

## Contact Info:

31 Malek Tower (9th floor- 2nd lift) Farmgate, Dhaka, Bangladesh.

Contact: +88 01626-523929 , 01950-222777

E-mail: [smtbangladesh@yahoo.com](mailto:smtbangladesh@yahoo.com) Web: [www.nextadmission.com](http://www.nextadmission.com)

# CCNA (Routing and Switching ) New Version (102 Hours)

## **Chapter 1: Internetworking**

- Internetworking Basics
- Internetworking Models
- The OSI Reference Model

## **Chapter 2: Ethernet Networking and Data Encapsulation**

- Ethernet Networks in Review
- Ethernet Cabling
- Data Encapsulation
- The Cisco Three-Layer Hierarchical Model

## **Chapter 3: Introduction to TCP/IP**

- Introducing TCP/IP
- TCP/IP and DoD Model
- IP Addressing
- IPv4 Address Types

## **Chapter 4: Easy Subnetting**

- Subnetting Basics
- Summary

## **Chapter 5: Variable Length Subnet Masks (VLSMs), Summarization and Troubleshooting TCP/IP**

- Variable Length Subnet Masks (VLSMs)
- Summarization
- Troubleshooting IP Addressing

## **Chapter 6: Cisco's Internetworking Operating System (IOS)**

- The IOS User Interface
- Command-Line Interface (CLI)
- Router and Switch Administrative Configurations
- Router Interfaces
- Viewing, Saving and Erasing Configurations

## Contact Info:

31 Malek Tower (9th floor- 2nd lift) Farmgate, Dhaka, Bangladesh.

Contact: +88 01626-523929 , 01950-222777

E-mail: [smtbangladesh@yahoo.com](mailto:smtbangladesh@yahoo.com) Web: [www.nextadmission.com](http://www.nextadmission.com)

## Chapter 7: Managing a Cisco Internetwork + Managing Cisco

### **Devices (book ICND II)**

- The Internal Components of a Cisco Router
- The Router Boot Sequence
- Managing Configuration Register
- Backing Up and Restoring the Cisco IOS
- Backing Up and Restoring the Cisco Configuration
- Using Cisco Discovery Protocol (CDP)
- Using Telnet
- Resolving Hostnames
- Checking Network Connectivity and Troubleshooting

## Chapter 8: IP Routing

- Routing Basics
- The IP Routing Process
- Configuring IP Routing in Our Network
- Dynamic Routing
- Distance-Vector Routing Protocols
- Routing Information Protocol (RIP)
- Verifying Your Configurations

## Chapter 9: Enhanced IGRP (EIGRP) and Open Shortest Path First (OSPF)

- EIGRP Features and Operation
- Using EIGRP to Support Larger Networks
- Configuring EIGRP
- Load Balancing with EIGRP
- Verifying EIGRP
- Open Shortest Path First (OSPF) Basics
- Configuring OSPF
- Verifying OSPF Configuration
- OSPF DR and BDR Elections
- OSPF and Loopback Interfaces
- Troubleshooting OSPF
- Configuring EIGRP and OSPF Summary Routes
- Chapter 10: Multi-Area OSPF

## Contact Info:

31 Malek Tower (9th floor- 2nd lift) Farmgate, Dhaka, Bangladesh.

Contact: +88 01626-523929 , 01950-222777

E-mail: [smtbangladesh@yahoo.com](mailto:smtbangladesh@yahoo.com) Web: [www.nextadmission.com](http://www.nextadmission.com)

### **Chapter 11: Layer 2 Switching and Spanning Tree Protocol (STP)**

- Before Layer 2 Switching
- Switching Services
- Spanning Tree Protocol (STP)
- Configuring Catalyst Switches

### **Chapter 12: Virtual LANs (VLANs) & InterVLAN Routing**

- VLAN Basics
- VLAN Membership
- Identifying VLANs
- VLAN Trunking Protocols (VTP)
- Routing between VLANs
- Configuring VLANs
- Configuring VTP
- Telephony: Configuring Voice VLANs
- RSTP
- PVSTP
- Ether Channels

### **Chapter 13: Security**

- Perimeter, Firewall and Internal Routers
- Introduction to Access Lists
- Standard Access Lists
- Extended Access Lists
- Turning Off and Configuring Network Services
- Monitoring Access Lists

### **Chapter 14: Network Address Translation (NAT)**

- When Do We Use NAT?
- Type of Network Address Translation
- NAT Names
- How NAT Works
- Testing and Troubleshooting NAT

## Contact Info:

31 Malek Tower (9th floor- 2nd lift) Farmgate, Dhaka, Bangladesh.

Contact: +88 01626-523929 , 01950-222777

E-mail: [smtbangladesh@yahoo.com](mailto:smtbangladesh@yahoo.com) Web: [www.nextadmission.com](http://www.nextadmission.com)

## **Chapter 15: Internet Protocol Version 6 (IPv6)**

- Why Do We Need IPv6?
- The Benefits and Uses of IPv6
- IPv6 Addressing and Expressions
- How IPv6 Works in an Internetwork
- IPv6 Routing Protocols
- Migrating to IPv6

## **Chapter 16: IP Services**

- Client Redundancy Issues
  - Introducing First Hop Redundancy Protocol (FHRP)
- Hot Standby Router Protocol (HSRP)
- Virtual Router Redundancy Protocol
- Syslog
- SNMP
- NetFlow

## **Chapter 17: Wide Area Networks**

- Introduction to Wide Area Networks
- Cable and DSL
- Cabling the Serial Wide Area Network
- High-Level Data-Link Control (HDLC) Protocol
- Point-to-Point Protocol (PPP)
- Virtual Private Networks
- GRE Tunnels