

## Advance Diploma in Computer Application

S. No	Topic
1	<p>Introduction to Computer</p> <p>Computer and Latest IT gadgets, Evolution of Computers &amp; its applications, IT gadgets and their applications, Basics of Hardware and Software, Central Processing Unit, Input devices, Output devices, Computer Memory &amp; storage, Application Software, Systems Software, Utility Software, Open source and Proprietary Software</p>
2	<p>Introduction to Operating System</p> <p>Operating System, Basics of Operating System, Operating Systems for Desktop and Laptop, User Interface for Desktop and Laptop, Task Bar, Icons &amp; shortcuts, running an application, Operating System simple setting, using mouse and changing its properties, changing system date and time, changing display properties, to add or remove Program and its features, adding, removing &amp; sharing Printers, File and Folder management, types of file extensions.</p>
3	<p>Information Technology and Office Tools-</p> <p>Introduction to Computer; Introduction to Operating System; Word Processing; Spreadsheet; Presentation; Introduction to Network, Internet and WWW; E-mail, Social Networking and e-Governance Services; Digital Financial Tools and Applications.</p>
4	<p>An Overview of the Database Management System: What is database?, Why database?, database system, database management system (DBMS), advantages of DBMS.</p> <p>An Architecture of the Database system: Three levels of architecture, mappings, role of Database Administrator (DBA), E-R model, three approaches of DBMS- relational, hierarchical and network.</p> <p>Relational Database Management System (RDBMS): Introduction, RDBMS terminology, relational model, base tables, keys.</p> <p>Normalization: Normal forms, Boyce-Codd Normal form, higher normal forms.</p> <p>The SQL Language: Introduction, Characteristics of SQL, data definition, data manipulation, SQL commands, SQL operators, Queries, aggregate functions.</p> <p>Backup and Recovery: Transaction recovery, system recovery, SQL support.</p>
5	<p>HTML Programming Basics:</p> <p>Introduction, Basic Structure of HTML, Head Section, Formatting Tags: Bold, Italic, Underline, Strikethrough, Anchor links and Named Anchors Image Tag, Paragraphs, Tables: Attributes –(Border, Cellpadding, Cellspacing , height , width), TR, TH, TD, Rowspan, Colspan Lists : Ordered List , Unordered List , Forms, Form Elements, Input types, Input Attributes, Text Input Text Area, Dropdown, Radio buttons , Check boxes, Submit and Reset Buttons Frames: Frameset, nested Frames.</p> <p>CSS:</p> <p>Introduction to CSS, Types of CSS, CSS Properties: Back Ground properties, Block Properties, Box properties, List properties, Border Properties, Positioning Properties, CSS Lists CSS Tables, CSS Menu Design CSS Image Gallery. JavaScript:</p> <p>Introduction to Scripting Language, Variables in Java Script, Operators in JS, Conditions Statements, JS Popup Boxes, JS Events, Basic Form Validations in JavaScript.</p> <p>Photo Editor: Basic photo editing using Photo editor software.</p>

6	Problem solving and programming on Python – Introduction to Python, Operators, Expressions and Python Statements, Sequence Data Types, Functions, File Processing, Scope and Modules, NumPy Basics.
7	Internet of Things and its Applications (IOT) Introduction to Internet of Things – Applications/Devices, Protocols and Communication Model, Sensors, Actuators and Microcontrollers