Networking - CCNA

Chapter Name	Topic
	The below topics are covered in-depth in the course
Internetworking	Introduction to Networking and OSI Model (layers of OSI Model, its functions and Protocols work at each layer.) Compare TCP/IP with OSI model.
IP Addressing	IP Address, Classes (A,B,C,D,E) Public and Private IP Addressing, Subnet Mask
Basics of Router	Cisco IOS , Router Modes, help Command, Types of Errors, Commands - History, Console password, Enable password and Secret password, Banner, Ports of Router(Console port, BRI, Ethernet, Fast-Ethernet, AUI, Aux) Router Connectivity (Real and Lab Scenerio), Types of Serial Cables (v.35,xxxxxx), Transmission Types (Synchronous and Asynchronous Transmission) DTE. DCE. CPE, etc. Types of Routers (Fixed and Modular), Router Series (Core router, Distribution and Access level Routers)
IP routing - Static	Assigning IP to Interfaces, No shutdown, Clock rate etc, Static and Dynamic Routing, Static (nexthop and exit interface) default route,
IP Routing - Dynamic	Types of Dynamic Routing, Protocols, Administrative Distance Number of all Routing Protocols (Chart)
RIP V1	Routing Information Protocol (Version 1), Configuration and Verfication
Subnetting	Subnetting of Major network of Class C, Class B and Class A
Rip V2	Routing Information Protocol (Version 2), Difference Ver1 and Ver2, Configuration of Ripv1 with Ripv2, Authentication in RipV2

	(keychain Authentication with clear text and MD5 (message-Digest 5 Algo)), Load-Balancing in Routing Information Protocol (Rip), Automatic Summarization , Loop-back interfaces.
VLSM	Variable Length Subnet Mask
CDP	Cisco Discovery Protocol, configuration and Verification.
Managing Cisco	Router IOS (Internetworking operating System), Router booting Sequence (RAM, NVRAM, FLASH (IOS), ROM), Commands- Show Version, sh flash, , sh running-configuration, sh Startup-configuration, Sh interfaces etc..
Register Configuration	Configuration Register values and Steps to bypass configuration to remove password.
Ospf	Open Shortest Path First Routing Protocol, Charaterstics and features, OSPF Termnologies , SPF Algorithm, Operation of OSPF (Neighbor Adjency, LSA Flooding, SPF Algorithm). Configuration and Verification of OSPF protocol.
Backup and Recovery	Backup of NVRAM, RAM, FLASH to TFTP Server. Restore process of Configuration from TFTP server.
Security (ACL)	Access control List (standard, extended and named acl)
Eigrp	IGRP AND EIGRP routing protocol
NAT	Network address Translation
Switching	Switching, Collision Domain and Broadcast Domain, Switching Services , Limitation of Layer 2 switching, Bridge Vs Switching, Switch Functions (Address Learning, Forward/Filter Decisions and Loop Avoidance)

STP	Spanning Tree protocol Terms (Root Bridge, BPDU, Bridge ID, Nonroot Bridge, Port-cost, Designated Port, Non-Designated port.) Spanning Tree Operations, Spanning Tree Ports States (Blocking, Listening, Learning, Forwarding, Disabled)
VLAN	creating and configuration of vlans, VTP and Inter vlan Routing.

An introduction to the below topics is covered in the course.

Wide Area Networks	ISDN (BRI and PRI channels), HDLC and PPP Protocols, PPP (PAP and CHAP Authentication)
Frame - Relay	Introduction, CIR, Encapsulation (Cisco, IETF), Virtual Circuits (PVC, SVC), DLCI, LMI, LMI Types (Ansi, Q.933a, Cisco), FR Congrestion Problem (DE, FECN, BECN), FR implementaiton and Monitoring, NBMA problem, Sub-interface, Types of sub-Interfaces (Point- to - Point, Multipoint).
Cisco Wireless	Cisco Wireless Technology
IPv6	Internet protocol Version 6