

SYLLABUS: ASSISTANT GRADE-I (IT) IN DTTDC LTD.

- **Programming & OOP:** C, C++, Java, Python; object-oriented concepts
- **Data Structures & Algorithms:** Arrays, linked lists, trees, graphs; sorting, searching, complexity
- **Database Management Systems:** SQL, normalization, transactions, NoSQL basics
- **Operating Systems:** Processes, memory management, file systems
- **Computer Networks:** OSI/TCP-IP, HTTP/HTTPS, DNS, basic network security
- **Software Engineering:** SDLC, Agile, system design, UML, version control (Git)
- **Web & Application Development:** HTML, CSS, JavaScript, APIs, backend basics
- **Cyber Security:** Threats, cryptography basics, secure coding, overview of Information Technology Act, 2000
- **Cloud & DevOps:** IaaS, PaaS, SaaS; CI/CD, containerization basics
- **Artificial Intelligence & Generative AI:** AI/ML basics, LLMs, NLP, prompt basics, ethical AI
- **Software Testing:** Unit, integration, system testing, debugging
- **E-Governance:** Digital India, government IT systems and service delivery
- **IT Project Management:** Planning, risk management, Agile/Scrum
- **Emerging Technologies:** Blockchain, IoT, Big Data (overview)