

PGDCA SEMESTER-II

PGDCA 201: Internet & Scripting Languages

Unit-1: Introduction

- Internet – A network Of Networks
- Types of Internet Connection-Dial Up & leased line, ISDN, broad band connectivity through DSL & WiMax,
- Various services available on internet,
- TCP/IP, FTP, Web Server, Web Site,

Unit-2: Internet Functions & Securities

- Concept of Web server & mail server,
- Intranet, applications in Internet & Intranet environment,
- Firewall, Virus, Cryptography

Unit-3: Web Page Design through scripting (HTML)

- Document Layout, Header Elements,
- Block Oriented elements, Lists, Inline links, Hyperlinks, URL, Images
- Forms, Tables, Special Characters

Unit-4: Introduction to other Web Languages

- DHTML, XML, PHP, WML, CGI

Unit-5: Animation in web page

- Flash Introduction & Screen Environment @ Basic Drawing & paintings.
- Use of Library. @ Animation in old Fashion.
- Motion Twin @ Graphic Symbol & Button Creation.
- Animated Gif Creation.

Reference Book:-

Internet - An Introduction by Duglass Comer Prentice-Hall of India Pvt. Ltd.

PGDCA 202: Structured System Analysis & Design

Unit-1: Introduction

- Role of technology in business.
- Business systems concepts.
- Categories of Information systems.
- System Development Strategies - Systems Development Life Cycle method, Structured analysis and design method, System prototype method

Unit-2: System Planning & Requirement Analysis

- Source of project request
- Steering committee, Information systems committee, User-group committee
- Fact finding techniques - Interviews, Questionnaire Record review, & Observation
- Analysis tools - Decision trees, Decision tables, Structured English.
- Data flow diagrams.
- Data dictionary.

Unit-3: Design of Output & Input

- Output objectives, types of output, Key output questions
- Output format - Detailed report & Summary report, Tabular output & Graphics output
- Input validation
- Error checking methods and Error messages
- Dialogue design - Menu driven dialogues, Data entry dialogues

Unit-4: Database Design

- Storage media.
- Database and conventional environments
- System development in a database environment
- Design of Database – Normalization

Unit-5: Software Design, Testing & Implementation

- Top-Down structure of modules, Coupling & Cohesion, Span of control, Module size, Shared modules
- Software Design tools - Structured flowcharts, HIPO, Warnier/Orr diagrams
- Level of testing - Unit testing, Systems testing, & special systems testing
- Methods of system conversion - parallel systems, direct conversation, pilot system, phase-in.

Reference Book:-

James A Senn : Analysis and Design of Information Systems, McGraw Hill Intl. Std. Edn.

PGDCA 203: RDBMS –II

Unit-1: STRUCTURED QUERY LANGUAGE (SQL * PLUS)

- Tables, Primary key, Foreign key, Indexes
- Data Definition Language : Create, Alter, Truncate, Drop
- Data Manipulation Language : Insert, Update, Delete
- Database Constraints

Unit-2: Database Objects & Function

- View, Sequence, Synonyms
- Transaction Control Language : Commit, Rollback, Savepoint
- Data Control Language : Grant, Revoke
- Database index
- General SQL Function(Character, Arithmetic, Date, Conversion)

Unit-3: Procedure Language with Data Manipulation

- Parts of PL/SQL block (Declaration, Execution, Exception, Error Handling).
- Writing PL/SQL Code : input/output statements,
- If-Then-Else,
- Cursor for Loop,
- while Loop and Simple for Loop,
- Error Handling

Unit-4: Advanced RDBMS Objects

- Stored Procedures
- Functions
- Packages.
- Triggers.

Unit-5: Introduction to Oracle Server

- Physical & Logical database
- Oracle instance
- Database Structure & Space Management
- Memory & Process Structure
- Process Architecture
- Client/Server Architecture: Distributed Processing

Reference Books:-

1. SQL, PL/SQL The Programming Language of Oracle by Ivan Bayross, 3rd Edition
2. Learn Oracle 8i by Jose A Ramalho

PGDCA 204: Visual Programming on .NET Platform

Unit-1: Introduction

- The .NET framework & Common Language Runtime
- Visual Basic Language – Operators, Conditions & Loops
- Procedures & Functions
- Understanding Scope
- Exception handling

Unit-2: Getting Started with VB .NET

- Concept of event handling
- Creating forms in application
- Adding the controls to the form – Text Boxes, Rich Text Boxes, Labels & Link Labels
- Other common controls – Buttons, Check Boxes, Radio Buttons, List Boxes, Combo Boxes, Scrollbars & Timers

Unit-3: Object Oriented Programming

- Classes & Objects
- Fields, Properties, Methods & Events
- Abstraction, Encapsulation, Inheritance & Polymorphism
- Overloading, Overriding & shadowing
- Constructors & Destructors

Unit-4: Web Application in VB .NET

- Working with web forms and web form controls – Buttons, Text Boxes, Labels, Literals & Place Holders
- Using other controls in Web form – Check Boxes, Radio Buttons, Labels, Panels, List Boxes, Hyper Links & Link Buttons.
- HTML Client controls & server controls

Unit-5: Database Access with ADO .NET

- Accessing data with Server Explorer
- Accessing data with Data Adaptors & Datasets
- Working with ADO .NET

Reference Books:-

Steven Holzner : Visual Basic .NET Programming Black Book DeramTech Press.

Paper 205: Practical:

Practical based on following papers: Weight

1. Paper: 201 Internet & Scripting Languages. { 30% }
2. Paper: 203 RDBMS & Client Server Programming. { 30% }
3. Paper: 204 Visual Programming on .NET Platform { 40% }