

CompTIA RF0-001

CompTIA RF0-001 RFID+ Certification Exam

Practice Test

Version 1.1

QUESTION NO: 1

Under optimal conditions, active RFID tags operating at 303.8MHz or 433.92MHz can be read at:

- A. less than 9.7 feet (3 meters).
- B. more than 322.6 feet (100 meters).
- C. more than 10 miles (16 kilometers).
- D. less than 6 inches (15 centimeters).

Answer: B

QUESTION NO: 2

High frequency (HF) output power is BEST measured as:

- A. decibels per meter.
- B. dBm.
- C. Effective Radiated Power (ERP).
- D. Effective Isotropic Radiated Power (EIRP).

Answer: B

QUESTION NO: 3

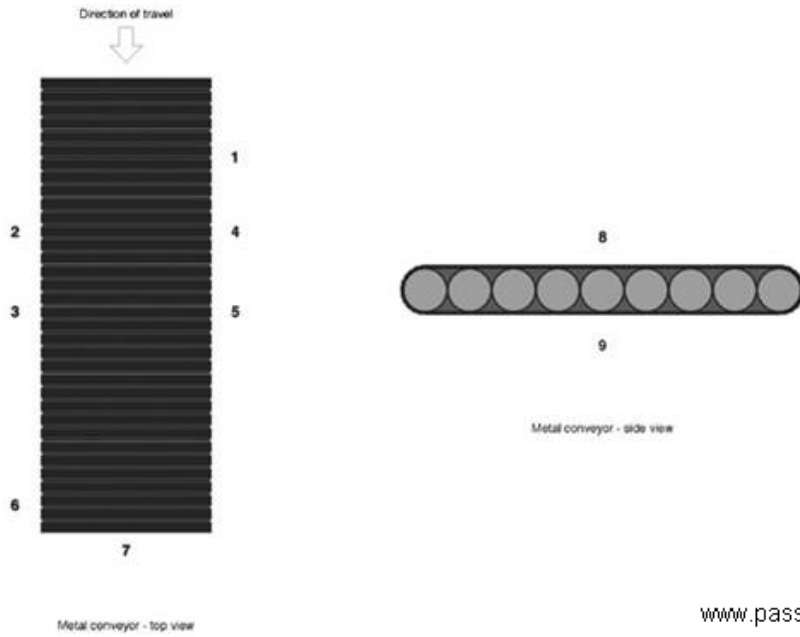
When firmware upgrades become available, which of the following should the technician consider FIRST?

- A. The benefits of new upgrade.
- B. When to schedule the upgrade.
- C. Whether the upgrade can be downloaded from the internet.
- D. How to install the upgrade.

Answer: A

QUESTION NO: 4

Based on the diagram below, at which of the following numbered locations should antennas be placed to read tags on six sides of an RF-opaque carton? (Select TWO).



- A. 2, 3, 4, 5
- B. 2, 3, 8, 9
- C. 3, 5, 8, 9
- D. 2, 4, 8, 9

Answer: C,D

QUESTION NO: 5

When installing a passive ultra high frequency (UHF) system that will read tags on consistently oriented cases as they move past an interrogator on a conveyor system, which of the following types of antenna would provide the BEST results?

- A. Circularly polarized
- B. Yagi
- C. Whip
- D. Linearly polarized

Answer: D

QUESTION NO: 6

RFID labels that were being printed correctly are now being printed with half the image area across two labels and the tags cannot be validated. Which of the following should the technician check FIRST?

- A. Communications protocol
- B. Print drivers
- C. Sensor settings
- D. Printer speed

Answer: C

QUESTION NO: 7

Which of the following is an attribute of an inductively coupled system [e.g. low frequency (LF), high frequency (HF)] that a capacitively coupled [e.g. ultra high frequency (UHF), uW] system does not have?

- A. Capacitive power circuitry.
- B. Inductive dipole antenna.
- C. Inductive coil antenna.
- D. Capacitive material in which to store power.

Answer: C

QUESTION NO: 8

A customer has an RFID system to sort packages by their destination in real time. When first installed, the system worked properly but now most packages are not going to the correct destination. Which of the following BEST describes the cause of this problem?

- A. The customer is using a bad batch of tags.
- B. Interrogator output power has degraded over time.
- C. There are increased losses in the antenna cabling.
- D. Sensors that control the interrogator were repositioned.

Answer: D

QUESTION NO: 9

Within an office environment, a property manager must place an RFID tag on all assets with a value of greater than \$100. The tags must cost less than \$10 each; be able to store a maximum of one kilobit of data and read with a portable interrogator. When performing inventory, the manager is unable to move the assets to interrogate the tags. The RFID tags used should be applied to the front of the asset with an adhesive strong enough to prevent tag removal and be:

- A. a Surface Acoustic Wave (SAW) tag.
- B. a passive Class 0 tag.
- C. a passive 13.56 MHz tag.
- D. an active Class 1 Gen 2 tag.

Answer: C

QUESTION NO: 10

When using an RFID enabled printer to encode tags as they are being printed, which of the following determines the data being encoded?

- A. The printer is encoding in a sequence guaranteeing unique data on each tag.
- B. The software generating the print job.
- C. The printer's firmware.
- D. RFID enabled printers cannot encode RFID tags.

Answer: B

QUESTION NO: 11

After viewing a site diagram, it is observed that the location of one of the interrogation zones is bisected by a steel door. Which of the following problems could this cause?

- A. Having steel doors amplifies the interrogator signal.
- B. Tags on the other side of the closed door would be read more than once.
- C. If the door is closed, the interrogation area is reduced by one-half.
- D. With the doors closed, the signal strength would overload the interrogator.

Answer: C

QUESTION NO: 12

A large number of antennas are being damaged at the dock doors of an existing installation. Upon further inspection, the technician discovers that forklift operators are hitting the antennas because they are 2 inches (5 centimeters) in front of the protective pylons/ballards. Which of the following would be the BEST solution?

- A. Move the dock stands so they are further out of the travel path than the protective equipment installed.
- B. Remove the dock stands and install them somewhere else in the operation.

- C. Re-install the antennas so they protrude into the travel path further than the dock stands.
- D. Replace the dock stands with smaller, less obtrusive dock stands.

Answer: A

QUESTION NO: 13

An RFID application at an automobile distributorship must be able to inventory the cars from a central location. Which one of the following RFID technologies would work BEST in this application?

- A. Passive high frequency (HF)
- B. Passive ultra high frequency (UHF)
- C. Active UHF
- D. Active surface acoustic wave (SAW)

Answer: C

QUESTION NO: 14

When installing an RFID system, lightning suppressors:

- A. are optional because lightning operates at higher frequencies than RFID.
- B. should be installed because of the potential severity of the effects of a lightning strike.
- C. are not needed because they are expensive and the probability of a facility being hit by lightning is low.
- D. are only needed in certain states within the United States.

Answer: B

QUESTION NO: 15

If a manufacturer ships items to the United States Department of Defense (DoD) and major retailers, which of the following standards applies to the use of RFID tags to identify the cartons and pallets they ship?

- A. Universal Product Code (UPC)
- B. None, no standards exist
- C. EPCglobalInc.
- D. International Organization for Standardization (ISO) 9001

Answer: C

QUESTION NO: 16

Using a spectrum analyzer, it is determined that the source of interference in a passive ultra high frequency (UHF) system is the vehicle-mounted computers. The computers are operating in spread-spectrum 915 MHz mode. Which of the following would be the MOST efficient method of resolving this situation?

- A. Replace the radio cards in the computer terminals with 802.11 radio cards and change the access points to support 802.11 operation as well.
- B. Surround the computer terminals with a shield so the terminals cannot emit signals into the interrogation zones.
- C. Remove the computer terminals, replacing them with computers that operate in a different frequency range and update the wireless network to support this change.
- D. Replace the radio cards in the computer terminals with 802.11 radio cards and the computer terminals will be able to communicate over the existing access points.

Answer: A

QUESTION NO: 17

Which of the following would be the BEST reason to use a hand-held rather than stationary interrogator?

- A. Aesthetic appeal
- B. User abilities
- C. System support
- D. Functional capabilities

Answer: D

QUESTION NO: 18

A client has validated that tags are reading at the point of application by using an automated print-and-apply device. At the end of the manufacturing line, the same tags have now failed. Upon inspection of the manufacturing process, the operator determines that the tags are being bent. Which of the following would be the BEST solution for this problem?

- A. Adjust the tag placement.
- B. Remove the tagging operation from the manufacturing process.

- C. Order sputtered-antenna tags for the client.
- D. Change the tag manufacturing process.

Answer: A

QUESTION NO: 19

If an interrogator and associated antennas are located at a dock door with a desk for the traffic coordinator, which of the following may be a concern?

- A. The forklift drivers would have access to the interrogator data.
- B. The traffic coordinator may be over exposed to radio waves.
- C. The traffic coordinator would rely too much on the RFID data.
- D. The interrogator could not be connected to the network.

Answer: B

QUESTION NO: 20

Which of the following air interface standards would be applicable to the development of a passive system for the tagging of cases and pallets?

- A. ISO/IEC 18000-3
- B. ISO/IEC 18000-7
- C. Electronic Product Code (EPC) Tag Data Standard 1.27
- D. International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) 18000-6, Type C

Answer: D

QUESTION NO: 21

When assisting with a site analysis for an active Real Time Locating System (RTLS), which of the following will have the LEAST affect upon the number of interrogators installed?

- A. The size of the area to be covered.
- B. The ampere-hour rating of the tag's battery.
- C. The frequency of the system selected.
- D. The resolution required for locating items.

Answer: B

QUESTION NO: 22

In a portal application where it is desirable for the interrogator to be triggered to read at certain times, which of the following would be the preferred trigger method?

- A. Use a photo optic sensor.
- B. Use a camera focused on the portal so that the system administrator can trigger the interrogator.
- C. Have a linear antenna.
- D. Have an employee plug-in the interrogator at desired time.

Answer: A

QUESTION NO: 23

A manufacturing plant uses plastic totes and attaches passive ultra high frequency (UHF) inserts to the totes for tracking purposes. A high percentage of the tags are failing. Which of the following is the MOST likely cause?

- A. There is electrostatic discharge (ESD) from the plastic totes.
- B. The ambient temperature of 50 C (122 F) is too high.
- C. The interrogator antenna is too close to the tag.
- D. The totes are damp causing the tags to short out.

Answer: A

QUESTION NO: 24

Ideally, as a tag passes through the antenna read window it should be:

- A. at least 30 feet (9.3 meters) from the antenna.
- B. on the same plane as the antenna.
- C. facing away from antenna.
- D. inside metal foil.

Answer: B

QUESTION NO: 25

Ultra high frequency (UHF) output power is measured as:

- A. Effective Radiated Power (ERP).
- B. decibels.
- C. decibels per meter.
- D. Effective Isotropic Radiated Power (EIRP).

Answer: D

QUESTION NO: 26

Anti-collision protocols in passive RFID systems allow:

- A. polite interactions between many interrogators in a single read zone.
- B. multiple tags to be read in a single pass through an interrogation zone.
- C. antennas to operate without interfering with one another.
- D. random tags to collide into each other.

Answer: B

QUESTION NO: 27

When an interrogator queries Electronic Product Code (EPC) Class 1 Gen 2 tags, the tag has the responsibility to perform which of the following?

- A. Place a randomly generated number in its slot counter.
- B. Tell the interrogator the channel the tag is going to use.
- C. Return its unique identification number on power up.
- D. Tell the interrogator the tag manufacturer.

Answer: A

QUESTION NO: 28

Which of the following RFID tags is BEST used for tracking in-transit assets carrying explosives?

- A. Active tags using power in excess of 15 milliwatts and an interrogator system strategic installed on a predetermined route.
- B. Passive tags that require the interrogator to be placed less than 9.7 feet (2.9 meters) from the tagged asset.
- C. Passive tags using strategically installed modulated backscatter interrogators.