**Week 1**

- **Day - 1 :** Introduction to Operating System : What is OS, Types, Primary components, Thread vs Process, Multithreading
- **Day - 2, 3, 4 :** Process management (OS) : Process states and scheduler, All scheduling algorithms
- **Day - 5, 6 :** Process synchronization (OS): Synchronization, Critical section, Semaphores, Monitors
- **Day – 7:** Deadlock (OS): Prevention, Avoidance, Detection, Recovery

**Week 2**

- **Day-1, 2, 3 :** Memory management & virtual memory (OS): Binding, Memory management, Partitioning, Fitting Algorithms, Paging, Virtual memory, Segmentation
- **Day 4:** *Attempt Contest on OS*
- **Day 5:** Introduction to DBMS : Introduction and evolution
- **Day 6:** ER and Relational model (DBMS) : ER models, Relational model, Keys
- **Day - 7 :** Database design (DBMS): Normalization, Functional dependencies, Normal forms

**Week 3**

- **Day - 1, 2 :** SQL (DBMS)
- **Day - 3, 4 :** File structures (DBMS): Indexing and B, B+ trees **(attempt contest)**
- ***Day – 5:*** *Attempt contest on DBMS*
- **Day – 6, 7:** Transactions and concurrency control (DBMS): ACID, Schedules, Serializability, Roll back, Two phase locking,

- **Day- 5, 6:** Data link layer (CN) : Delays, Stop & wait, Sliding window, Selective repeat, Go back N
- **Day-6, 7:** Network layer (CN): Introduction, Circuit switching vs Packet switching, Classless and Classful IP addressing, NAT.

**Week 5**

- **Day 1, 2:** Sub-netting, CIDR, Address resolution protocol, Routing Algorithms
- **Day 3:** Transport layer (CN): Introduction, TCP and UDP
- **Day 4:** Application layer (CN): DNS, DHCP, ARP
- ***Day 5:*** *Attempt contest on CN*

- **Day 6 onwards:** Most asked interview questions for Computer Networks, Operating System, DBMS

Note 1: This is a recommended plan to complete the course, but it is the complete discretion of the candidates to choose their way of completion of the course depending on the availability and efficiency of the course.

Note 2: Also while solving tracks it is advisable to complete the quizzes simultaneously.