Computer Networks Course

Final Exam Study Guide

Chapter 4 and 5, 7th Edition Chapter 4, 5th and 6th Edition

Finding Router link interface using Destination Address and forwarding table

Router output port average buffer formula

IPv4, IPv6 and MAC addresses format and examples

Finding number of subnets in the network topology

IP addressing classes: A, B and C

DHCP protocol

Private Addresses Ranges

NAT

Implementation of Traceroute

Tunneling of IPv6 in IPv4

Dijkstra and Distance Vector Algorithm tables

RIP, OSPF and BGP (iBGP and eBGP)

SDN concept

OpenFlow Table Actions and examples

Chapter 5, 5th and 6th Edition

Simplex, Half Duplex and full duplex concept

Parity Check and CRC

CSMA/CD Algorithm

ARP Protocol and ARP table

Comparing DNS and ARP

Sending Datagram from one subnet to another subnet

Binary Exponential Backoff example

Switch Frame filtering/forwarding algorithm

Comparing switch with router

VLAN implementation and frame format

MPLS in layer 2.5 and comparison with IP

Data Center TOR and EOR options comparison

Order of protocols when connecting to google.com slide 122 – 128

Chapter 6, 5th and 6th Edition

Differences between Wired and Wireless links

Hidden Terminal Problem and signal attenuation

Bluetooth

CSMA/CA for wifi

Role of Three Addresses in IEEE802.11 Frame

802.11 mobility with in same subnet

Advanced feature in 802.11

One protocol example for each of WPAN, WLAN and WWAN