Cisco Chapter 4 Revision Sheet

Question 1

Describe the function of a pulse: (Choose 2)

a) A consistent wave of energy which can be measured
b) A disturbance of fixed, predictable duration
c) Important in electrical signals to determine the value of data being transmitted
d) The height of a wave being measured
e) An electronic signal used to indicate a closed loop

Learn all the properties and purposes of a pulse!

Question 2

Which of the following describe square waves? (Choose 2)

a) Periodic waves which continually vary with time
b) Periodic waves which do not continuously vary with time
c) Square waves represent analogue signals
d) The wave holds one value for some time, and then suddenly changes to a different value
e) Sine waves are graphical representations of many natural occurrences that change regularly over time

Learn all the properties of both square and sine waves and what they are intended to measure!

Question 3

Name the units of measure commonly used in formulae for calculating the amount of gain or loss in networking signals? (Provide 3)

Watts
Volts
Decibels

Learn your formulas and be able to calculate gain/loss in a networking signal

Question 4

Which of the following are true about sine waves? (Choose 3)

a) They repeat a flat pattern both on top and at the bottom of the wave
b) Sine waves are periodic
c) Sine waves are continuously varying
d) Sine waves represent analogue signals
e) Sine waves appear square on an oscilloscope

Again, make sure you research both square and sine waves thoroughly!

Question 5

What are some of the factors that contribute to attenuation in a fibre optic cable?

a) Nothing, optical light does not suffer attenuation
b) EMI
c) Noise from twisted pair
d) Poorly installed connectors
e) An optical discontinuity reflecting light back

Learn the main causes of attenuation on all types of cabling!

Question 6

Which of the following cables are shielded? (Choose 2)

a) STP
b) UTP
c) Coaxial
d) Fibre Optic
e) Wireless Signal Cables

Learn which cables use shielding and why they use it!

Question 7

Which numbering systems are used to represent Decimal, Hexadecimal and Binary? (Choose 3)

a) Base 10
b) Base 2
c) Base 7
d) Base 15
e) Base 16

Learn the terms and descriptions for the commonly used numbering systems!

Question 8

For which type of waves would the signal loss or gain be calculated using the Voltage Formula?

a) Electromagnetic waves on copper cables
b) Light Waves on a Fibre Cable
c) Radio waves travelling through the air
d) Signal timing on a coaxial cable
e) Cable temperatures on a LAN

Question 9

List the common ways in which the capacities of communications systems are measured

Analogue Bandwidth
Digital Bandwidth

Learn the capacities and means to measure them

Question 10

List sources of line noise on a copper cable

Radio Transmitters (RFI)
Electrical Motors (EMI)
Crosstalk

Learn causes of interference on all media types!

Question 11

Why would twisted pair cable be favoured on a LAN installation over Fibre Optic (Choose 3)

a) Cheaper
b) Longer distances without attenuation
c) More resistant to EMI
d) Easier to install
e) Easier to connect

Learn why one type of media would be favoured over another, say Fibre Optic between buildings!

Question 12

What type of shielding does STP use? (Choose 2)

a) Lexan Infused
b) Foil-screened
c) Insulating sheath
d) Braided conductive
e) Compacted fibre wadding

Learn the makeup and shielding types for all media

Question 13

What problems are associated with impedance mismatches in copper cabling (Choose 2)

a) Jitter
b) Signal absorption
c) Termination of signals
d) Reflection
e) NEXT

Learn the consequences of impedance mismatches and what causes it

Question 14

List the terms used when transmission signals from one wire affects another wire pair (List 2)

Noise
Crosstalk

Learn the conditions which cause cross wire interference and how to prevent these occurring!

Question 15

Which additional standards must be met for CAT 6 cable to meet the ANSI/TIA/EIA-568-B.2-1 standards? (Choose 3)

a) Must pass all ten test from the original performance standards with higher scores
b) Must be capable of carrying frequencies up to 250 MHz
c) Must have lower levels of crosstalk and return loss
d) Must use CAT 6 multi-format shielding around shielded pairs
e) Must have a minimum copper cable diameter of 120 microns

Learn the standards for all categories of cables and learn the ten tests!

Question 16

In a new network installation, the network administrator has decided to use a medium that is cheap to install and can be installed quickly but will remain reliable. What medium would you recommend?

a) STP
b) Wireless
c) Fibre Optic
d) UTP
e) Coaxial

Learn the practical benefits that would appeal to a network administrator in differing mediums available when installing a new network!

Question 17

How does noise impact a data signal in a communication system?

a) It replaces the data signal
b) It blocks the data signal
c) It is added to the data signal
d) It creates a harmonic signal

Learn the actual effects of interference on different medium types

Question 18

What is the purpose of the X-axis on an oscilloscope?

a) To measure distance
b) To measure signal strength
c) To measure Signal direction
d) To measure Sine Bandwidths
e) To measure time

Learn the purposes of both the x and y axis on an oscilloscope and how units of measurement are taken

Question 19

What analysis is performed by an oscilloscope?

Time-domain analysis

Learn the functions of an oscilloscope!

Question 20

Which of the following describes amplitude?

a) Length of each wave
b) Height of each wave
c) Number of cycles each second
d) Shape of each wave

Learn the purpose of both amplitude and frequency!

Question 21

Choose from below, any ways that binary one's and zero's are represented on copper cables

a) +5 volts/ -5 volts
b) 0 volts/ 5 volts
c) light/ no light
d) high to low light transition
e) low to high light transition
f) increasing / decreasing electrical intensity

Learn the actual methods used to transmit binary data on all medium types!

Question 22

Which of the following correctly matches the definitions of analogue and digital bandwidth? (Choose 2)

a) Analogue bandwidth refers to frequency range
b) Analogue bandwidth is a measurement of the amount of frequency sent
c) Digital bandwidth refers to the range of a frequency
d) Digital bandwidth measures speed of the transmission
e) Analogue bandwidth is a measurement of how much information can flow

Learn how differing bandwidth are actually describes and what these descriptions mean in real terms!