

Solapur University Solapur

Semester Pattern Syllabus

Post Graduate Diploma in Computer Applications (PGDCA)

(Subject to the modification from time to time)

(w. e. f. June 2013)

Introduction :

The name of the program shall be Post Graduate Diploma in Computer Applications (P.G.D.C.A.)

Course Objectives :

There are three major objectives of this diploma course.

1. To prepare a Computer Operator and Accounting operator various office packages effectively with some analytical approach and who can be directly employed by many organizations.
2. To prepare a person who can work as Web Programmer , Assistant Programmer in an Organization & to train students to a level where they can readily compete for a seats for lateral entry to advance degree courses like M.C.A.,M.C.M., M. Sc. (C.S.) etc.
3. To introduce students with programming

The course has been designed keeping in mind the desirable characteristics of a component professional. We have identified these characteristics to be the following.

1. Good knowledge and skill base of the following form the core field

- Office Application Packages
- Web designing
- Programming methodology and techniques.
- LAN and Internet.
- Database user.

2. Ability to work in team

- Course Duration : One year (TWO SEMESTERS)
- Intake Capacity :60
- Number of Computers : 15.
- Eligibility :

1. Graduate of any discipline (under 10+2+3) pattern from any recognized university

2. Student who is perusing any post graduate course of Solapur University can be admitted to P.G.D.C.A. course i.e. student may be allowed to do Simultaneously two courses.

3. Students who are doing the post graduate degree in external mode in any University other than Solapur Univeristy, can do PGDCA Course

Structure of the Course

Sem. I

Paper No.	Subject	Weekly University Workload in Theory Hours	University Theory Examination	Internal Marks
1.	Fundamentals of Computer & Information Technology	4	80	20
2.	Introduction to A/c Package & MS-Office	4	80	20
3.	System Analysis & Design With C Programming	4	80	20
4.	Web Programming with PHP	4	80	20
5.	i) Lab Course I based on Paper No. 1,2 ,3,4	3	--	100
6.	ii) Mini Project based on Paper No. 3 OR 4	2	--	100
Total Marks			320	280

Sem. II

Paper No.	Subject	Weekly Workload in Hours	University Theory Examination	Internal Marks
7.	DBMS & RDBMS Using Oracle	4	80	20
8.	ASP.NET Using C #	4	80	20
9.	Java Programming	4	80	20
10.	Lab Course – II Based on Paper No. 7, 8 & 9	3	--	100
11.	Major Project Viva Voce	3	100	100
Total			340	260

Project Work :-

The project report can be prepared by a group of three or four students. The project report will be assessed by an internal guide for 70 marks and there will be Viva for 80 marks conducted by the Panel Examiner appointed by University.

Standard of Passing:-

To pass the examination in Post Graduate Diploma in Computer Applications, a candidate must obtain a minimum of 40% of marks in each head of passing and also in aggregate. Subject to the condition of clearing in all heads a candidate will be awarded class of distinction.

If aggregate percentage is :-

Greater than or equal to 40% but less than 49.99% - Pass Class.

Greater than or equal to 50% but less than 59.99% -Second Class.

Greater than or equal to 60% but less than 69.99% -First Class.

Greater than or equal to 70% -First Class with Distinction.

Lab Work Load	-Size of the practical batch should be 15 students.
Staff Pattern	- One full time Assistant Professor. One full time Instructor. Visiting faculty as per requirement.

Nature of Examination –

University examination shall be 3 hours duration for 80 marks paper.

The question paper pattern will be flexible. Examiner may set the objective, short or long answer type questions

20% objectives, 40% short and 40%long

Internal Marks

The division of 20 marks are as follows—

Attendance	: 5 Marks
Mid Test	: 5 Marks
Assignments	: 10 Marks

- **Instructor** : Graduate with one year diploma in Computer recognized by the University.

Qualifications for Assistant Professor and Instructor :

- **Assistant Professor** :- A candidate with M.C.A., M.C.M. B. E. (I. T. / CSE), M. Sc.(CS) qualifications eligible to teach P.G.D.C.A. course.

Fees Structure:-

Tuition Fee	Rs. 12000/-
Computer Lab Charge	Rs. 1500/-
Library Fee	Rs. 1000/-
Caution Money	Rs. 500/-
Total	Rs.15000/-

The Repeater P.G.D.C.A. students may be given additional two chances.

Equivalence of the subjects

PGDCA Sem I

Old Syllabus wef 2010		New Syllabus wef .June 2013	
Paper No.	Subject	Paper No.	Subject
1	Fundamentals Of Computer and Information Technology	1	Fundamentals Of Computer and Information Technology
2	Introduction to A/C Package and MS-Office	2	Introduction to A/C Package and MS-Office
3	System Analysis Design and Soft Skills	3	System Analysis and Design with C Programming
4	E-commerce and Web Programming	4	Web Programming with PHP
5	Lab Course I based on paper no. 1 & 2	5	Lab Course I based on paper no. 1 ,2,3,4
6	Mini Project Based on Paper No.4	6	Mini Project Based on Paper No.3 Or 4

PGDCA Sem II

Old Syllabus wef 2010		New Syllabus wef .June 2013	
Paper No.	Subject	Paper No.	Subject
7	Dbms & Rdbms Using Oracle	7	Dbms & Rdbms Using Oracle
8	Programming With Visual Basic.NET	8	ASP.NET using C #
9	Programming In C	9	Java Programming
10	Lab Course II Based on P.No. 7, 8 ,9	10	Lab Course Based on P.No. 7, 8 ,9
11	Major Project and Viva Voce	11	Major Project and Viva Voce

Solapur University , Solapur
PGDCA – Semester I
(Paper No.1)
Fundamentals of Computer and Information Technology

Max. Marks: 100
External Assessment: 80
Internal Assessment: 20

Topic : 1

(10)

Introduction to Computer and Information Technology :

Characteristics of Computer, Concept of Hardware and Software, Evaluation of computer and Generations, Classification and types of computer, Block Diagram of computer system, Motherboard, Number System – Binary, Decimal, Octal and Hexadecimal.

Topic : 2

(10)

Input and Output Devices :

Input Devices- Keyboard, Mouse, Light pen, Joystick, Scanner, MICR, OMR, Bar code reader.

Output Devices- Monitor-LCD,LED, Projector, Printer Dot Matrix, Inkjet, Laser, plotters.

Topic : 3

(10)

Computer Memory:

Memory concept, Semiconductor Memory- RAM, ROM, PROM, EPROM, Secondary Storage Devices- Magnetic Tape, Magnetic Disk,(Floppy Disk and Hard Disk),Pen Drive, Optical Memory - CD, DVD

Topic :4

(10)

Introduction to Operating Systems:

,Operating System- Concept, Types, Functions . Introduction to Windows , Linux.

Topic : 5

(10)

Computer Languages:

Machine Level Language, High Level Language and Assembly Language. Translators- Assembler , Compiler, Interpreter.

Topic : 6

(10)

Computer Networks and Security of Data:

Concepts of network, Network Topologies, LAN, MAN, WAN. Introduction to Internet, E-Mail .Computer Viruses- Characteristics, types, Detection and removing the viruses , Antivirus Softwares

Topic : 7

(5)

Introduction to Information Technology:

Definition of IT, Information System , IT Applications – IT in Business, IT in Education etc.

Books :

- 1) Computer Fundamental - P.K. Sinha
- 2) Computer Today - Basundara
- 3) Computer Fundamental - V. Rajaraman
- 4) Computer Today - Donald N. Sanders.

Solapur University , Solapur
PGDCA- Semester - I
PAPER NO. : 2
INTRODUCTION TO A/C PACKAGE & MS-OFFICE

Max. Marks: 100
External Assessment: 80
Internal Assessment: 20

UNIT -1

(10)

Accounting Concepts : Concepts of Accounting, Manual Vs Computerized Accounting, Golden Rule, Accounting Equation etc.

Introduction to Tally : Introduction, Creation of Company, Introduction to Gateway of Tally, Menu, Company Info menu.

UNIT – 2

(10)

Accounts Configuration & Classification : Features & Configuration options for company maintaining accounts, Planning about organization of Chart of Accounts, Group and Ledgers Account Masters and Vouchers :

Working with Account Masters, viz, Group, Ledger, Cost Centre and Category, Currency, Entry of Accounts Vouchers with Examples of Billwise, Interest Computation, Printing of Vouchers, Creation and Alteration of Vouchers types and Vouchers Classes. Final Accounts : Viewing Balance Sheet, P& L Account, Trial balance.

UNIT– 3

(10)

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

UNIT – 4

(10)

MS Excel: Introduction and area of use; Working with MS Excel.; concepts of Workbook & Worksheets; Using Wizards; Various Data Types; 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 –5

(15)

MS PowerPoint: Introduction & area of use; Working with MS PowerPoint; Creating a New Presentation; Working with Presentation; Using Wizards; Slides & its 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.

Reference Books:

1. Implementing Tally 6.3 by A.K.Nadhani, K.K.Nadhani, BPB Pub.
- 2.. Accounting by Tally (Illustrated) by L.B.Singh & V.P.Singh, Asian Pub.
3. Computerised Financial accounting using tally- Rajan Chougule.
4. Windows XP Complete Reference. BPB Publications
5. MS Office XP complete BPB publication6
6. MS Windows XP Home edition complete, BPB Publications
7. I.T. Tools and Applications, A. Mansoor, Pragya Publications
8. Tally.ERP 9 By Asok K Nadhani BPB Pub.

Solapur University , Solapur
PGDCA- Semester - I
(Paper No.3)
SYSTEM ANALYSIS & DESIGN WITH C Programming

Max. Marks: 100
External Assessment: 80
Internal Assessment: 20

1. SYSTEM ANALYSIS AND DESIGN OVERVIEW - (10)

meaning and definition of system, difference between system and software, business system concepts, characteristics, elements of system, types of system, subsystems, system development life cycle, feasibility study-social, technical, operational and economic feasibility, role of system analysis and users in system development

2. TECHNIQUES FOR KNOWING USER REQUIREMENT - (10)

observation, document searching, questionnaire, interview ,Charting techniques- Decision table, decision tree, program Flowchart, system flowchart, table of Content DFD Levels of DFD for library system ,ERD concept of Entity,attribute , relations, System Design – File , Code ,I/O, etc.

3: PROGRAMMING METHODOLOGY (07)

Algorithm: Definition, properties, developing well-known algorithms. Flowcharts: Principles of flowcharting, symbols, converting algorithms to flowcharts.

4: GETTING STARTED WITH C (10)

History, Character set, Keywords, Identifiers variables, constants, symbolic constants. Data types Operators: Arithmetic relational and logical operators, assignment, precedence and associativity, mixed mode expression conditional expression. Input, Output Functions.

5 CONTROL STRUCTURES (08)

If-else, switch, loops - while, for, do-while, Break, continue exit statements, goto, and labels blocks. ,Functions in C

6 ARRAYS AND POINTERS: (10)

Arrays, single and multidimensional arrays, string operations. Introduction t o pointers , pass by reference, pointer to pointer Structutres :- passing structure to function, array of structure

7 FILES: (05)

Text and binary file, FILE structure, file operations

References:

1. Basic system analysis and design- alan denial & donYeats
2. System analysis and design-davis w.s.
3. System analysis and design-edwards p.
4. System analysis and design-award e.h.
5. Let Us C - Y.C.Kanetkar.
- 6 The C programming Language - Ritchie and Kernighan.
7. C in depth II Edition By S..K Srivastav

Solapur University , Solapur
PGDCA- Semester - I
(Paper No.4)
WEB PROGRAMMING WITH PHP

Max. Marks: 100
External Assessment: 80
Internal Assessment: 20

Unit 1:

(10)

PHP/HTML Introduction:

Need of Open Sources – Advantages of Open Sources – Applications – Commercial aspects of Open Source movement A Brief History of PHP - Installing PHP - A Walk Through PHP - Installing and Configuring PHP on Windows.

Language Basics:

Lexical Structure -Data Types -Variables -Expressions and Operators – Constants - Flow-Control Statements -Including Code -Embedding PHP in Web Pages

HTML Basics:

Structure of HTML Document, Types of Html Tags, Basic HTML Tags

Unit 2: Functions:

(10)

Calling a Function - Defining a Function - Variable Scope -Function Parameters - Return Values -Variable Functions - Anonymous Functions.

Strings: Quoting String Constants - Printing Strings - Accessing Individual Characters -Cleaning Strings - Encoding and Escaping -Comparing Strings - Manipulating and Searching Strings - Regular Expressions.

Unit 3:Arrays :

(10)

Indexed Versus Associative Arrays - Identifying Elements of an Array - Storing Data in Arrays - Multidimensional Arrays - Extracting Multiple Values - Converting Between Arrays and Variables - Traversing Arrays - Sorting - Acting on Entire Arrays

Unit 4: Web Server:

(05)

Apache Web Server – Working with Web Server – Configuring and using apache web services.

Open source software tools: Browsers – Processors – Compilers – Model driven architecture tools.

Unit 5: Databases:

(10)

Using PHP to [Access](#) a Database - Relational Databases and SQL - Advanced Database Techniques - Sample Applications.

MySQL: Introduction – What is MySQL? - MySQL Data Types - Primary Keys and Auto Increment Fields – Queries - Download MySQL Database - Facts About MySQL database - Connecting to a MySQL Database - writing your own SQL programs - Closing a Connection.

Unit 6 : PHP MySQL Create Database and Tables:

(10)

Create a Database - Create a Table - Insert Data Into a Database Table - Insert Data From a Form into a Database. Record Selection Technology: Select Data From a Database Table - Display the Result in an HTML Table - The WHERE clause - The

ORDER BY Keyword – Working with Strings – Date and Time – Working with metadata.

Unit 7 : Database ODBC:

(10)

Create an ODBC Connection – Connecting to an ODBC – Retrieving records – Retrieving Fields from a Record – Closing an ODBC Connection.

Reference Books :

1. MySQL Bible Steve Suchring John Wiley sons, 2002
2. Programming PHP Rasmus Lerdorf and Levin Tatroe O'Reilly Publications, 2002
3. PHP: The Complete Reference by Steven Holzner ,Tata Mcgraw Hill,2007
4. Beginning PHP and MySql:From Novice To Professional by W.Jason Gilmore, Apress,2010

Paper no. 1

- 1) How to start computer?
- 2) How to shut down computer?
- 3) Linking of various peripherals.
- 4) Operation of all keys as key Board.
- 5) Mouse operation.
- 6) VDU - Various adjustment.
- 7) Printer and various options and its operations.
- 8) Searching of virus and removing of virus.

Paper 2

1. WindowsXP :- Starting Windows-Browsing Start Menu, Manipulating Windows - Moving, Resizing, Closing, Windows, Minimizing and Maximizing Windows, Working With Multiple Windows Using Windows Application: Using Word- Pad to create a document, entering text and saving the work. Using my computer - Changing the icon arrangement, To view the floppy disk. To manage files, selecting one or more files, copying a file, delete a file, Drag and drop to move a file.
2. File Management using Windows Explorer :- To Copy, move and delete files, using copy and paste, using drag and drop, creating a folder. Creating a file to a folder, copying and moving the files between drives, renaming files and folders, find Program- To search by file name, by date, by type, by specific text.
3. Control Panel: - Changing date and time, changing display, choosing a background, placing folder on desktop. Adding shortcuts to folder and creating shortcut.
4. Computer Application Through Accounting Package Tally: - Creation of firm/company, group, ledger accounts, Feeding of accounting data- Receipt, Payment, Purchase, Sale, Contra, Journal, Credit Note, Debit Note.
5. Inventory Information: - Groups, items, Valuation
6. Reports and Final Accounts Generations -Display and print.
7. Students should use MS-word package for Letters and Reports.
8. Students should acquire the basics of MS-Excel, i.e. functions, formulae, charts etc.
9. Student has to present one seminar with the help of transparencies. Student should use MS - Power-Point package for presentation.

Paper no. 3

1. The distance between two cities (10 Km.) is input through the keyboard. Write a program to convert and print this distance in meters, feet, inches and centimeters.
2. Write a program to convert the temperature in centigrade degree to Fahrenheit degrees.
3. Check given number is even or odd.
4. Write program to check give number is prime or not.
5. Write program to display fibomcei series.
6. Write a function to input 5 digit integer and calculate sum of digits.
7. Write recursive function to find factorial of given number.
8. Write program to check given string is palindrome or not.
9. Write program to do matrix manipulations.
10. Write program to accept students information through arry of structure and calculate average marks, also decide grade and display it.
11. Write program to generate paysheet using employees information through array of structures.
12. Write a program to do string manipulation, write separate functions for each operation.
13. Write program to find number of vowels in given string.
14. Write program to find number of words in given text file.
15. Write program to display marksheet of students using data from stud.dat file (the structure of information of students is Roll No., Name, Marks1, Marks2, Marks3, Marks4, Marks5).

Paper no. 4

1. Write a simple PHP page that will display some information onto web page.
2. Write a PHP program to find given number is Armstrong or not
3. Write a PHP program to find largest among 3 Numbers
4. Write a PHP program to check whether the given number is prime or not
5. Write a PHP program to create an array and try with all array functions.
6. Create a registration form which contains fields name, Roll No, Gender and a submit button
- 7 .All the details should be displayed in the server page when the user clicks the submit button. Write a Web page that asks for the last name of a faculty member. Upon clicking "submit", the Web page should call a HTML/PHP script that retrieves faculty data from the database. If the last name does not match any faculty members, the script should indicate "no faculty match". If the last name does match, then all faculty members with the given last name should be printed. (For testing, note that both Thomas Moore and Emily Moore are in the faculty database.)

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PGDCA- Semester - I
Mini Project : Paper No. 6

Maximum Marks : 100

A mini project based on the C Language OR HTML/PHP Language.

Solapur University , Solapur
PGDCA – Semester II
(Paper No.7)
DBMS and RDBMS using Oracle

Max. Marks: 100
External Assessment: 80
Internal Assessment: 20

1. DBMS & RDBMS :-

(10)

Concept of DBMS & RDBMS, Difference between DBMS and RDBMS, Features of RDBMS, Introduction of Oracle, Historical Development of Oracle, Role & responsibilities of Oracle DBA, Codd's Rules, Functional Dependencies, Normalization.

2. Introduction to SQL :-

(15)

Features of SQL, Starting up Database, Logging on to SQL*Plus, Data types, Classification of SQL commands.

SQL table creation, Integrity Constraints, Insertion of Records, Select statement, Alter Commands, Drop Table.

SQL Operators- Transaction Processing, Where Clause, Like Operator, Between Operator, Order by Clause, GROUP BY clause, Having clause, SQL Functions - Arithmetic functions, Conversion Functions, Miscellaneous functions.

3. Sub queries :-

(10)

Sub queries, Multiple sub queries, Nesting of sub queries, sub queries in DML commands, comparison operators.

4. Introduction of PL/SQL :-

(10)

Difference between SQL and PL/SQL, Block definition Structure, Block. Functions - % type, & Row type, % record type, IF ELSE statement, FOR loop, While loop, GOTO Statement.

5. Concept of Cursors :-

(10)

Types, Implicit, Explicit open, Close cursor. Introduction to Triggers-Block level, Field level triggers.

6. User Create Granting :

(10)

Privilege - Object System, User, GRANT, REVOKE.

Books :-

1. Commercial Application Development Using Developer 2000 - Ivan Bayross
2. SQL - Scott Urman
3. Structured Query Language - Osborne
4. Teach yourself ORACLE 8 - Ed. Whalen
5. PL/SQL Programming - Ivan Bayross

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PGDCA – Semester II
(Paper No.8)
ASP.NET Using C #

Max. Marks: 100
External Assessment: 80
Internal Assessment: 20

Unit No.1. Introduction to ASP.NET

[10]

- What is .NET?
- ASP.NET and its uses
- Common Language Runtime
- Internet Information Server
- Installation of ASP.NET
- Namespaces
- .Net Framework Classes
- The Visual Studio IDE

Unit No.2 . C# Fundamentals

[10]

- Programming Basics
- Variable & Datatypes
- Operators
- Arrays
- Conditional Statements
- Looping
- Functions
- OOPs Concepts
- Classes & Objects

Unit No.3 .Web Forms and Controls

[10]

- Web Control Class
- Creating Web Forms Application
- Handling Images
- Navigating between Pages
- Managing Server Controls
- Server Control Events
- Using HTML Controls
- Using Data Controls

Unit No.4 .Master Pages

[10]

- Simple Master Page , Nested Master Page
- Introduction to CSS
- Applying Stylesheet

Unit No. 5. State Management

[10]

- Preserving State in Web Applications
- Using Cookies to Preserve State
- ASP.NET Session State
- Application State

Unit No. 6 ADO.NET (Working with Database)

[15]

- Overview of ADO.NET
- Connection Object
- Command Object
- Data Readers
- Data Sets & Data Adapters
- Using SQLDataSource

Reference Books -

1. Mastering ASP.Net - BPB Publication
2. ASP.net – The Complete Reference- Tata McGraw Hill
3. ASP.NET Programming – Murach
4. The C# Programming Language - Anders Hejlsberg, Mads Torgersen, Scott Wiltamuth

5. ASP.Net Programming with C# & SQL Server - Don Gosselin

6. Sams Teach Yourself Ado.Net in 21 Days - Dan Fox , Sams Pulishing
7. ASP.Net 3.5 Using C #.Net 2008 – Prof. Rajendra Salokhe Aruta Pub.

Solapur University , Solapur
PGDCA – Semester II
(Paper No.9)
Java Programming

Max. Marks: 100
External Assessment: 80
Internal Assessment: 20

- 1. Java Fundamentals (8)**
Features of Java , OOPs concepts , Java virtual machine ,Reflection byte codes ,Byte code interpretation ,Data types, variable, arrays, expressions, operators, and control structures Objects and classes
- 2. Java Classes (8)**
Abstract classes ,Static classes ,Inner classes ,Packages ,Wrapper classes Interfaces ,This ,Super ,Access control
- 3. Exception handling (8)**
Exception as objects ,Exception hierarchy ,Try catch finally ,Throw, throws
- 4. IO package (8)**
Input streams ,Output streams ,Object serialization ,Deserialization, Sample programs on IO files Filter and pipe streams
- 5. Multi threading (8)**
Thread Life cycle ,Multi threading advantages and issues Simple thread program ,Thread synchronization
- 6. GUI (10)**
Introduction to AWT programming Layout and component managers Event handling ,Applet class ,Applet life-cycle ,Passing parameters embedding in HTML ,Swing components - JApplet, JButton, JFrame, etc. Sample swing programs
- 7. Database Connectivity (10)**
JDBC architecture ,Establishing connectivity and working with connection interface Working with statements

References:

1. Programming with Java A Primer, E.Balaguruswamy Tata McGraw Hill Companies
2. Java Programming John P. Flynt Thomson 2nd
3. Java Programming Language Ken Arnold Pearson
4. The complete reference JAVA2, Herbert schildt. TMH
5. Big Java, Cay Horstmann 2nd edition, Wiley India Edition
6. Core Java, Dietel and Dietel
7. Java - Balaguruswamy
8. Java server programming, Ivan Bayross SPD

Solapur University, Solapur
PGDCA Semester II
PAPER NO - 10
Lab Course II Based on Paper No. 7, 8 & 9

Max. Marks: 100

Paper No . 7 :

1. SQL;-create table .Insert rows
2. Create Table, Insert rows and update.
3. Alter existing table structure (ALTER-ADD, MODIFY, DELETE).
4. Simple queries based on single table to view rows.
5. Simple queries based on multi table.
6. Complex queries based on single and multi table.
7. Practical by making use of IF..ELSE.
8. Practical by making use of FOR-LOOP.
9. Practical by using WHILE-LOOP.
10. Practical by making use of PL / SQL Block.
11. Practical by using cursors.
12. Practical by making use of - (% type, & row type)
13. Practical by making use to triggers.

Paper No. 8

1. Write a program using different control structures like While , For etc.
- 2 Create a Web site of Your college using ASP.Net and C#
- 3 Create a Master Pages
4. Create a Master Page with CSS to manage application state.
- 5.Program to manage session state
6. Create a program for Database Conectivity

Paper No. 9

JAVA PROGRAMMING LAB

1. Programs using constructor and destructor
2. Creation of classes and use of different types of functions
3. Count the number of objects created for a class using static member function
4. Write programs on interfaces
5. Write programs on packages
6. Write programs using function overloading
7. Programs using inheritance
8. Programs using IO streams
9. Programs using files
10. Write a program using exception handling mechanism
11. Programs using AWT
12. Programs on swing
13. Programs using JDBC

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PGDCA- Semester - II
Major Project : Paper No. 11

Maximum Marks : 100

A Major Project based on the Java , ASP.NET using C# Language.