

## HamRadioSchool.com Technician License Course Section 5.0 Question Pool

T1A06 (C) [97.3(a)(9)]

What is the FCC Part 97 definition of a beacon?

- A. A government transmitter marking the amateur radio band edges
- B. A bulletin sent by the FCC to announce a national emergency
- C. An amateur station transmitting communications for the purposes of observing propagation or related experimental activities
- D. A continuous transmission of weather information authorized in the amateur bands by the National Weather Service

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T3A02 (B)

Why might the range of VHF and UHF signals be greater in the winter?

- A. Less ionospheric absorption
- B. Less absorption by vegetation
- C. Less solar activity
- D. Less tropospheric absorption

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T3A08 (C)

Which of the following is a likely cause of irregular fading of signals received by ionospheric reflection?

- A. Frequency shift due to Faraday rotation
- B. Interference from thunderstorms
- C. Random combining of signals arriving via different paths
- D. Intermodulation distortion

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T3A09 (B)

Which of the following results from the fact that skip signals refracted from the ionosphere are elliptically polarized?

- A. Digital modes are unusable
- B. Either vertically or horizontally polarized antennas may be used for transmission or reception
- C. FM voice is unusable
- D. Both the transmitting and receiving antennas must be of the same polarization

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T3A11 (C)

Which part of the atmosphere enables the propagation of radio signals around the world?

- A. The stratosphere
- B. The troposphere
- C. The ionosphere
- D. The magnetosphere

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T3A12 (B)

How might fog and light rain affect radio range on the 10 meter and 6 meter bands?

- A. Fog and rain absorb these wavelength bands
- B. Fog and light rain will have little effect on these bands
- C. Fog and rain will deflect these signals
- D. Fog and rain will increase radio range

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T3A13 (C)

What weather condition would decrease range at microwave frequencies?

- A. High winds
- B. Low barometric pressure
- C. Precipitation
- D. Colder temperatures

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T3C01 (C)

Why are direct (not via a repeater) UHF signals rarely heard from stations outside your local coverage area?

- A. They are too weak to go very far
- B. FCC regulations prohibit them from going more than 50 miles
- C. UHF signals are usually not reflected by the ionosphere
- D. UHF signals are absorbed by the ionospheric D layer

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T3C02 (C)

Which of the following is an advantage of HF vs VHF and higher frequencies?

- A. HF antennas are generally smaller
- B. HF accommodates wider bandwidth signals
- C. Long distance ionospheric propagation is far more common on HF
- D. There is less atmospheric interference (static) on HF

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T3C03 (B)

What is a characteristic of VHF signals received via auroral reflection?

- A. Signals from distances of 10,000 or more miles are common
- B. The signals exhibit rapid fluctuations of strength and often sound distorted
- C. These types of signals occur only during winter nighttime hours
- D. These types of signals are generally strongest when your antenna is aimed west

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T3C04 (B)

Which of the following propagation types is most commonly associated with occasional strong over-the-horizon signals on the 10, 6, and 2 meter bands?

- A. Backscatter
- B. Sporadic E
- C. D layer absorption
- D. Gray-line propagation

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T3C05 (A)

Which of the following effects might cause radio signals to be heard despite obstructions between the transmitting and receiving stations?

- A. Knife-edge diffraction
- B. Faraday rotation
- C. Quantum tunneling
- D. Doppler shift

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T3C06 (A)

What mode is responsible for allowing over-the-horizon VHF and UHF communications to ranges of approximately 300 miles on a regular basis?

- A. Tropospheric ducting
- B. D layer refraction
- C. F2 layer refraction
- D. Faraday rotation

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T3C07 (B)

What band is best suited for communicating via meteor scatter?

- A. 10 meter band
- B. 6 meter band
- C. 2 meter band
- D. 70 centimeter band

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T3C08 (D)

What causes tropospheric ducting?

- A. Discharges of lightning during electrical storms
- B. Sunspots and solar flares
- C. Updrafts from hurricanes and tornadoes
- D. Temperature inversions in the atmosphere

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T3C09 (A)

What is generally the best time for long-distance 10 meter band propagation via the F layer?

- A. From dawn to shortly after sunset during periods of high sunspot activity
- B. From shortly after sunset to dawn during periods of high sunspot activity
- C. From dawn to shortly after sunset during periods of low sunspot activity
- D. From shortly after sunset to dawn during periods of low sunspot activity

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T3C10 (A)

Which of the following bands may provide long distance communications during the peak of the sunspot cycle?

- A. 6 or 10 meter bands
- B. 23 centimeter band
- C. 70 centimeter or 1.25 meter bands
- D. All of these choices are correct

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T7A09 (B)

What is the function of the SSB/CW-FM switch on a VHF power amplifier?

- A. Change the mode of the transmitted signal
- B. Set the amplifier for proper operation in the selected mode
- C. Change the frequency range of the amplifier to operate in the proper portion of the band
- D. Reduce the received signal noise

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