# CWNP

## Exam CWDP-302

### Certified Wireless Design Professional

**Version: 6.0**

**[ Total Questions: 60 ]**

## Question No : 1

What kind of antenna results in a nearly circular pattern on the azimuth chart but a very flat donutshape on the elevation chart?

**A.** High gain omni-directional
**B.** 20 degree vertical yagi
**C.** 120 degree horizontal sector
**D.** 60 degree horizontal patch

**Answer: A**

## Question No : 2

What VoWiFi implementations frequently require multicast packet delivery support by the WLAN infrastructure?

**A.** All VoWiFi implementations
**B.** Push-to-Talk VoWiFi phones
**C.** All VoWiFi soft phones
**D.** All VoWiFi hard phones

**Answer: B**

## Question No : 3

As an implementation engineer, you have just received initial design specs from a network designer for your dual-band 802.11n deployment. The network design documents prescribe the following data rate configuration for the 2.4 GHz radio:

Basic Rates — 5.5, 6, 11, 12 Mbps

Supported Rates —9, 18, 24, 36, 48, and 54 Mbps as well as MCS 0-15

What will result from this design strategy?

**A.** By disabling support for 1 and 2 Mbps while allowing 5.5 and 11 Mbps, the network will force 802.11b clients to use these higher data rates.
**B.** Protection mechanisms will always be in use on this network to support 5.5 and 11

Mbps as basic rates.
**C.** HR/DSSS (802.11b) stations will not be able to associate to the service set.
**D.** This configuration violates the IEEE specification that defines 6, 12, and 24 Mbps as mandatory data rates for 802.11g/n.

**Answer: C**

## Question No : 4

Given: You are evaluating the theoretical and real-world RF gain benefits of transmit and receive features introduced by 802.11 with MIMO. This exercise allows you to quantify the feature's value in a real-world environment.

What is the maximum theoretical signal gain of chip-based TxBF and MRC (as features) when compared to the same AP using only a single antenna for transmit and receive (effectively simulating a 1x1 chip)?

**A.** 2 Rx or Tx chains = 3 dBi gain
3 Rx or Tx chains = approx 5 dBi gain
4 Rx or Tx chains = 6 dBi gain
**B.** 2 Rx or Tx chains = 1 dBi gain
3 Rx or Tx chains = 2 dBi gain
4 Rx or Tx chains = 3 dBi gain
**C.** 2 Rx or Tx chains = 3 dBi gain
3 Rx or Tx chains = 6 dBi gain
4 Rx or Tx chains = 9 dBi gain
**D.** 2 Rx or Tx chains = approx 4-6.5 dBi gain
3 Rx or Tx chains = approx 7-10 dBi gain
4 Rx or Tx chains = approx 10-12 dBi gain

**Answer: A**

## Question No : 5

In a manufacturing facility with highly reflective materials, you are planning an upgrade to your existing 802.11b WLAN implementation. You have chosen a dual-band 802.11n infrastructure product for this purpose. Your client applications include:

- Handheld scanners — for inventory management
- Toughbooks (laptops) — mounted on forklifts for inventory and workflow

management
- VoWiFi phones — used by select employees throughout the facility

You are evaluating all of the 802.11n enhancements and determining which features to enable for your environment and applications.

In this scenario, what 802.11n enhancement typically should NOT be enabled on the 2.4 GHz radio of the new APs?

**A.** Multiple streams
**B.** Short guard intervals
**C.** Block Acknowledgments
**D.** Frame aggregation

**Answer: B**

## Question No : 6

Why does a frame transmitted at 1 Mbps have a greater usable range than the same frame transmitted at 54 Mbps?

**A.** Free space path loss causes greater signal dispersion for higher rate transmissions.
**B.** Receiver sensitivity requirements are lower for frames transmitted with less complex modulation and coding.
**C.** To improve reliability, 802.11 STAs increase transmit power as the signaling rate decreases.
**D.** Lower data rate RF transmissions travel at higher speeds and are less likely to experience collisions.

**Answer: B**

## Question No : 7

You deployed an AP and installed its antenna, and you now need to set the AP transmit power. Given a desired EIRP of 21 dBm, and an antenna gain of 5.85 dBd connected through 25 feet of cable with a lossspecification of 4 dB/100 feet.

Assuming that there is no significant loss from the connectors, what should be the transmit power level for this AP?

**A.** 10 mW
**B.** 14 mW
**C.** 20 mW
**D.** 25 mW

**Answer: D**

## Question No : 8

One of your customers plans on providing wireless coverage to a warehouse facility. After performing an initial walkthrough, you collect the following information:

- The central part of the warehouse is between 400 and 600 feet (122 to 183 meters) from the warehouseswitches mounted on the walls.
- The warehouse storage is composed of metallic racks with varying inventory levels and contents, from electronics and plastic toys to food pallets and juice bottles.
- Workers need basic data coverage from their working location, and are not highly mobile. They usually work from one single aisle, and their laptop is on a cart with wheels.

What would be your one recommendation to provide coverage to the central area of the warehouse?

**A.** Equip workers laptops with a directional antenna and install APs less than 328 feet (100m) away from the switch.
**B.** In this case, extend the cable length just beyond 328 feet (100 m) and position APs as close as possible to the central area of the warehouse.
**C.** Position APs along the walls, and equip the APs with Yagi antennas to cover the central area.
**D.** Install APs for client access in the central area and use a mesh backhaul link to connect to the DS.

**Answer: D**

## Question No : 9

What commonly causes a client-to-AP link imbalance?

**A.** The client’s antenna gain is lower than the AP’s antenna gain
**B.** The client’s transmit power is significantly lower than the AP’s transmit power
**C.** The AP’s transmit power is significantly lower than the client’s transmit power