

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH
CHENNAI**

**Deemed to be University under Distinct Category – A Centrally Funded Technical Institute
PG DIPLOMA IN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING**

Syllabus for Entrance Examination

Section 1: Data Structures

Introduction to Data Types and Data Structures - Abstract Data Types (ADT) - Time and Space Complexity (Big-O Notation) - Arrays - Linked Lists - Stack – Queue – Searching – Sorting

Section 2: Database Management Systems

Introduction – Data Models – ER Model – Relational Model – Basic SQL Queries – Normalization

Section 3:

Introduction – Types of OS – System calls – System processes – Threads – CPU Scheduling – Process synchronization – Deadlocks

Section 4:

Structure of computer – Digital logic and Number systems – Instruction cycle – CPU, ALU, CU and memory organization

Section 5:

Components and types of networks – Topologies – OSI Layer Architecture – Physical layer: Devices and switching techniques – Data link layer: Framing, Error detection, flow control – Network layer: Logical addressing, subnetting – Transport layer: TCP, UDP – Application layer: HTTP,FTP,SMTP protocols