# COMPUTER APPLICATIONS (COMMERCE)

| Chapter | Focus Area |
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| **1. Fundamentals of Computer** | Data and information, Functional units of computer, Computer and its characteristics, Number conversions – Decimal to non decimal and reverse, Shortcut methods (avoid fractional conversion), Representation of integers (Sign & Magnitude, 1's and 2's compliments) and characters (ASCII & Unicode). |
| **2. Components of the Computer System** | Primary memory (RAM and measuring units), Input - Output devices, e-Waste and disposal methods, System software (OS, Language processors – compiler and interpreter), Free and open source software. |
| **3. Principles of Programming and Problem Solving** | Phases in programming (Listing only), Debugging (Types of errors), Development of algorithms and flowcharts to solve simple problems only (except looping). |
| **4. Getting started with C++** | Tokens and classification with examples |
| **5. Data Types and Operators** | Fundamental data types, Variables, Operators and classifications, Types of expressions, Types of statements. |
| **6. Introduction to Programming** | Structure of C++ program, Variable initialization, Arithmetic assignment operators, Increment – decrement operators, Type conversion. (No programming). |
| **7. Control Statements** | Decision making statements (if, if – else, if – else if, switch), Iteration statements (while, for, do – while) – syntax and working, (No programming). (Nesting not required) |
| **8. Computer Networks** | Advantages of network, Key terms (Bandwidth, noise, node), Data communication devices(switch, router, gateway, bridge, modem), Types of network (PAN, LAN, MAN, WAN), Network topologies, Identification of computers over network (MAC, IP) |
| **9. Internet** | Services on Internet (Working procedure is not required), Cyber security (Computer virus, Trojan horse, hacking, phishing). |
| **10. IT Application** | e-Governance (Types, infrastructure), e-Business, e-Learning (Including benefits and challenges) |