

Solapur University, Solapur
Faculty Of Commerce
Choice Based Credit System(CBCS)
(w.e.f - June 2016)

Structure for PGDCA(Post Graduate Diploma In Computer Applications)

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 University, can do PGDCA Course

Structure of the Course Sem - I

Subject /Core Course	Name and Type of The Paper		L	Credits	Total Marks Per Paper	UA		CA	
	Type	Paper No. & Name							
Class:-> PGDCA(Post Graduate Diploma In Computer Applications)Sem -I									
	Ability Enhancement Courses(AECC)	1. Communication Skills	4	4	100	70	28	30	12
	Core	2. Fundamentals Of Computer And Information Technology	4	4	100	70	28	30	12
	Core	3. Introduction to Accounting Package And MS-Office	4	4	100	70	28	30	12
	Core	4. Software Engineering With 'C' Programming	4	4	100	70	28	30	12
	Core	5. Web Programming With PHP	4	4	100	70	28	30	12
	Core	6. (i) Lab Course 1 Based On Paper No. 2,3,4	2	4	50	-	-	50	20
		(ii) Mini Project Based On Paper No. 5	3		50	-	-	50	20
		Total	25	24	600	350	--	250	--

Sem -II

Subject /Core Course	Name and Type of The Paper		L	Credits	Total Marks Per Paper	UA		CA	
	Type	Paper No. & Name							
Class:-> PGDCA(Post Graduate Diploma In Computer Applications)Sem -II									
	Core	7. DBMS And RDBMS Using Oracle	4	4	100	70	28	30	12
	Core	8. ASP.Net Using C #	4	4	100	70	28	30	12
	Core	9. Java Programming	4	4	100	70	28	30	12
	Core	10. Lab Course 2 Based On Paper No. 7, 8,9	3	4	100	-	-	100	40
	Core	11. Major Project & Viva Voce	3	8	200	100	40	100	40
		Total	18	24	600	310	--	290	--

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 100 marks and there will be Viva for 100 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 2.30 hours duration for 70 marks paper.

The question paper pattern will be flexible. Examiner may set the objective, short

20% objectives, 40% short and 40% long

Internal Marks

The division of 30 marks are as follows—

Internal Marks

1. Attendance	05 Marks
2. 2 Class & 2 Home Assignments	10 Marks
3. Seminar/ Group Exercise	10 Marks
4. Mid Test	05 Marks

 Total 30 Marks

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

Fee Structure

Tuition Fee	12000
Computer Lab Charge	1500
Library Fee	1000
Caution Money	500
Total	15000

The Repeater PGDCA students may be given additional two chances.

Equivalence of the subjects

PGDCA Sem I

Old Syllabus w.e.f. 2013		New Syllabus(CBCS)w.e.f. June 2016	
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 Accounting Package and MS-Office
3	System Analysis and Design with C Programming	3	Software Engineering with 'C' Programming
4	Web Programming with PHP	4	Web Programming with PHP
5	Lab Course I based on paper no. 1 , 2,3,4	5	Lab Course I based on paper no. 2,3,4
6	Mini Project Based on Paper No.4	6	Mini Project Based on Paper No. 5

PGDCA Sem II

Old Syllabus w.e.f. 2013		New Syllabus w.e.f. June 2016	
Paper No.	Subject	Paper No.	Subject
7	Dbms & Rdbms Using Oracle	7	DBMS & RDBMS Using Oracle
8	ASP.NET using C #	8	ASP.NET using C #
9	Java Programming	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)

Communication Skills

Max. Marks: 100
External Assessment: 70
Internal Assessment: 30

Unit 1: Nature of Communications: [16]

Definition of communication, Significance of Good Communication, Objective of Communication, Communication Process, Type of Communication, Nonverbal communication aspects of body language and Principles of Communication.

Unit 2: Communication in organization: [14]

Nature, scope and limitations of communication, Barriers to communication, Overcoming the barriers, Downward communication, Upward Communication, Horizontal communication, Grapevine communication.

Written communication:

- The process of formal written communication – The ‘you’ attitude, classify, conciseness, preciseness, style, flow Accuracy and readability
- Mechanism of writing – Abbreviations, Numerals, Capitalization, Spelling, Punctuation.

Unit 3: business Correspondence: [14]

Business Correspondence in organization, Essential, The layout, Planning the letter. Letter related to –purchase, Sales, Business related inquiries, Claims and adjustment, Job application and resume.

Unit 4: Foundation of Effective Writing :(AIDS) [16]

- Meeting- Kinds of meetings, the agenda, Minute of the meetings, Paper work for regular meetings
- Report – Common features, Routing reports and non-routine reports, Steps in writing report
- Modern Office Communication – Electronic communication, Telephone EPBAX, Teleconferencing, Answering machine, E-mail, Voicemail, Fax, Internet, Video conferencing
- Notes – The General approach will be to give broad idea of business communication, Practical work will consist of Letter writing, Report writing, Arranging meetings and Seminars, Every student will have to deliver minimum two prepared speeches and one extempore speech.

Books Recommended:

- 1) Essentials of Business Communication- Rajendra Pal & L.S.
- 2) Business Communications- U.S.Rai& S.M. Rai.
- 3) Communication skill – P. C. Pardesi
- 4) Business Communication, AshaKaul, PHI
- 5) Business Communication, M. Balasubramanyam
- 6) Business correspondence and report writing, Sharma, K. Mohan, Tata Mc-Graw Hill

Solapur University ,Solapur
PGDCA – Semester I
(Paper No.2)
Fundamentals of Computer and Information Technology

Max. Marks: 100
External Assessment: 70
Internal Assessment: 30

Topic : 1 **(15)**

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 **(15)**

Input and Output Devices :

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

Output Devices- Monitor-LCD,LED, Projector, Printer- Types.

Topic : 3 **(10)**

Computer Memory:

Memory concept, Semiconductor Memory- RAM, ROM, Secondary Storage Devices- Magnetic Tape, Hard Disk, Pen Drive, Optical Memory - CD, DVD

Topic :4 **(10)**

Introduction to Operating Systems:

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

Topic :5 **(10)**

Computer Networks and Security of Data:

Concepts of network, Network Topologies, LAN, MAN, WAN. Introduction to Internet, E-Mail .Computer Viruses, Antivirus Software's, IT Applications.

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. : 3
Introduction to Accounting Package & MS-Office

Max. Marks : 100
External Assessment : 70
Internal Assessment : 30

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 **(15)**

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 Bill wise, 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 2013 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 2013: 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 2013: 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.4)
Software Engineering With 'C' Programming

Max. Marks: 100
External Assessment: 70
Internal Assessment: 30

Unit 1: System concepts, Software Engineering & Development life cycle (10)

Definition, Element of system, system, system concepts, Types of system, System Analysis. Role of System Analyst.

Software Engineering- Definition, Characteristics of software, Qualities of software

System Development life cycle- System Development life cycle, classical model, Spiral model, Waterfall model, Prototyping.

Unit 2: Requirement Analysis & Fact finding techniques (10)

Requirement Anticipation, Requirement investigation, requirement specifications, feasibility study.

Fact finding techniques- interviews, Questionnaire, Record reviews, Observation, study of physical system, identifying the data used, identifying the controls. User transaction Requirements, User design requirements, Organization dependent requirements.

Unit 3: Software Testing, Implementation and maintenance (10)

Need of Testing, White Box, Black Box testing, Changeover, Pilot, Parallel Case studies- Ray Roll, library System, Inventory Control, College Admission System.

Unit 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.

Unit 5 :Control Structures**(10)**

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

Unit. 6: Arrays , Pointers& File Handling:**(10)**

Arrays, single and multidimensional arrays, string operations .Introduction to pointers pass by reference, pointer to pointer Structures :- passing structure to function, array of structure, File Handling – File Types, File Opening Modes.

References:

1. Basic system analysis and design- alan denial &donYeats
2. System analysis and design-davisw.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.5)
Web Programming With PHP

Max. Marks: 100
External Assessment: 70
Internal Assessment: 30

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.

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.

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

Unit 6 :PHP My SQL 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: (05)

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

Reference Books :

1. My SQL 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 My Sql :From Novice To Professional by W. Jason Gilmore, Apress,2010

Solapur University ,Solapur
PGDCA- Semester - I
Paper No. 6
(I) Lab Course - 1 (Max Marks : 50)
Based on Paper No. 2, 3,4

Practicals Based on Paper No. 2

- 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.

Practicals Based on Paper No. 3

Windows7 :- 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.

Practicals Based on Paper No. 4

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 displayfibnoccie 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).

(ii) Mini Project (Max. Marks 50)

Practicals :

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

A mini project based on the HTML/PHP Language.

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

Max. Marks: 100
External Assessment: 70
Internal Assessment: 30

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 :

(05)

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

Solapur University ,Solapur

PGDCA – Semester II

(Paper No.8)

ASP.NET Using C #

Max. Marks: 100

External Assessment: 70

Internal Assessment: 30

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 &Data types
- 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 Style sheet

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)

[10]

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

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, MadsTorgersen, Scott Wiltamuth
5. ASP.Net Programming with C# & SQL Server - Don Gosselin
6. Sams Teach Yourself Ado.Net in 21 Days - Dan Fox ,Sams Pulishing7.
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:70
Internal Assessment:30

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 2 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

Solapur University ,Solapur
PGDCA- Semester - II
Major Project : Paper No. 11

Maximum Marks : 100

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