

## PGDCA

| Semester | Subject Code | Subject  |
|----------|--------------|--|
| Sem-I    | PGDCA-101    | PC Computing-I (MS Office)   |
| Sem-I    | PGDCA-102    | PC Computing-II (Professional DTP)                                       |
| Sem-I    | PGDCA-103    | Fundamentals of Computer & Operating Systems                             |
| Sem-I    | PGDCA-104    | Database Management System through Oracle-10g & System Analysis & Design |

**LESSON PLAN PGDCA-I SEM**  
**PC COMPUTING-I**

| Topic          | Notes/Strategies/ Resources  | Time    |
|----------------|--|---------|
| MS- Word       | <ul style="list-style-type: none"> <li>• Students will be acquainted with MS-Office</li> <li>• Features of a Good Word processor</li> <li>• Anatomy of MS- Word Window</li> <li>• Creating, Saving and opening File</li> <li>• Page Setup</li> <li>• Page Break</li> <li>• Header and footer</li> <li>• Editing</li> <li>• Replace</li> <li>• Spell Checker</li> <li>• Printing</li> <li>• Creating table</li> <li>• Operations on Tables</li> <li>• Formatting Tables</li> <li>• Border and shading</li> <li>• Templates and Wizards</li> <li>• Mail Merge</li> <br/> <li>✓ From fundamentals of Information Technology by Anshuman Sharma</li> </ul> | 1 Month |
| MS- Powerpoint | <ul style="list-style-type: none"> <li>• Students will learn about Features of powerpoint</li> <li>• Powerpoint Elements</li> <li>• Exploring powerpoint menu</li> <li>• Adding Text and title</li> <li>• Adding Pictures</li> <li>• Saving presentation</li> <li>• Printing slides</li> <li>• Views</li> <li>• Formatting</li> <li>• Choosing Transitions</li> <li>• Creating Graph</li> </ul>  | 20 Days |

|            |  |         |
|------------|--|---------|
|            | <ul style="list-style-type: none"> <li>• Addind Multimedia</li> <li>• Adding Movies and sounds</li> <li>• Using Pick look wizard</li> </ul> <p>✓ From fundamentals of Information Technology by Anshuman Sharma</p>  |         |
| MS- Excel  | <ul style="list-style-type: none"> <li>• Students will gain knowledge about working with Worksheets</li> <li>• Features of MS-Excel</li> <li>• Excel Window</li> <li>• Excel Functions</li> <li>• Creating Graphs</li> <li>• Editing charts</li> <li>• Formatting charts</li> <li>• Creating Worksheet</li> <li>• Linking Different sheets</li> <li>• Sorting data</li> <li>• Querying data</li> <li>• Filtering data</li> <li>• What if Analysis</li> <li>• Printing Worksheet</li> </ul> <p>✓ From fundamentals of Information Technology by Anshuman Sharma</p> | 20 Days |
| Ms- Access | <ul style="list-style-type: none"> <li>• Students will have understanding of working with databases</li> <li>• Creating tables</li> <li>• Entering Records in table</li> <li>• Modifying Table Fields</li> <li>• Linking tables</li> <li>• Queries</li> <li>• Forms</li> <li>• Relating Form to Table</li> <li>• Reports</li> <li>• Adding Graph to Report</li> </ul> <p>From fundamentals of Information Technology by Anshuman Sharma</p>  | 20 Days |

## Lesson Plan PGDCA 1<sup>st</sup> Sem

### Subject: PC Computing- II

| Topic                            | Notes/Strategies/ Resources   | Time   |
|----------------------------------|---|--------|
| Introduction to Photoshop 5.5    | <ul style="list-style-type: none"><li>• Students will Learn About concept of graphics</li><li>• Vector Graphics</li><li>• Bitmap Graphics</li><li>• Vector Vs Bitmap Graphics</li></ul> <p>✓ From PC Computing II, ABS Publications</p>   | 2 Days |
| Image Size & Resolution          | <ul style="list-style-type: none"><li>• Students will get understanding about image size and resolution</li><li>• Relation between resolution, file size &amp; output</li></ul> <p>✓ From Photoshop 5.5 &amp; Corel Draw 9, Professional DTP, AP Publications</p>                           | 2 Days |
| Photoshop 5.5 Basics             | <ul style="list-style-type: none"><li>• Students will gain knowledge about working area of Photoshop 5.5</li><li>• Using Menus</li><li>• Using Palate</li><li>• Acquiring &amp; Importing Images</li></ul> <p>✓ From PC Computing II, ABS Publications</p>                                  | 5Days  |
| Concept of path in Photoshop 5.5 | <p>Concept of Path:</p> <ul style="list-style-type: none"><li>• Pen Tool</li><li>• Segment</li><li>• Anchor points</li><li>• Curved</li><li>• Closed path</li><li>• Open path</li><li>• Subpath</li></ul> <p>✓ From Photoshop 5.5 &amp; Corel Draw 9, Professional DTP, AP Publications</p> | 1 Week |

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|-------------------------------------|--|----------------|
| <p>Photoshop Tools</p>              | <ul style="list-style-type: none"> <li>• Students will be acquainted with Photoshop Tools</li> <li>• Pencil tool</li> <li>• Brush tool</li> <li>• History Brush Tool</li> <li>• Air Brush Tool</li> <li>• Eraser</li> <li>• Rubber Stamp tool</li> <li>• Sponge tool</li> <li>• Dodge tool</li> <li>• Burn tool</li> <li>• Smudge tool</li> <li>• Pattern stamp tool</li> </ul> <ul style="list-style-type: none"> <li>✓ From PC Computing II, ABS Publications</li> <li>✓ From Photoshop 5.5 &amp; Corel Draw 9, Professional DTP, AP Publications</li> </ul> | <p>15 Days</p> |
| <p>Photoshop Concepts</p>           | <ul style="list-style-type: none"> <li>• Students will learn about other concepts of Photoshop</li> <li>• Masks &amp; Histograms</li> <li>• Concept of Channel</li> <li>• Concept of Layer</li> <li>• Filters</li> <li>• Rendering Effects</li> <li>• Transformations</li> <li>• Canvas &amp; Images</li> <li>• Strokes</li> <li>• Image Modes</li> <li>• Using Navigator</li> <li>• Photoshop Plugins</li> </ul> <ul style="list-style-type: none"> <li>✓ From Photoshop 5.5 &amp; Corel Draw 9, Professional DTP, AP Publications</li> </ul>                 | <p>20 days</p> |
| <p>Introduction to Corel Draw-9</p> | <ul style="list-style-type: none"> <li>• Students will learn about concept of Corel-draw</li> <li>• Vector Graphics</li> <li>• Color Palate</li> <li>• Pasteboard or Working Area</li> </ul>   | <p>1 Week</p>  |

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|------------------------------|--|---------|
|                              | <ul style="list-style-type: none"> <li>• Print Page</li> <li>• Using ruler units</li> <li>✓ From PC Computing II, ABS Publications</li> </ul>  |         |
| Corel Draw Tools             | <ul style="list-style-type: none"> <li>• Students will gain knowledge about various Corel draw tools</li> <li>• Pick Tool</li> <li>• Knife Tool</li> <li>• Eraser</li> <li>• Zoom</li> <li>• Freehand</li> <li>• Natural Pen Tool</li> <li>• Dimensions</li> <li>• Ellipse</li> <li>• Polygon</li> <li>✓ From Photoshop 5.5 &amp; Corel Draw 9, Professional DTP, AP Publications</li> <li>✓ From PC Computing II, ABS Publications</li> </ul> | 15 Days |
| Corel Draw Concepts          | <ul style="list-style-type: none"> <li>• Students will learn about the basic concept of Corel Draw</li> <li>• Transformations</li> <li>• Welding</li> <li>• Intersection of Objects</li> <li>• Snapping</li> <li>• Using Object Manager</li> <li>✓ From PC Computing II, ABS Publications</li> </ul>   | 10 Days |
| Giving effects in Corel Draw | <ul style="list-style-type: none"> <li>• Students will learn how to give effects in Corel Draw</li> <li>• Envelope</li> <li>• Adding Perspective</li> <li>• Contours</li> <li>• Blending Image</li> <li>✓ From Photoshop 5.5 &amp; Corel Draw 9, Professional DTP, AP Publications</li> <li>✓ From PC Computing II, ABS Publications</li> </ul>  | 1 Week  |



## Lesson Plan PGDCA- Sem I

### FUNDAMENTALS OF COMPUTER & OPERATING SYSTEMS

| Topic  | Notes/Strategies/ Resources   | Time   |
|--|---|--------|
| Introduction to Computers and its Applications | <ul style="list-style-type: none"> <li>• Students will be Acquainted with basics of computer</li> <li>• What is computer?</li> <li>• Characteristics of Computer</li> <li>• Applications of Computers</li> <li>• Various Functional Units of Computer along with diagram</li> <li>• Categories of computers.</li> <br/> <li>• From Computer Fundamentals<br/>✓ by PK Sinha</li> </ul>   | 4 days |
| Input Devices                                  | <ul style="list-style-type: none"> <li>• Students will be Acquainted with what are input devices and different types of input devices</li> <li>• Text Input Devices</li> <li>• Graphical Input Devices</li> <li>• Cursor Control Input Devices</li> <li>• Vision Input Systems</li> <br/> <li>✓ From Computer Fundamentals By PK Sinha</li> <li>✓ Through Powerpoint Presentation</li> </ul>  | 3 days |
| Output Devices                                 | <ul style="list-style-type: none"> <li>• Students will Learn about What are Output devices and various types of output devices</li> <li>• Monitors</li> <li>• Raster Scan and random Scan Systems</li> <li>• CRT Monitors</li> <li>• Colour Monitors</li> <li>• Printers and various types of printers (Character, Line , page)</li> <li>• Plotters</li> <li>• Voice Response Units</li> <br/> <li>✓ From Computer Fundamentals By PK Sinha</li> <li>✓ Through Powerpoint Presentation</li> </ul> | 2 Days |
| Secondary Storage Devices                      | Students will learn about various types of storage devices in computer  | 3 days |



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|--|--|--------|
|  | <ul style="list-style-type: none"> <li>• Magnetic disk</li> <li>• Winchester disk</li> <li>• Optical disk</li> <li>• Comparison between these all types of secondary storage devices</li> <li>✓ From Computer Fundamentals By PK Sinha</li> </ul>  |        |
| Types of software                              | <ul style="list-style-type: none"> <li>• Students will Learn about types of software on the basis of functionality</li> <li>• System software (operating system,communication software)</li> <li>• Application software</li> <li>✓ From Computer Fundamentals By PK Sinha</li> </ul>   | 2Days  |
| Translators                                    | <ul style="list-style-type: none"> <li>• Students will be acquainted with what is translator and different types of translators</li> <li>• Compiler</li> <li>• Interpreter</li> <li>• Assembler</li> <li>• Difference between various types of translators</li> <li>• Need of translators</li> <li>✓ From Computer Fundamentals By PK Sinha</li> <li>✓ Through Powerpoint Presentation</li> </ul>  | 3 days |
| Introduction to data communication and network | <ul style="list-style-type: none"> <li>• Students will be acquainted with what is data communication, its component,data representation,data flow</li> <li>• Definition of data communication</li> <li>• Effective characteristics of data communication</li> <li>• Five components of data communication(sender,receiver,medium,message,protocol)</li> <li>• Data flow(simplex,half-duplex,full duplex)</li> <li>•</li> <li>✓ From introduction to computer networks and data communication by Behrouz A. Forouzan</li> </ul> | 4 days |
| Introduction to window vista                   | <ul style="list-style-type: none"> <li>• Students will learn about Features of window vista</li> <li>• Parts of window screen(desktop&gt;window&gt;icon)</li> <li>• Start menu</li> </ul>  | 20Days |

|                       |  |         |
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|                       | <ul style="list-style-type: none"> <li>• Taskbar settings</li> <li>• Application and document window</li> <li>• Anatomy of a window</li> <li>• Window explorer</li> <li>• About desktop icons</li> <li>• Folder,shortcut creation</li> <li>• Settings of screen saver,color setting,wallpaper,changing window appearance</li> <li>✓ From window vista book by wempen</li> </ul>  |         |
| Disk operating system | <ul style="list-style-type: none"> <li>• Students will gain knowledge about types of operating systems and its features</li> <li>• Definition of operating system,its functions</li> <li>• Types of operating systems(batch system,real time systems,multiprogramming,multitasking,single,multiuser system)</li> <li>• Hot and cold booting internal commands,external commands</li> <li>✓ From operating system concepts book by silberschatz</li> </ul>  | 15 Days |
| Introduction to unix  | <ul style="list-style-type: none"> <li>• Students will learn about operating system- Unix (its basics, architecture or structure )</li> <li>• Features of unix</li> <li>• Structure of unix(kernel shell)</li> <li>• Unix file system</li> <li>• Various types of file system in unix</li> <li>• Types of files</li> <li>• Types of users</li> <li>• Simple commands on unix(Cat,Is,In,chmod etc.)</li> <li>• Piping in unix,filters</li> <li>• Batchg processing,shell programming</li> <li>• Vi editor(opening,insertion,modification,deletion,saving files)</li> <li>• Types of shell</li> <li>✓ From Beginning Unix book by paul love</li> </ul> | 10 days |

**Lesson Plan PGDCA-I Sem**  
**Database Management System through**  
**Oracle-10g & system analysis & design**

| Topic                                      | Notes/Strategies/ Resources   | Time    |
|--|---|---------|
| Basics of database management system(DBMS) | <ul style="list-style-type: none"> <li>• What is data,information, database</li> <li>• Software to manage database(DBMS)</li> <li>• Need of data base system</li> <li>• Limitations of file system</li> <li>• Advantages of DBMS</li> <li>• Three level architecture of database system</li> <li>• Mapping in various levels of database</li> <li>• Who is DBA?</li> <li>• Relational database(what are relations, tuples, attributes etc.)</li> <li>✓ From Fundamentals of DBMS by Anshuman Sharma</li> <li>✓ From fundamentals of databse system by Shamkant B.Navathe</li> </ul> | 15 days |
| Data Models in DBMS                        | <ul style="list-style-type: none"> <li>• Various types of data models, their limitations , advantages</li> <li>• Introduction to Relationbal model - its objective,database schema</li> <li>• Domain constraints, referential integrity constraints , entity integrity constraints,key constraints</li> <li>✓ From Fundamentals of DBMS by Anshuman Sharma</li> <li>✓ From fundamentals of databse system by Shamkant B.Navathe</li> </ul>  | 15 days |
| System analysis and designs                | <ul style="list-style-type: none"> <li>• What is System development life cycle(SDLC)?</li> <li>• Various stages of SDLC</li> <li>• Various SDLC modelsand their pros and cons</li> </ul>  | 10 days |

|                      |   |         |
|----------------------|---|---------|
|                      | <ul style="list-style-type: none"> <li>• System development tools</li> <li>✓ From Fundamentals of DBMS by Anshuman Sharma</li> <li>✓ From fundamentals of database system by Shamkant B.Navathe</li> </ul>  |         |
| SQL*PLUS –Oracle 10g | <ul style="list-style-type: none"> <li>• Introduction to oracle 10g</li> <li>• Various types of commands on mysql database – DCL,DML,DOL</li> <li>• What are joins?</li> <li>• Natural join, theta join, full outer join, left outer join ,right outer join</li> <li>• What is relation algebra in SQL</li> <li>• Basics operations of relational algebra<br/>-union ,intersection,minus</li> <li>• Built in functions , views, sequences,security in users, indexing,</li> <li>• Object oriented features of oracle 10g</li> <li>• Introduction to PL/SQL</li> <li>• What are cursor- implicit and explicit cursors</li> <li>• What are procedures , functions and packages in PL/SQL</li> <li>• Various database trigger</li> <li>✓ From Fundamentals of DBMS by Anshuman Sharma</li> </ul> | 20days  |
| Basics of PL/SQL     | <ul style="list-style-type: none"> <li>• Introduction to PL/SQL</li> <li>• What are cursor- implicit and explicit cursors</li> <li>• What are procedures , functions and packages in PL/SQL</li> <li>• Various database triggers</li> <li>✓ From Fundamentals of DBMS by Anshuman Sharma</li> </ul>   | 10 days |