



**Vendor: CWNP**

**Exam Code: CWNA-106**

**Exam Name: Certified Wireless Network Administrator**

**Version: 13.01**

**Q & As: 120**

**QUESTION 1**

What word describes the bending of an RF signal as it passes through a medium of a varying density from that of free space?

- A. Diffraction
- B. Reflection
- C. Refraction
- D. Diffusion
- E. Scattering

**Correct Answer:** C

**QUESTION 2**

What can cause an excessively high VSWR (Voltage Standing Wave Ratio) in a WLAN RF transmission line?

- A. An impedance mismatch in the RF cables and connectors
- B. Reflected direct current (DC) voltage on the main RF signal line
- C. Attenuation of the RF signal as it travels along the main signal path
- D. Crosstalk (inductance) between adjacent RF conductors

**Correct Answer:** A

**QUESTION 3**

What factors influence the distance that an RF signal can be effectively received? (Choose 3)

- A. Transmitting station's power source
- B. Receiving station's radio sensitivity
- C. Free Space Path Loss
- D. MAC layer encryption
- E. Transmitting station's output power
- F. Temperature in the Fresnel zone

**Correct Answer:** BCE

**QUESTION 4**

As an RF wave propagates through space, the wave front experiences natural expansion that reduces its signal strength in an area. What term describes the rate at which this expansion happens?

- A. MU-MIMO
- B. Inverse square law
- C. Path spread phenomenon
- D. Fresnel zone thinning
- E. Ohm's law

**Correct Answer:** B

**QUESTION 5**

Return Loss is the decrease of forward energy in a system when some of the power is being reflected back toward the transmitter. What will cause high return loss in an RF transmission

system, including the radio, cables, connectors and antenna?

- A. A Voltage Standing Wave Ratio (VSWR) of 1:1
- B. An impedance mismatch between components in the RF system
- C. Cross-polarization of the RF signal as it passes through the RF system
- D. The use of cables longer than one meter in the RF system
- E. High output power at the transmitter and use of a low-gain antenna

**Correct Answer:** B

#### QUESTION 6

What factors are taken into account when calculating the Link Budget of a point-to-point outdoor WLAN bridge link?

- A. Operating frequency
- B. Transmit antenna gain
- C. Transmit power
- D. Antenna height

**Correct Answer:** ABC

#### QUESTION 7

A WLAN transmitter that emits a 200 mW signal is connected to a cable with 3 dB loss. If the cable is connected to an antenna with 10 dBi gain, what is the EIRP at the antenna element?

- A. 10 dBm
- B. 13 dBm
- C. 20 dBm
- D. 26 dBm
- E. 30 dBm

**Correct Answer:** E

#### QUESTION 8

In a long-distance RF link, what statement about Fade Margin is true?

- A. Fade Margin is an additional pad of signal strength designed into the RF system to compensate for unpredictable signal fading.
- B. The Fade Margin of a long-distance radio link should be equivalent to the receiver's antenna gain.
- C. A Fade Margin is unnecessary on a long-distance RF link if more than 80% of the first Fresnel zone is clear of obstructions.
- D. The Fade Margin is a measurement of signal loss through free space, and is a function of frequency and distance.

**Correct Answer:** A

#### QUESTION 9

Which unit of measurement is an absolute unit that is used to quantify power levels on a linear scale?

- A. dBm
- B. W

- C. dB
- D. mW
- E. VSWR

**Correct Answer:** A

**QUESTION 10**

An 802.11 WLAN transmitter that emits a 50 mW signal is connected to a cable with 3 dB of loss. The cable is connected to an antenna with 16 dBi of gain. What is the EIRP power output?

- A. 10 mW
- B. 25 mW
- C. 50 mW
- D. 250 mW
- E. 1000 mW

**Correct Answer:** E

**QUESTION 11**

What is always required to establish a high quality 2.4 GHz RF link at a distance of 3 miles (5 kilometers)?

- A. Minimum output power level of 2 W
- B. Accurate Earth Bulge calculations
- C. Grid antennas at each endpoint
- D. A minimum antenna gain of 11 dBi at both endpoints
- E. A Fresnel Zone that is at least 60% clear of obstructions

**Correct Answer:** E

**QUESTION 12**

What phrase defines Equivalent Isotropically Radiated Power (EIRP)?

- A. The power output from the radio into the RF cable
- B. The power output from the radio after cable losses
- C. The highest RF signal strength that is transmitted from a given antenna
- D. Reflected power due to an impedance mismatch in the signal path
- E. Power supplied from the transmission line to the antenna input

**Correct Answer:** C

**QUESTION 13**

What term describes the effect of increasing the intensity of an RF wave with an antenna by focusing the energy in a specific direction?

- A. Distributed Radiation
- B. Active Amplification
- C. Beam Compression
- D. Passive Gain
- E. RF Flooding