

# **HARDWARE & NETWORKING**

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## **COURSE DURATION 30 HOURS**

### **ALLOCATION OF TOTAL HOURS FOR EACH CHAPTER:**

<b>SI No</b>	<b>Chapter</b>	<b>Theory in Hours</b>	<b>Practical in Hours</b>
1.	Introduction about computer	1	1
2.	Basic Networking concepts	1	2
3.	Introduction to various networking devices	2	2
4.	Inside the PC	4	2
5.	Network basic and configuration	4	4
6.	Introduction to servers and network security	4	4
		15	15

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### **DETAILED SYLLABUS**

1. Introduction about Computer
  - 1.1. Basics of computer
  - 1.2. Organization of computer.
  - 1.3. Software and hardware.
  - 1.4. Input/output devices.
2. Basic networking concepts,
  - 2.1 Network topologies:
    - 2.1.1 LAN, WAN, MAN, PAN, CAN.
  - 2.2 Networking Model
    - 2.2.1. The OSI model
    - 2.2.2. TCP/ IP Model
  - 2.3 Network adapters.
  - 2.4 Introducing protocols.
  - 2.5 Cabling and troubleshooting.
3. Introduction to various networking devices:
  - 3.1. Routers.
  - 3.2. Switches.
  - 3.3. Modems.
  - 3.4. Hubs etc.
  - 3.5. Wired and Wireless technology.



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## COURSE DURATION

### 4. Network basic and configuration:

- 4.1. Setting IP addresses,
- 4.2. Sharing files and folders.
- 4.3. Network troubleshooting.
- 4.4. PING test, ipconfig etc.

### 5. Introduction to servers and network security

#### 5.1. Types of servers:

- 5.1.1. Files servers,
- 5.1.2. Email Servers,
- 5.1.3. Proxy servers etc.

#### 6.2 .Basics of Internet and Intranet:

#### 6.3 .Types of Internet connections:

- 6.3.1 Dialup, Broadband, Leased Line, Wi-Fi, Wi-Max, 2G, 3G, 4G, WWW, E-mails, Search Engines, Social Networking.
- 6.3.2 Cloud application.
- 6.3.3 Audio-video Conferencing.
- 6.3.4 Voice over Internet Protocol (VOIP).

#### 6.4. Recovery and backup.

#### 6.5. Essential security measures.