Networking Test #2 Review

30 Multiple Choice 30 marks  
30 Fill in the blanks 20 marks  
Short answers 50 marks

You are responsible for Notes and PowerPoints since the last test. Most questions were taken from the Notes with a few questions taken out of the labs.

# TCP/IP and Subnetting

# Beginning octet for Class A, B and C networks

* A = 0-127
* B = 128-191
* C = 192-255

# Network and Host part of Class A, B and C networks without subnets

# Loopback address

# Reserved addresses for private networks

* Reason that subnets are used
* So that you can break one network down into multiple smaller networks that can’t see each other or communicate with each other
* Subnet masks, Network IDs, Broadcast Address
* Calculating how many subnets and hosts can be created with x bits borrowed.
* Calculating Subnet masks for subnets
* CIDR notation – Know what it means and how to find it
* Problem with IPv4 and how IPv6 will solve this
* IPv4 only has 32 bits, so there’s much fewer possible address than IPv6 that has 128 bits.

# Wireless Networking

* Different methods wireless transmissions are sent
* Directional and Omnidirectional antennas
* The path a signal takes to reach its destination
  + Range, LOS, Reflection, Diffraction, Scattering, Fading, Attenuation, Noise
* Ad hoc WLAN
* Wireless nodes that communicate directly with each other using NICs
* Access point, roaming
* SSID, BSSID, ESSID
* SSID (service set identifier): ID of the access point
* BSSID (basic service set identifier):
* Wireless standards (a, b, g, n)
* Wireless Broadband, Satellite and WiMAX
* IEEE wireless designations
* Antennas, frequency, and amplitude definitions
* Bluetooth networks

# Wireless Network Security

* SSID, Admin Password,Access/Encryption Password (WEP, WPA, WPA2, MAC address filtering)
* What limits choice of encryption password
* Limiting AP signal access by access point positioning
* Encryption definition
* Remote administration
* Default IP address range
* Static vs Dynamic IP addresses
* Static IP address on device vs on router
* Private IP address ranges not reachable from the internet

# NOS

* Windows Server
  + Roles, Active Directory, DNS and DHCP setup on the client and server
* Linux basic commands and file permissions

# ENCRYPTION

* Private key encryption
  + # keys, how it is used, security risks with key sharing
* Public key encryption
  + # keys, how it is used to share files and prove users identity