

## 100 question practice

Below is a 100-question ham radio practice test aimed at the Technician license level. It mixes multiple-choice (A–D) and True/False questions. The questions are original/paraphrased (not copied from the real pool) but cover the same concepts you'll see on the exam.

### Amateur Radio Technician Practice Test (100 Questions)

#### Instructions

- Multiple-choice: choose A, B, C, or D
- True/False: answer T or F
- Answers are at the end — don't peek!

#### Section 1: Rules & Regulations

1. (MC) What organization regulates amateur radio in the U.S.?
  - A. ARRL
  - B. FCC
  - C. NOAA
  - D. NTIA
2. (T/F) You may transmit on amateur bands without a license if it's an emergency.
3. (MC) How long is a U.S. amateur license valid?
  - A. 5 years
  - B. 7 years
  - C. 10 years
  - D. Lifetime
4. (MC) What must you transmit at least every 10 minutes during a contact?
  - A. Location
  - B. Power level
  - C. Call sign
  - D. License class
5. (T/F) Music may be broadcast on amateur radio if it's educational.
6. (MC) Which license class is required to begin transmitting?
  - A. Amateur Extra
  - B. General
  - C. Technician
  - D. None
7. (T/F) Amateur radio may be used for personal business.
8. (MC) Who can be a control operator of a station?
  - A. Any listener
  - B. Any licensed amateur
  - C. Only the station owner
  - D. Only FCC employees
9. (T/F) You may let an unlicensed person talk on your radio if you supervise them.

## 100 question practice

10. (MC) What is the FCC call sign used for?
- A. Encryption
  - B. Identification
  - C. Tracking power use
  - D. Paying fees

### Section 2: Operating Practices

1. (MC) What does "CQ" mean?
  - A. End of transmission
  - B. Calling any station
  - C. Emergency traffic
  - D. Clear frequency
2. (T/F) Repeaters usually transmit and receive on the same frequency.
3. (MC) What is a repeater offset?
  - A. Antenna height
  - B. Frequency difference between transmit and receive
  - C. Power output
  - D. Signal delay
4. (MC) What is a phonetic alphabet used for?
  - A. Encryption
  - B. Faster talking
  - C. Clear identification
  - D. Morse code
5. (T/F) "Break" is used to interrupt a conversation for emergency traffic.
6. (MC) Which is good operating practice?
  - A. Talking over others
  - B. Using excessive power
  - C. Listening before transmitting
  - D. Broadcasting music
7. (T/F) Plain language is preferred over codes.
8. (MC) What does "simplex" mean?
  - A. Using a repeater
  - B. One-direction transmission
  - C. Direct radio-to-radio
  - D. Satellite operation
9. (T/F) You must give your call sign at the end of a contact.
10. (MC) What should you do if a frequency is busy?
  - A. Transmit anyway
  - B. Jam the signal
  - C. Find another frequency
  - D. Increase power

### Section 3: Radio & Electronics Basics

## 100 question practice

1. (MC) What does AC stand for?
  - A. Active current
  - B. Alternating current
  - C. Applied circuit
  - D. Average charge
2. (T/F) DC current flows in one direction.
3. (MC) What unit measures electrical resistance?
  - A. Volts
  - B. Amps
  - C. Ohms
  - D. Watts
4. (MC) What component stores electrical energy in an electric field?
  - A. Resistor
  - B. Capacitor
  - C. Inductor
  - D. Fuse
5. (T/F) A fuse protects equipment from excessive current.
6. (MC) What is voltage best described as?
  - A. Current flow
  - B. Electrical pressure
  - C. Resistance to current
  - D. Heat
7. (MC) What does RF stand for?
  - A. Radio frequency
  - B. Radiated force
  - C. Resistor function
  - D. Reactive field
8. (T/F) Increasing frequency decreases wavelength.
9. (MC) What is a common power source for handheld radios?
  - A. Solar panels
  - B. Car alternator
  - C. Batteries
  - D. AC mains only
10. (T/F) Ohm's Law relates voltage, current, and resistance.

### Section 4: Antennas & Propagation

1. (MC) What does an antenna do?
  - A. Stores signals
  - B. Converts RF to sound
  - C. Radiates RF energy
  - D. Amplifies audio
2. (T/F) Antenna length is related to operating frequency.
3. (MC) What is a dipole antenna made of?
  - A. One long wire

## 100 question practice

- B. Two equal sections
  - C. A loop
  - D. A dish
4. (MC) What is feed line used for?
    - A. Supporting antennas
    - B. Carrying RF between radio and antenna
    - C. Grounding
    - D. Power regulation
  5. (T/F) Coaxial cable is a type of feed line.
  6. (MC) What does SWR indicate?
    - A. Antenna efficiency
    - B. Power output
    - C. Signal clarity
    - D. Frequency stability
  7. (T/F) High SWR can damage a transmitter.
  8. (MC) Which band is commonly used for local communication?
    - A. HF
    - B. VHF
    - C. Microwave
    - D. Optical
  9. (T/F) Height generally improves antenna performance.
  10. (MC) What affects radio wave propagation?
    - A. Sun activity
    - B. Time of day
    - C. Frequency
    - D. All of the above

### Section 5: Safety

1. (MC) What is RF exposure?
  - A. Sound waves
  - B. Electrical shock
  - C. Radio energy absorbed by the body
  - D. Static discharge
2. (T/F) RF exposure limits exist for safety reasons.
3. (MC) What is a common grounding purpose?
  - A. Decoration
  - B. Signal boosting
  - C. Electrical safety
  - D. Audio quality
4. (T/F) Never touch antennas during transmission.
5. (MC) What should you do before working on an antenna?
  - A. Increase power
  - B. Transmit a test signal

## 100 question practice

- C. Disconnect power
- D. Change frequency
- 6. (T/F) Lightning can travel through feed lines.
- 7. (MC) What is PPE?
  - A. Power per emission
  - B. Personal protective equipment
  - C. Portable power enclosure
  - D. Phase path efficiency
- 8. (T/F) Proper grounding can reduce electrical hazards.
- 9. (MC) Which is a safe practice?
  - A. Running cables through doors
  - B. Ignoring RF limits
  - C. Securing towers properly
  - D. Overloading outlets
- 10. (T/F) Safety rules apply even to low-power stations.

### Section 6: Signals & Modes

- 1. (MC) What does FM stand for?
  - A. Fixed modulation
  - B. Frequency modulation
  - C. Field mode
  - D. Fast messaging
- 2. (T/F) AM varies signal amplitude.
- 3. (MC) Which mode is commonly used on VHF repeaters?
  - A. CW
  - B. AM
  - C. FM
  - D. SSB
- 4. (MC) What is digital communication?
  - A. Voice only
  - B. Morse only
  - C. Data encoded as bits
  - D. Static signals
- 5. (T/F) Morse code is no longer allowed.
- 6. (MC) What is bandwidth?
  - A. Signal power
  - B. Frequency range of a signal
  - C. Antenna length
  - D. Modulation depth
- 7. (T/F) Narrower bandwidth usually causes less interference.
- 8. (MC) What is SSB?
  - A. Short signal band
  - B. Single sideband

## 100 question practice

- C. Split signal base
  - D. Satellite system band
9. (T/F) Digital modes can be used for messaging.
  10. (MC) What is interference?
    - A. Helpful signal
    - B. Unwanted signal
    - C. Strong audio
    - D. Proper modulation

### Section 7: Practical Knowledge

1. (MC) What should you do before transmitting?
  - A. Call CQ immediately
  - B. Check SWR
  - C. Listen to the frequency
  - D. Maximize power
2. (T/F) You should always use the maximum legal power.
3. (MC) What is a handheld radio often called?
  - A. Base station
  - B. Mobile rig
  - C. HT
  - D. Linear amp
4. (MC) What is a mobile station?
  - A. Fixed location radio
  - B. Portable antenna only
  - C. Vehicle-installed station
  - D. Satellite radio
5. (T/F) Repeaters extend communication range.
6. (MC) What does "timeout timer" on a repeater do?
  - A. Measures signal strength
  - B. Limits transmission length
  - C. Changes frequency
  - D. Boosts power
7. (T/F) You should pause between transmissions on a repeater.
8. (MC) What does "QRM" refer to?
  - A. Equipment failure
  - B. Man-made interference
  - C. Natural noise
  - D. Weak signal
9. (T/F) Clear speech improves communication.
10. (MC) What is logging used for?
  - A. Required by FCC always
  - B. Tracking contacts
  - C. Power measurement
  - D. Antenna tuning

## 100 question practice

### Section 8: Mixed Review

1. (T/F) Amateur radio is for experimentation and learning.
2. (MC) What happens if frequency increases?
  - A. Wavelength increases
  - B. Wavelength decreases
  - C. Power doubles
  - D. Resistance increases
3. (MC) What is a beacon?
  - A. Emergency alarm
  - B. Navigation signal
  - C. Continuous identification signal
  - D. Repeater
4. (T/F) Encryption is generally prohibited on amateur bands.
5. (MC) What does "control operator" mean?
  - A. Station owner
  - B. Person responsible for transmissions
  - C. FCC monitor
  - D. Repeater trustee
6. (T/F) You can listen to any frequency without a license.
7. (MC) What is the main purpose of amateur radio?
  - A. Profit
  - B. Entertainment broadcasting
  - C. Self-training and public service
  - D. Advertising
8. (MC) What does "ELMER" mean?
  - A. Emergency operator
  - B. Antenna type
  - C. Mentor
  - D. FCC inspector
9. (T/F) Amateur radio can help during emergencies.
10. (MC) What is propagation?
  - A. Antenna tuning
  - B. Signal travel behavior
  - C. Modulation method
  - D. Power control

### Section 9: Final Review

1. (T/F) Technician license holders can use VHF/UHF bands.
2. (MC) What is a tone used for repeaters?
  - A. Encryption
  - B. Audio enhancement
  - C. Access control
  - D. Noise reduction

## 100 question practice

3. (MC) What does CTCSS do?
  - A. Boost signal
  - B. Identify call signs
  - C. Control repeater access
  - D. Encode data
4. (T/F) Repeaters always transmit stronger signals than users.
5. (MC) What is a dummy load?
  - A. Antenna replacement
  - B. Battery pack
  - C. Power supply
  - D. Audio filter
6. (T/F) Dummy loads radiate RF.
7. (MC) What is a watt a measure of?
  - A. Voltage
  - B. Resistance
  - C. Power
  - D. Frequency
8. (T/F) Higher power always improves communication.
9. (MC) What should you do if interference occurs?
  - A. Increase power
  - B. Change frequency or reduce power
  - C. Ignore it
  - D. Jam back
10. (T/F) Courtesy is important on the air.

### Section 10: Last 10

1. (MC) What does "band plan" describe?
  - A. Legal rules
  - B. Suggested frequency usage
  - C. Antenna types
  - D. Power limits
2. (T/F) Band plans help reduce interference.
3. (MC) What is a call sign prefix used for?
  - A. Mode selection
  - B. Country identification
  - C. Power level
  - D. Band selection
4. (T/F) You must speak English on amateur radio.
5. (MC) What is a repeater trustee?
  - A. FCC official
  - B. Equipment manufacturer
  - C. Repeater owner/operator
  - D. Control operator
6. (T/F) You can talk to astronauts using amateur radio.

## 100 question practice

7. (MC) What is the first step if equipment malfunctions?
  - A. Transmit anyway
  - B. Shut down and investigate
  - C. Increase power
  - D. Change bands
8. (T/F) Amateur radio encourages experimentation.
9. (MC) What is one benefit of joining a ham radio club?
  - A. Free radios
  - B. Mentorship and learning
  - C. No exams
  - D. Higher power limits
10. (T/F) Anyone of any age can earn an amateur license.