

G0A04

1. **What does "time averaging" mean in reference to RF radiation exposure?**

- A. The average time of day when the exposure occurs
 - B. The average time it takes RF radiation to have any long-term effect on the body
 - C. The total time of the exposure
 - D. The total RF exposure averaged over a certain time
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G0B13

2. **What must you do when powering your house from an emergency generator?**

- A. Disconnect the incoming utility power feed
 - B. Insure that the generator is not grounded
 - C. Insure that all lightning grounds are disconnected
 - D. All of these choices are correct
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G1A11 [97.301(d)]

3. **Which of the following frequencies is available to a control operator holding a General Class license?**

- A. 28.020 MHz
 - B. 28.350 MHz
 - C. 28.550 MHz
 - D. All of these choices are correct
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G1B09 [97.113(a)(3)]

4. **When may an amateur station transmit communications in which the licensee or control operator has a pecuniary (monetary) interest?**

- A. When other amateurs are being notified of the sale of apparatus normally used in an

amateur station and such activity is not done on a regular basis

- B. Only when there is no other means of communications readily available
 - C. When other amateurs are being notified of the sale of any item with a monetary value less than \$200 and such activity is not done on a regular basis
 - D. Never
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G1C11 [97.305(c) and 97.307(f)(5)]

5. What is the maximum symbol rate permitted for RTTY or data emission transmissions on the 2 meter band?

- A. 56 kilobaud
 - B. 19.6 kilobaud
 - C. 1200 baud
 - D. 300 baud
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G1D08 [97.509(b)(3)]

6. Which of the following criteria must be met for a non-U.S. citizen to be an accredited Volunteer Examiner?

- A. The person must be a resident of the U.S. for a minimum of 5 years
 - B. The person must hold an FCC granted Amateur Radio license of General Class or above
 - C. The person's home citizenship must be in the ITU 2 region
 - D. None of these choices is correct; non-U.S. citizens cannot be volunteer examiners
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G1E02 [97.205(a)]

7. When may a 10 meter repeater retransmit the 2 meter signal from a station having a Technician Class control operator?

- A. Under no circumstances
- B. Only if the station on 10 meters is operating under a Special Temporary Authorization allowing such retransmission

- C. Only during an FCC declared general state of communications emergency
 - D. Only if the 10 meter repeater control operator holds at least a General Class license
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G2A01

8. **Which sideband is most commonly used for voice communications on frequencies of 14 MHz or higher?**

- A. Upper sideband
 - B. Lower sideband
 - C. Vestigial sideband
 - D. Double sideband
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G2B05

9. **What is the customary minimum frequency separation between SSB signals under normal conditions?**

- A. Between 150 and 500 Hz
 - B. Approximately 3 kHz
 - C. Approximately 6 kHz
 - D. Approximately 10 kHz
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G2C01

10. **Which of the following describes full break-in telegraphy (QSK)?**

- A. Breaking stations send the Morse code prosign BK
 - B. Automatic keyers are used to send Morse code instead of hand keys
 - C. An operator must activate a manual send/receive switch before and after every transmission
 - D. Transmitting stations can receive between code characters and elements
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G2D05 [97.111(a)(1)]

11. **When is it permissible to communicate with amateur stations in countries outside the areas administered by the Federal Communications Commission?**

- A. Only when the foreign country has a formal third party agreement filed with the FCC
 - B. When the contact is with amateurs in any country except those whose administrations have notified the ITU that they object to such communications
 - C. When the contact is with amateurs in any country as long as the communication is conducted in English
 - D. Only when the foreign country is a member of the International Amateur Radio Union
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G2E02

12. **How many data bits are sent in a single PSK31 character?**

- A. The number varies
 - B. 5
 - C. 7
 - D. 8
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G3A08

13. **Which of the following effects can a geomagnetic storm have on radio-wave propagation?**

- A. Improved high-latitude HF propagation
 - B. Degraded high-latitude HF propagation
 - C. Improved ground-wave propagation
 - D. Improved chances of UHF ducting
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G3B02

14. Which of the following is a good indicator of the possibility of sky-wave propagation on the 6 meter band?

- A. Short skip sky-wave propagation on the 10 meter band
 - B. Long skip sky-wave propagation on the 10 meter band
 - C. Severe attenuation of signals on the 10 meter band
 - D. Long delayed echoes on the 10 meter band
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G3C07

15. What makes HF scatter signals often sound distorted?

- A. The ionospheric layer involved is unstable
 - B. Ground waves are absorbing much of the signal
 - C. The E-region is not present
 - D. Energy is scattered into the skip zone through several different radio wave paths
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G4A05

16. What is a purpose of using Automatic Level Control (ALC) with a RF power amplifier?

- A. To balance the transmitter audio frequency response
 - B. To reduce harmonic radiation
 - C. To reduce distortion due to excessive drive
 - D. To increase overall efficiency
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G4B02

17. Which of the following is an advantage of an oscilloscope versus a digital voltmeter?

- A. An oscilloscope uses less power
- B. Complex impedances can be easily measured

- C. Input impedance is much lower
 - D. Complex waveforms can be measured
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G4C06

18. What effect can be caused by a resonant ground connection?

- A. Overheating of ground straps
 - B. Corrosion of the ground rod
 - C. High RF voltages on the enclosures of station equipment
 - D. A ground loop
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G4D04

19. What does an S meter measure?

- A. Conductance
 - B. Impedance
 - C. Received signal strength
 - D. Transmitter power output
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G4E03

20. Which of the following direct, fused power connections would be the best for a 100-watt HF mobile installation?

- A. To the battery using heavy gauge wire
 - B. To the alternator or generator using heavy gauge wire
 - C. To the battery using resistor wire
 - D. To the alternator or generator using resistor wire
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G5A06

21. How does a capacitor react to AC?

- A. As the frequency of the applied AC increases, the reactance decreases
 - B. As the frequency of the applied AC increases, the reactance increases
 - C. As the amplitude of the applied AC increases, the reactance increases
 - D. As the amplitude of the applied AC increases, the reactance decreases
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G5B03

22. How many watts of electrical power are used if 400 VDC is supplied to an 800-ohm load?

- A. 0.5 watts
 - B. 200 watts
 - C. 400 watts
 - D. 3200 watts
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G5C12

23. What is the capacitance of a 20 microfarad capacitor in series with a 50 microfarad capacitor?

- A. .07 microfarads
 - B. 14.3 microfarads
 - C. 70 microfarads
 - D. 1000 microfarads
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G6A02

24. Which of the following types of capacitors are often used in power supply circuits to filter the rectified AC?

- A. Disc ceramic
 - B. Vacuum variable
 - C. Mica
 - D. Electrolytic
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G6B03

25. What is the approximate junction threshold voltage of a germanium diode?

- A. 0.1 volt
 - B. 0.3 volts
 - C. 0.7 volts
 - D. 1.0 volts
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G6C09

26. Which of the following is a characteristic of a liquid crystal display?

- A. It requires ambient or back lighting
 - B. It offers a wide dynamic range
 - C. It has a wide viewing angle
 - D. All of these choices are correct
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G7A05

27. What portion of the AC cycle is converted to DC by a half-wave rectifier?

- A. 90 degrees
- B. 180 degrees
- C. 270 degrees
- D. 360 degrees

G7B03

28. Which of the following describes the function of a two input AND gate?

- A. Output is high when either or both inputs are low
 - B. Output is high only when both inputs are high
 - C. Output is low when either or both inputs are high
 - D. Output is low only when both inputs are high
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G7C03

29. What circuit is used to process signals from the RF amplifier and local oscillator and send the result to the IF filter in a superheterodyne receiver?

- A. Balanced modulator
 - B. IF amplifier
 - C. Mixer
 - D. Detector
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G8A06

30. What is one advantage of carrier suppression in a single-sideband phone transmission?

- A. Audio fidelity is improved
 - B. Greater modulation percentage is obtainable with lower distortion
 - C. The available transmitter power can be used more effectively
 - D. Simpler receiving equipment can be used
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G8B01

31. What receiver stage combines a 14.250 MHz input signal with a 13.795 MHz oscillator signal to produce a 455 kHz intermediate frequency (IF) signal?

- A. Mixer
 - B. BFO
 - C. VFO
 - D. Discriminator
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G9A04

32. What is the reason for the occurrence of reflected power at the point where a feed line connects to an antenna?

- A. Operating an antenna at its resonant frequency
 - B. Using more transmitter power than the antenna can handle
 - C. A difference between feed-line impedance and antenna feed-point impedance
 - D. Feeding the antenna with unbalanced feed line
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G9B09

33. Which of the following is an advantage of a horizontally polarized as compared to vertically polarized HF antenna?

- A. Lower ground reflection losses
 - B. Lower feed-point impedance
 - C. Shorter Radials
 - D. Lower radiation resistance
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G9C19

34. What configuration of the loops of a two-element quad antenna must be used for the antenna to operate as a beam antenna, assuming one of the elements is used as a reflector?

- A. The driven element must be fed with a balun transformer

- B. The driven element must be open-circuited on the side opposite the feed point
 - C. The reflector element must be approximately 5% shorter than the driven element
 - D. The reflector element must be approximately 5% longer than the driven element
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G9D09

35. Which of the following is an application for a Beverage antenna?

- A. Directional transmitting for low HF bands
- B. Directional receiving for low HF bands
- C. Portable direction finding at higher HF frequencies
- D. Portable direction finding at lower HF frequencies