion, functions with arrays, the scope and lifetime of variables in functions.

UNIT-IV : [18 Marks]

Pointers:

Definition, accessing the address of variable, declaring and initializing pointers, accessing a variable through its pointer, pointer expressions, pointer increments and scale factor, pointers and arrays, pointers and character strings, pointers and functions, pointers and structures.

Structures and Unions:

Structure definition, giving values to members, structure initialization, comparison of structures, arrays of structures, arrays within structures, structures within structures, structures and functions, unions, size of structures, bit fields.

Text Books :

o ANSI C, E. Balagurusamy - TMH Publications

o Mastering Turbo C, Stan Kelly-Bootle - BPB Publications

PGDCA SEMESTER – I

PGDCA-102 : Database Management System - I

Rationale: Database Management System-I enable beginners to understand the basic concepts of database and various other activities that can be carried out in a database environment. This subject will allow students to develop understanding of the basic concepts of data in general and Relational Database System in particular. The students will learn Database concept, Data Models, various approaches to Database design, strengths of relational model.

Learning Outcomes: The students will be able to understand

1. Basic concepts of database environment

2. Differences between file based and database approach

3. Components of database environment

4. Creation of database, tables, queries, reports, forms, Macros etc

5. Various keys used in database systems.

Teaching and Evaluation Scheme: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations which consist of Term Work such as class test, quizzes, class participation, home assignments, presentation, Regular Attendance (i.e. Minimum 85%), Internal marks which consist of 30 (10 Term Work + 20 Sessional Exams) marks and External marks which consist of 70 for University examination.

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 102	Database Management System – I	4	3+1	3	70	-	-	30	100

University Examination Duration: 3 Hours.

Course Content:

UNIT-I :   **[17 Marks]**

Introduction of DBMS

Overview, File system Vs DBMS, Describing & storing data (Data models (relational, hierarchical, network)), Levels of abstraction, data independence, Structure of DBMS, People who deal in DBMS, Advantages / Disadvantages of DBMS

Conceptual Design (E-R model)

Overview of DB design, developing ER data model for conceptual design for 1to 1, 1 to many and many to many relationships among entities, Case studies.

UNIT-II :   [18 Marks]

Relational Data Model

Relations (concepts, definition), Conversion of ER to Relational model, integrity constraints (key, referential integrity, general constraints) Database tables and their components,

Relational algebra: Relational algebra (selection, projection, set operations, renaming, joins, and division)

UNIT-III :   [17 Marks]

Implementing the Database Design through MS ACCESS

Create the new database; modify the table structure, indexes, data entry, edit and delete, import and exporting tables, creating relation-ships between tables. **Queries:** Query basics: select query, cross tab query, action query, query wrap-up

UNIT-IV :   [18 Marks]

Form development: Forms : definition, use and functions, creating a form with form wizard, modifying the form's presentation format, list boxes on forms, main form, sub form creation and use, dialog boxes, menu.

Reports and Labels: Creating a report, creating report with subtotal and total, report based on cross tab queries, mailing labels, Macros

Text Books :

- o Databases: Design, Development using Access by Peter Rob & Elie Semaan [TMH]
- o Introduction to Computer Data Processing & System Analysis : V. K. Kapoor [Sultan Chand & Sons]
- o Teach Yourself Access 97, Seigal [BPB]
- o Fundamentals of database management design : by Renu Vig, Ekta Walia [ISTE]
- o Foundations of Computing by P.K. Sinha [BPB].

PGDCA SEMESTER – I

PGDCA-103 : Internet & Web Development

Rationale : Internet is demanding and basic need of 20th century and it can helping in many ways to various sector of society as well as students along with this it give static website implementation chance to students in this demanding sector using HTML

Learning Outcome: The student will be able to-

- Internet overview and awareness

- HTML basic knowledge

- HTML tags and implementation of text – image - audio – video in web page\

- Website designing and templates utilities in web development

- Web site development using HTML

Teaching and Evaluation Scheme: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations which consist of class test, class participation, home assignments, project reports, presentation, regular attendance (i.e. minimum 85%). Internal marks which consist of 30 (10 term work + 20 sectional exams) marks and and External marks which consist of 70 for University examination.

Subject Code	Subject Title	Teaching Scheme		Exam Scheme				Term Work + Sessional Marks	Total Marks
		Credit	Theory/ Practical + Tutorial	Theory		Practical			
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 103	Internet & Web Development	4	3+1	3	70	-	-	30	100

University Examination Duration : 3 Hours.

Course Content:

UNIT-I :   **[17 Marks]**

Internet:

What is internet – how internet works – types of accessing internet - internet application / uses – protocols of internet –   types of websites - scope of internet (ecommerce – search engine optimization –SEO)

UNIT-II :   **[18 Marks]**

Internet & Basics of HTML

Internet implementation (hands on practice about)

-    website surfing (educational websites)

-    communication (mailing)

-   search engine utilities

Understanding HTML, History of HTML Block / Structure of HTML with attributes,

UNIT-III :   [18 Marks]

Implementation of HTML

Table – list – forms – text formatting tags – images - sound – videos - imagemap – anchor in HTML with various attributes.

UNIT-IV :   [17 Marks]

Web Development using HTML

Frameset – anchor tag implementations – embed & object tag - CSS introduction and implementation on text formatting level - website designing and web templates implementation – creating customize website.

Text Books :

o   How the Internet Works – Preston Gralia ,tech media , fourth edition
o   Practical HTML - Lee Anne Phillips, Prentice Hall of India

PGDCA SEMESTER – I

PGDCA-104 : Office Communication Packages

Rationale : It presents an overview of the technology relating to Computer System & Application Packages.

Learning outcomes:

• Having brief knowledge of Computer parts and Viruses.

• Able to know the importance of primary process of Computer with various OS. (DOS Vs Windows).

• Able to prepare various types of documentation using Word Processing S/w.

• Able to develop an excellent Spread Sheet primary process related to real life examples.

• Able to create excellent programming types of process using function and having huge statistical report with charts and other process.

• Able to develop their Presentational Skills by Power Point and it's process.

• Able to communicate through Offline email using Outlook Express and other utilities.

Teaching and Evaluation Scheme: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations which consist of Term Work such as class test, quizzes, class participation, home assignments, presentation, Regular Attendance (i.e. Minimum 85%), Internal marks which consist of 30 (10 Term Work + 20 Sessional Exams) marks and External marks which consist of 70 for University examination.

Subject Code	Subject Title	Teaching Scheme		Exam Scheme						
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 104	Office Communication Packages	4	3+1	3	70	-	-	30	100

University Examination Duration : 3 Hours.

Course Content:

UNIT–I :   **[18 Marks]**

Computer Operation Awareness : Operating System and It's types overview , Windows V/s DOS , Basics operations of Windows (programme, accessories …etc) , computer hardware; Viewing Files: Using My Computer; Using Windows Explorer; Working with Files: Select, open, move, copy rename, delete, restore deleted files; create a new file and folder, search for files; create a shortcut; Printing: print files, pictures; Introduction to Accessories and Control Panel; Install Software: Add windows Component; Install and remove program.

DOS: Internal & External commands; Wildcard Character; file name; Creating/Editing file;

batch file.

UNIT–II : [17 Marks]

MS Word Basics : Introduction to MS Office; Introduction to MSWord; Features & area of use.

Working with MS Word : Menus & Commands, Toolbars & Buttons, Shortcut Menus, Wizards & Templates; Creating a New Document; Different Page Views and layouts; Applying various Text Enhancements; Working with – Styles, Text Attributes; Paragraph and Page Formatting; Text Editing using various features – Bullets, Numbering, Auto formatting, Printing & various print options. Advanced Features of MS-Word: Using bookmarks; Spell Check and Thesaurus; Find & Replace; Headers & Footers ; Inserting – Page Numbers, Pictures, Files, Auto texts, Symbols ; Working with Columns, Tabs & Indents; Creation & Working with Tables ; Margins & Space management in Document; Mail Merge.

UNIT–III : [18 Marks]

MS Excel : Introduction and area of use; Working with MS Excel.; concepts of Workbook &

Worksheets; Using different features with Data, Cell and Texts; Inserting, Removing & Resizing of Columns & Rows; Working with Data & Ranges; Different Views of Worksheets; Column Freezing, Labels, Hiding, Splitting etc.; Using different features with Data and Text; Use of Formulas, Calculations & Functions; Cell Formatting including Borders & Shading; Working with Different Chart Types; Printing of Workbook & Worksheets with various options.

UNIT-IV : [17 Marks]

Further Excel : Some miscellaneous formula (statistical, data, VLookup, HLookup .. etc) , pivot table and chart

MS PowerPoint : Introduction & area of use; Working with MS PowerPoint; Creating a New

Presentation; Working with Presentation; Using Wizards; Slides & it's different views; Inserting, Deleting and Copying of Slides; Working with Notes, Handouts, Columns & Lists; Adding Graphics, Sounds and Movies to a Slide; Working with PowerPoint Objects; Designing & Presentation of a Slide Show; Printing Presentations, Notes, Handouts with print options.

Text Books :
- o **Master visually Windows XP complete visual reference,** Hungry Minds
- o **Straight to the Point – MS Office 2003** By Dinesh Maidasani, Publisher: Firewall
- o **Master Visually Microsoft Office 2003** By Michael S. Toot, Publisher: Visual

Reference Books:
- o **Windows Xp simplified,** *Wiley publishing Inc.*
- o **Ms-Office 2000 – No Experience Required –** Gini Courter and Annette Marquis**.**

PGDCA SEMESTER – I
PGDCA-105 : Practical Based on PGDCA - 101

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 105	Practical Based on PGDCA – 101	2	4	-	-	4	30	20	50

University Examination Duration : 3 Hours (Per Batch)

Practical based on 'Problem Solving & Logic Development using 'C' Programming'

Practical List
1. Write a C program to find the sum of digits of accepted no.
2. Write a C program to find the sum of first 100 natural nos.
3. Write a C program to find the sum of first 100 odd nos. and even nos.
4. Write a C program to display first 25 Fibonacci nos.
5. Write a C program to check whether the given number is prime or not.
6. Write a C program to check whether the given number is Armstrong or not.
7. Write a C program to find factorial of the given number.
8. Write a C program to reverse the accepted number.
9. Write a C program to find whether the accepted string number is palindrome or not.
10. Write a C program to convert decimal number to its equivalent binary number.
11. Write a C program to convert decimal number to its equivalent octal number.
12. Write a C program to convert decimal number to its equivalent hexadecimal number.
13. Write a C program to arrange the accepted numbers in ascending order and descending order.
14. Write a C program to convert given line into upper case or lower case character as user want. (use switch statement for the choice of case.)
15. Write a C program to convert a string in uppercase to lowercase and vice versa using string built-in functions.
16. Write a C program to find maximum number into given two numbers using conditional operator.
17. Write a C program to count how many characters, words, lines, spaces, tabs into given text.
18. Write a C program to print detail of students like r-no, name, address, city, phone on screen. (Use structure.)
19. Write a C program to swap the values of two different no using UDF & Pointer.
20. Display the following format on screen.
    C
    CP
    CPR
    CPRO
    ..
    CPROGRAMING
    . .
    CPRO
    CPR
    CP
    C

PGDCA SEMESTER – I

PGDCA-106 : Practical Based on PGDCA – 102

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 106	Practical Based on PGDCA – 102	2	4	-	-	4	30	20	50

University Examination Duration : 3 Hours (Per Batch)

Practical Based on 'Database Management System – I'

Practical List

1) Perform to create table / tables with suitable data types (along with useful table properties like input mask, value, data types, and validations rule …. Etc) for given subject and if necessary set proper relationship between them , create forms , various types of queries , reports using Ms – Access.

   - School Management systems (tables are studentdetail, admisnform, fees, result ….. etc)

   - Library Management System (tables are booktype, bookdetail, bookauthor, bookstock, members, bookissue, bookretur….. etc)

   - Examination Management System (tables are studentdetail, standarddetail, subjecmaster, questions, result ………….. etc **)**

P.G.D.C.A. SEMESTER – I

PGDCA-107 : Practical Based on PGDCA - 103

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 107	Practical Based on PGDCA – 103	2	4	-	-	4	30	20	50

University Examination Duration : 3 Hours (Per Batch)

Practical Based on 'Internet & Web Development'

Practical List

Internet: (10 Marks)

- To create new Internet Connection.
- To create new Email Account
- Browsing up the Web sites (e.g. Railway reservation, Airline reservation, cinema ticket booking etc).
- Search engines
- Important Web sites.

HTML: (20 Marks)

1. Develop an HTML document for a web page of your favorite teacher. Design the page with an attractive background color, text color and background image.
2. Develop an HTML document for a web page of your favorite National Leader. Design the page with an attractive color combination, with suitable headings and horizontal rules.
3. Write an HTML document with an example of Ordered List and Unordered List.
4. Write an HTML document with an example of Table format to print your Bio-Data.
5. Write an HTML document with an example of Table format to print your Telephone Bill.
6. Write the Frameset tags and Frame tags for the following frameset.

Physics.html	Welcome.html	Maths.html
Chemistry.html	Details.html	Biology.html
Computer.html		Zoology.html

P.G.D.C.A. SEMESTER – I

PGDCA-108 : Practical Based on PGDCA – 104

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 108	Practical Based on PGDCA – 104	2	4	-	-	4	30	20	50

University Examination Duration : 3 Hours (Per Batch)

Practical Based on 'Office Communication Packages'

Practical List

1. MS-WORD   [5 Marks]
Practical may be given for
- Creating the documents with Special effects like underline, bold, different size, different font, different color. Etc.
- Find and Replace operations like cut, paste, copy clipboard.
- Inserting Date & Time, Pictures, Bullets & Numbering ets.
- Paragraphs, bullets, indentation etc. Formatting features.
- Printing the documents, it includes paper-size, margins, header and footer, page no.
- Creating a table.
- Mailmerge, spellcheck, drawing table.
- Template.

2. MS-EXCEL   [15 Marks]
Practical may be given for
- Creating Worksheets.
- Printing, Inserting, Deleting, Copying, Moving worksheets.
- Formulas, Built-in functions.
- Graph-Plotting facilities.
- Database Management System.
- Using extensionally created data files.
- What-if analysis.
- Formatting cells, Worksheets etc.
- Custom Controls
- Protection facility
- Pivot tables
- Macro facility

3. MS-PowerPoint   [10 Marks]
Practical may be given for
- Creating a presentation
- Inserting/Deleting slides
- Different slide views
- Editing slides.
- Slide transition & editing special effects
- Inserting sound, picture, chart, organization chart.

P.G.D.C.A. SEMESTER – I

PGDCA-109 : DTP & Multimedia Packages

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 109	DTP & Multimedia Packages	2	4	-	-	4	30	20	50

University Examination Duration: 3 Hours (Per Batch)

Practical List

Multimedia: **[20 Marks]**

Study of any multimedia software like Adobe Photoshop, Scala, 3D STUDIO MAX

Students must be trained by discussing various case studies.

Desktop Publishing (DTP):   **[10 Marks]**

Study of any DTP software like PageMaker, Corel Draw, Instant Artist.

Students must be trained by discussing various case studies.

> ➢ *The Journal must be prepared for the External Examination as well as Internal Continuous Evaluation purpose.*

P.G.D.C.A. SEMESTER – II

PGDCA -201 Object Oriented Programming

Rationale : Understanding most useful concept of Object Oriented Programming using C++ & implementing practical skill for future use.

Learning Outcome:
• Students will be able to understand all features of OOPS which will be useful for any other OOPS also.
• Students will be able to handle any number of classes with the creation of their objects in the proper order of invocation.
• Students will able to solve problem related to real life entities by using inheritance, templates.
• Students will able to handle functions by using function overloading and function overriding
• Students will be able to change the meaning of operator by using operator overloading.

Teaching and Evaluation Scheme: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations which consist of Term Work such as class test, quizzes, class participation, home assignments, presentation, Regular Attendance (i.e. Minimum 85%), Internal marks which consist of 30 (10 Term Work + 20 Sessional Exams) marks and External marks which consist of 60 for University examination.

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 201	Object Oriented Programming	4	3+1	3	70	-	-	30	100

University Examination Duration: 3 Hours

Course Content:

Unit-I : Fundamentals of Programming.   **[17 Marks]**

- Concept of Procedural, structured and object oriented programming.

- Concept of Encapsulation, Data hiding, Inheritance and Polymorphism.

- Classes and objects.

- Data types, variable and constants, expression and operators.

- Simple I/O statements- reading and writing.

- Reference variable.

- Control statements, Looping statement, Array.

- History of C++ its OOP over Procedural Languages.

- Advantages of OOP over Procedural Languages parts of C++ Programs.

Unit-II : Functions, Class, Object, Constructor and Destructor :   **[18 Marks]**

- **Functions :** Call by reference, call by value, return by reference, inline function, constant argument, function overloading, static member function, static data member.
- **Classes :** Implementing class, Classes and members, Accessing class members, implementing class methods, array of object, friend function.
- **Constructor & Distracters :** Parameterized constructor, multiple constructor, constructor with default argument, copy constructor, destructor.

Unit-III : Operator Overloading & Type Casting :   **[17 Marks]**

- Operator overloading, unary operator overloading, binary operator overloading, manipulates string using operator overloading.
- Type conversions: basic to class, class to basic, class to class.

Unit-IV : Inheritance, Virtual Function and Files :   **[18 Marks]**

- Inheritance : single Inheritance, multilevel Inheritance, multiple Inheritance, hybrid Inheritance, hierarchical Inheritance, virtual base class, abstract class.
- Pointers : pointer to object, this pointer, virtual function and pure virtual function.
- File : opening and close file, detecting end of the file.

Text Books :

- o E. Blagurusamy : Object Oriented Programming with C++, 2nd Edition, Tata McGraw Hill Publishers.

- o V. Rajaraman : Object Oriented Programming with c++, New Age International Publishers.

PGDCA SEMESTER – II

PGDCA-202 : Client Server Application

Rationale: Visual Basic .Net is the front end tool which is used for programming in applications like Microsoft studio. VB.Net is used in creating Applications of types, desktop applications; proper windows based layout and designing. The windows components are used to develop an application.

Learning Outcomes: The student will be able to:
* Understand the difference between procedures oriented language and object oriented language along with framework technology
* It revises the concept of events, methods.
* Understand the procedure of working with validation.
* Learn and interact about GUI based tool and other advanced tools
* Know to develop GUI based standard applications, some games and other interesting Application

Teaching and Evaluation Scheme: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations which consist of Term Work such as class test, quizzes, class participation, home assignments, presentation, Regular Attendance (i.e. Minimum 85%), Internal marks which consist of 30 (10 Term Work + 20 Sessional Exams) marks and External marks which consist of 60 for University examination.

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 202	Client Server Application	4	3+1	3	70	-	-	30	100

University Examination Duration: 3 Hours

Course Content:

UNIT-I : Introduction to Framework Technology and Windows Applications   [17 Marks]

Overview of Frame work & Architecture, Versioning and deployment,

CLR, CTS, CLS : three base of framework, Metadata,

IDE for windows programming (toolbox, solution explorer, property window, output window, command window, task list window)

Basics of VB.NET

Variable, constants & object declaration in vb.net

Operators, flow control statements,

Modular (subroutines, functions)

UNIT-II : Utilization of tools of Windows Applications   [18 Marks]

Introduction about property, events and methods,

Your First windows application & some console application with some input box and message box, Multiple Documents Interface.

Windows Control

Textbox, rich text box, listbox, combo box, checked list box, scrollbar, trackbar, timer, picture box, image box, label, link label, radio button, check box, group box.

Advanced Windows Control

Listview, treeview, common dialog controls (open, save, font, color, print, page setup….etc), tab control, date time picker.

MDI with OOPS

Introduction about menu & context menu, Menu editor & context menu as tool, Menus properties, event & methods.

UNIT-II : ADO.NET Introduction   [17 Marks]

Overview of ADO.NET

Framework of ADO.NET, advantages of ADO.NET,1-tier, 2–tier & 3-tier architecture with it's function & important, Components of ADO.NET (connection, data binding source, dataset, data adopter, data reader, data view, data table, command object).

Common environment components for windows as well as web application,

What is database? DBMS–RDBMS, components of Database, Data base implementation (Insert, Update, Delete, Selection… etc)

UNIT-III : Implementation of ADO.NET   [18 Marks]

Interaction with Windows application by ADO.NET

Data binding and it's technique (wizard and coding both), Application implementation by connection of database , Insert , Update , Delete process with from Implementation of error and alert message box for un authentication data entry.

Data mining through query (Searching), Report & Charts

How to search any records types of searching Methods, property for searching data.

Representation of data by crystal report (wizard technique), simple data report and Charting Analyzing.

Introduction to live network concept of Front end – Back end technology.

Text Books :

- o Mastering in VB.NET by Evangelos Petroutsos : BPB Publication
- o An Introduction to programming using VB.NET by Devid Schneider Publication : PHI Publication

Reference Books :

- o Projects in VB.NET Publication : O-Relly Publication
- o Programming by VB .Net by Shyam Chavada : Books India Publication

PGDCA SEMESTER – II

PGDCA-203 : Database Management System - II

Rationale: Database Management System-II enables students to develop understanding of the basic concepts of data in general and Relational Database System in particular. The students will learn Database concept, normalization, advanced database concepts such as transaction control, management and distributed database.

Learning Outcomes: The students will be able to understand:
• Basic concepts of database designing through normalization.
• Creation of database, tables, queries, advanced queries in oracle.
• Various methods available to control concurrency in transaction management.
• Components of DDBMS and its structure.
• Various aspects of Database Administrations

Teaching and Evaluation Scheme: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations which consist of Term Work such as class test, quizzes, class participation, home assignments, presentation, Regular Attendance (i.e. Minimum 85%), Internal marks which consist of 30 (10 Term Work + 20 Sessional Exams) marks and External marks which consist of 70 for University Examination.

Subject Code	Subject Title	Teaching Scheme		Exam Scheme				Term Work + Sessional Marks	Total Marks
				Theory		Practical			
		Credit	Theory/ Practical + Tutorial	Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 203	Database Management System – II	4	3+1	3	70	-	-	30	100

University Examination Duration: 3 Hours

Course Content:

UNIT-I :   **[17 Marks]**

Transition Management: Recovery, concurrency, security: Introduction, Discretionary access control, Mandatory access control, Statistical databases, Data encryption, **Distributed Databases:** Introduction, Some Preliminaries, The twelve objectives, Problems of distributed systems.

UNIT-II :   **[18 Marks]**

Structured Query Language (SQL): Introduction to SQL, Constraints, DDL, DML, DCL, Create, Alter, Drop, Rename, Grant, Revoke, Select Clause, Functions, Different Types of Joins, Set Operators.

UNIT-III :   **[17 Marks]**

PL/SQL: Index, View, Sequence, Trigger, Procedure, Cursor, Exception Handling.

UNIT-IV :   **[18 Marks]**

Decision Support: Introduction, Aspects of decision support, Database design for decision support, Data Warehouses and Data marts, Online analytical processing, Data mining

Text Books :

- o Introduction to Database System : C. J. Date (7th edition) Low Price Edition
- o SQL, PL/SQL : Evan Bayross (2nd edition) BPB
- o Database System Concepts : Henry F. Korth (3rd edition) TMH

PGDCA SEMESTER – II

PGDCA-204 : Computer Network & Maintenance

Rationale : Computer Networks-I focus on understanding of the concepts of communication system, network protocols transmission medias, networks security, network management.

Learning Outcomes: Students will be able to
• To understand the role of systems analysis within various systems development life cycles
• To develop an awareness of the different approaches that may be taken to
• systems analysis
• To understand the systems analyst's activities, and apply current tools and techniques
• Describe different life cycle models and explains the contribution of systems
• analysis within them
• Discuss various systems analysis approaches and explain their strengths and weaknesses
• Evaluate the tools and techniques that may be used by a systems analyst in a given context
• Use appropriate methods and techniques to produce a systems analysis for a given scenario
• Provide suitable systems documentation for an analysis
• Discuss the CASE tools currently available to support the analyst
• Finalize the Project Definition, Analysis and Designing for the final project.

Teaching and Evaluation Scheme: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations which consist of Term Work such as class test, quizzes, class participation, home assignments, presentation, Regular Attendance (i.e. Minimum 85%), Internal marks which consist of 30 (10 Term Work + 20 Sessional Exams) marks and External marks which consist of 70 for University examination.

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 204	Computer Network & Maintenance	4	3+1	3	70	-	-	30	100

University Examination Duration: 3 Hours

Course Content:

UNIT UNIT-I :   [18 Marks]

Basic of Computer Networks :

Networking of Computer.- Need, Advantages and disadvantages of computer networking, Types of Networks - LAN, MAN, WAN, Network Topology – Star, Ring, Bus, Tree, Complete, Irregular.

UNIT-II :   [17 Marks]

Transmission Media:

Transmission Media - Magnetic media, twisted pair, co-axial cable (baseband and broadband), fiber optics principle, transmission of light through fiber, fiber cables, fiber optics network, comparison of fiber optic and copper wire.

UNIT-III :   **[17 Marks]**

Model of Computer Networks:

  Common network connectivity devices (NIC, hub, Switch, router, gateway, and other devices) The OSI model, Layers in OSI model, Layer's tasks, Entities – sender and receiver, carrier, TCP/IP protocol suite, Addressing scheme

UNIT-IV :   **[18 Marks]**

Computer Hardware and Assembling:

- Types of computers

Desktop Devices (PC)

Input devices – output devices – processing device (processor – motherboard – RAM – ROM – graphics card – NIC card – USB – HDD)

PC maintenance

Internal computer maintenance (system tools – disk defragmentation, disk cleanup, backup, scheduling – system restore … etc) - Antivirus installation and utilization (open source antivirus / demo version).

Text Books :

- o Computer Networks, A. S. Tanenbaum, PHI Publishers.
- o Data Communications and Networking,   Behrous A. Forouzan, TMH Publishers.

P.G.D.C.A. SEMESTER – II
PGDCA-205 : Practical Based on PGDCA - 201

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
				Theory		Practical		Term Work +	Total Marks
		Credit	Theory/ Practical + Tutorial	Hrs.	Max Marks	Hrs.	Max Marks	Sessional Marks	
PGDCA – 205	Practical Based on PGDCA – 201	2	4	-	-	4	30	20	50

University Examination Duration : 3 Hours (Per Batch)

Practical Based on 'Object Oriented Programming' (C++)

Practical List :

1. Write a C++ program to find the sum of digits of accepted no.
2. Write a C++ program to find the sum of first 100 natural nos.
3. Write a C++ program to find the sum of first 100 odd nos. and even nos.
4. Write a C++ program to display first 25 Fibonacci nos.
5. Write a C++ program to check whether the given number is prime or not.
6. Write a C++ program to find factorial of the given number.
7. Write a C++ program to reverse the accepted number.
8. Write a C++ program to find whether the accepted string number is palindrome or not.
9. Write a C++ program to convert decimal number to its equivalent binary number.
10. Write a C++ program to convert decimal number to its equivalent octal number.
11. Write a C++ program to convert decimal number to its equivalent hexadecimal number.
12. Write a C++ program to arrange the accepted numbers in ascending order and descending order.
13. Convert given line into upper case or lower case character as user want. (Use switch statement for the choice of case.)
14. Count How many Characters, Words, lines, spaces, tabs into given text.
15. Print detail of students like R-No, name, address, city, phone on screen. (Use structure.)
16. Swap the values of two different no using UDF & pointer.
17. Create one text file store some information into it and print the same information on terminal.
18. You have given a file which contains some integers. From this file create another two files one for odd and second for even numbers. Print the result of both files.
19. Create one file and insert some information using fprintf() and fscanf() function.
20. Display the following format on screen.
    *
    **
    ***
    ****
    *****
    ******
    *****
    ****
    ***
    **
    *

PGDCA-206 : Practical Based on PGDCA – 202

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 206	Practical Based on PGDCA 202	2	4	-	-	4	30	20	50

University Examination Duration : 3 Hours (Per Batch)

Practical Based on 'Client Server Application'

Practical List :

VB. NET Programs List :

[1] Develop a simple calculator using two textbox as input and perform the mathematical process.

[2] Develop a simple calculator using 10 digits button and perform the mathematical process

[3] Develop data item transfer from one listbox to other using buttons

[4] Develop desktop registration forms and other similar appicatinos

[5] Develop desktop registration form with validation (empty, only numeric … etc)

[6] Develop simple desktop applications using scrollbar, trackbar, label, timer, combobox … etc tools.

[7] Develop menu base applications (notepad) and other advance control like listview , treeview , dialog boxes ,,,,, etc in vb.net

[8] **Windows Applications**

- Simple calculator & digital (0 to 9 button) calculator.
- Listbox data transfer from one to other
- Timer base examples
- Combobox base mathematical example (square , cube… etc)
- Scrollbar, trackbar examples
- Listview, treeview …..etc

[9] **ADO.NET Applications**

- Ms – Access database connectivity by wizard add, update and delete.
- Ms – Access database connectivity by coding add, update and delete.
- Searching data using front end and back end.
- Simple data report formatting in database connectivity.

P.G.D.C.A. SEMESTER – II
PGDCA-207 : Practical Based on PGDCA – 203

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
				Theory		Practical		Term Work + Sessional Marks	Total Marks
		Credit	Theory/ Practical + Tutorial	Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 207	Practical Based on PGDCA 203	2	4	-	-	4	30	20	50

University Examination Duration : 3 Hours (Per Batch)

Practical Based on 'Database Management System - II '

Practical List :

Create following Three Tables.

1. Salesman

SNUM SNAME CITY COMMISSION

1001 PIYUSH LONDON 12%

1002 NIRAJ SURAT 13%

1003 MITI LONDON 11%

1004 RAJESH BARODA 15%

1005 ANAND NEW DELHI 10%

1006 RAM PATAN 10%

1007 LAXMAN BOMBAY 09%

SNUM : A Unique number assign to each salesman.

SNAME : The name of salesman.

CITY : The location of salesman.

COMMISSION : The salesman commission on order.

2. Customer

CNUM CNAME CITY RATING SNUM

2001 HARDIK LONDON 100 1001

2002 GITA ROME 200 1003

2003 LAXIT SURAT 200 1002

2004 GOVIND BOMBAY 300 1002

2005 CHANDU LONDON 100 1001

2006 CHAMPAK SURAT 300 1007

2007 PRATIK ROME 100 1004

CNUM : A Unique number assign to each customer.

CNAME : The name of customer.

CITY : The location of customer.

RATING : A level of preference indicator given to this customer.

SNUM : A salesman number assign to this customer.

3. Order

ONUM AMOUNT ODATE CNUM SNUM

3001 18.69 10/03/99 2008 1007

3002 767.19 10/03/99 2001 1001

3003 1900.10 10/03/99 2007 1004

3004 5160.45 10/03/99 2003 1002

3005 1098.25 10/04/99 2008 1007

3006 1713.12 10/04/99 2002 1003

3007 75.75 10/05/99 2004 1002

3008 4723.00 10/05/99 2006 1001

3009 1309.95 10/05/99 2004 1002 3010 9898.87 10/06/99 2006 1001

ONUM : A Unique number assign to each Order.

AMOUNT : Amount of order in Rs.

ODATE : The date of order.

CNUM : The number of customer making the order.

SNUM : The number of salesman credited with the sale.

Solve following request with the help of sql query.

1. Produce the order no ,a mount and date of all orders.

2. Give all the information about all the customers with salesman number 1001.

3. Display the information in the sequence of city, sname, snum, and Commission.

4. List of rating followed by the name of each customer in Surat.

5. List of sum of all salesmen with orders in order table without an duplicates.

6. List of all orders for more than Rs. 1000.

7. List out names and cities of all salesmen in London with commission above 10%

8. List all customers excluding those with rating <= 100 or they are located in Rome.

9. List all order for more than Rs. 1000 except the orders of snum,1006 of 10/03/97

10. List all orders taken on October 3rd or 4th or 6th 1997.

11. List all customers whose names begins with a letter 'C'.

12. List all customers whose names begins with letter 'A' to 'G'

13. List all orders with zero or NULL amount.

14. Find out the largest orders of salesman 1002 and 1007.

15. Count all orders of 10-Mar-97.

16. Calculate the total amount ordered.

17. Calculate the average amount ordered.

18. Count the no. of salesmen currently having orders.

19. Find the largest order taken by each salesman on each date.

20. Find the largest order taken by each salesman on 10/03/1997.

21. Count the no. of different non NULL cities in the Customer table.

22. Find out each customer's smallest order.

23. Find out the customer in alphabetical order whose name begins with 'G'

24. Count the no. of salesmen registering orders for each day.

25. List all salesmen with their % of commission.

26. Display the no. of order for each day in the following format. Dd-mon-yy.

27. Assume each salesperson has a 12% commission. Write a query on the order table that will produce the Order number, salesman no and amount of commission for that order.

28. Find the highest rating in each city in the following format:

29. List all customers in descending order of rating.

30. Calculate the total of orders for each day.

31. Show the name of all customers with their salesman's name.

32. List all customers and salesmen who shared a same city.

33. List all orders with the names of their customer and salesman.

34. List all orders by the customers not located in the same city as their salesman.

35. List all customers serviced by salesman with commission above 12%.

36. Calculate the amount of the salesman commission on each order by customer with rating above 100.

37. Find all pairs of customers having the same rating with our duplication.

38. List all customers located in cities where salesman Niraj has customers.

39. Find all pairs of customers served by a single salesman with the salesman's name and no.

40. List all salesmen who are living in the same city with out duplicate rows.

41. Produce the name and city of all the customers with the same rati as Hardik'.

42. Extract all orders of 'Mili'.
43. Extract all orders of Baroda's salesmen.

44. Find all orders of the salesman who services 'Hardik'

45. List all orders that are greater than the average of April 10, 1997 46. Find all orders attribute to salesmen in 'London'.

46. List the commission of all salesmen serving customers in 'London'.

47. Find all customers whose cnum is 1000 above than the snum of Niraj. 49. Count the no. of customers with the rating above than the average of 'Surat'.

48. List all orders of the customer 'Chandresh'.

49. Produce the name and rating of all customers who have above average orders.

50. Find all customers with orders on 3rd Oct., 1997 using correlate sub query.

51. List the name and number of all salesmen who has more than Zero customer.

52. Calculate the total amount ordered on each day eliminating the days where the total amount was not at least Rs. 2000 above the maximum amount of that day.

53. Using correlated sub query find the name and number of all customer with rating equal to maximum for their city.

54. Select the name and number of all salesmen who have customers their cities.

55. Find all salesmen who have customers with rating > 300

56. List all salesmen with customers located in their cities.

57. Find all salesmen for whom there are customers that follow them alphabetical order.

58. Find all customers having rating greater than any customer in 'Rome'.

59. List all order that has amount grater than at least one of the orders from 6th October, 1997.

60. Find all orders with amounts smaller than any amount for a customer in 'Rome'.

61. Find all the customers who have greater rating than every customer in 'Rome'.

62. Select all customers whose rating doesn't match with any rating customer of 'Surat'.

63. List all customers whose ratings are equal to or greater than ANY 'Niraj'

64. Find out which salesman produce largest and smallest orders on each date.

65. Create a union of two queries that shows the names, cities and ratings of all customers. those with rating of >=200 should display 'HIGH RATING' and those with < 200 should display 'LOW RATIN'

66. Insert a row into salesmen table with the values snum is 100 salesman name is Rakesh, city is unknown and commission is 14%.

67. Insert a row in to customer table with values London, Pratik a 2005 for the columns city, name and number.

68. Create another table London staff having same structure as salesman table.

69. Insert all the rows of salesmen table with city London in the London staff table.

70. Create another table Day totals with two attributes date and total and insert rows into this table from order table.

71. Create a duplicate of the salesmen table with a name Multicust. Now delete all the rows from the salesmen table.

72. Get back all the rows of salesmen table from its duplicate table.

73. Remove all orders from customer Chandresh from the orders table.

74. Set the ratings of all the customers of Piyush to 400.

75. Increase the rating of all customers in Rome by 100.

76. Salesman Miti has resigned. Reassign her number to a new salesman Gopal whose city is Bombay and commission is 10%.

77. Double the commission of all salesmen of London.

78. Set ratings for all customers in London to NULL.

79. Suppose we have a table called sales Manager with the same definition as Salesmen table. Company decides to promote salesmen having total order more than 5000 to Sales Manager. Fill up the Sales Manager table.

80. Assume that we have a table called smcity. Store the information of all salesmen with the customers in their home cities into smcity.

81. Create a table Bonus that contains date wise maximum amount of order for all salesmen.

82. Create a table Multicust containing the salesmen with more than one customer.

83. New Delhi office has closed. Remove all customers assigned to salesmen in New Delhi.

84. Delete all salesmen who have at least one customer with a rating of 100 from salesmen table.

85. Delete the salesmen who produce the lowest order for each day.

86. Find the smallest order for each day. Reduce the commission of all salesmen by 2% who produce this order.

87. Delete all customers with no current orders.

88. Write a command to find out the orders by date.

89. Write a command to add the item-name column to the order table.

90. Create a copy of your order table. Drop the original order table.

91. Write a command to create the order table so that all onum values as well as all combinations of cnum and snum are different from one another and so that NULL values are excluded from the date field.

92. Write a command to create the salesmen table so that the default commission is 10% with No NULL permitted, snum is the primary key and all names contain alphabets only.

93. Give the commands to create our sample tables (salesmen, customer, orders) with all the necessary constraints like PRIMARY KEY, NOT NULL UNIQUE, FOREING KEY.

94. Create a view called Big orders which stores all orders larger than Rs.4000.

95. Create a view Rate count that gives the count of no. Of customers at each rating.

96. Create a view that shows all the customers who have the highest ratings.

97. Create a view that shows all the number of salesman in each city.

98. Create a view that shows all the number of salesmen in each city.

99. Create a view that shows the average and total orders for each salesmen after his name

and number.

100. Create a view that shows all the salesmen with multiple customers.

101. Create a view to keep track of the total no of customers ordering, no of salesmen taking orders, the no of orders, the average amount ordered, and the total amount ordered for each day.

102. Create a view Show name that shows for each order the order no, amount, salesman name and the customer name.

103. List all orders of salesman 'Rajesh' using Show name View along with his commission.

104. Create a view Max sales to store the name and number of salesman, along with the date, who have the highest order on any given date.

105. Using above view, find out the name and number of salesman who have the highest order at least two times. Store the result in another view.

106. Create a view Same city that shows the no and name and city of the customers along with the city of the salesman serving them.

107. Create a view Commission of salesmen table to include only snum and commission field so that through. This view someone can enter or change the commission but only to values between 10% and 20%.

108. Assume that the CURDATE is a constant representing current date. Give a command to Create orders table with CURDATE as a default date.

109. List all salesmen in London who had at least one customer located there as well.

P.G.D.C.A. SEMESTER – II
PGDCA - 208 : Project

Rationale: The main motive behind this subject is to give practical exposure of the topics learnt in parts in various subjects of PGDCA course. Project is an integral part of the PGDCA curriculum, which is carried out in the last semester. The students will design, develop and implement real systems which can be either extension or application of the courses learnt during PGDCA course. The students have to carry out work in an actual IT organization or take project of a non-IT organization.

Teaching and Evaluation Scheme: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations consisting of 150 marks (1st Phase presentation: 15 marks, 2nd Phase presentation: 15 marks, 3rd Phase presentation: 20 marks) and External marks which consist of 100 for viva-voice presentation on Project Work in University Examination.

Subject Code	Subject Title	Teaching Scheme		Exam Scheme					
		Credit	Theory/ Practical + Tutorial	Theory		Practical		Term Work + Sessional Marks	Total Marks
				Hrs.	Max Marks	Hrs.	Max Marks		
PGDCA – 208	Project	6	6	-	-	6	100	50	150

University Examination Duration: Average Minimum 15 Minutes of Each Group

In-door / out door project must be done by each student on simple applications using any computer language/ Front-end and Back-end / RDBMS / Embedded Technology. Project development should be under the proper approved title from internal faculty that should be team of 3 students (in case of special request from the students team size can be increase or decrease as per proper justifications)
The internal / external guide must be schedule for a students project work & evaluate them from time to time.
The project report must be prepared for the external Examination.
External examination of this project-viva paper will be arranged after 15 days of completion of the internal examination.

Project Criteria / Technology may be

- MS Access (With Multiple Table and Components Table, Query, Reports, Form)
- Flash (Story Board , Imagination, Movie Making …. Etc)
- Front End and Back End (VB.NET - MS Access)