

Results for sample general2015 test paper

Your answers are marked like this:

✓ **A. You got this question right, this is your correct answer.**

✗ *A. You got this question wrong, this is your incorrect answer.*

✓ *A. You got this question wrong, this is the correct answer.*

✓ **A. You didnt answer this question but this would be the correct answer.**

Subelement G0

1: G0A04

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

- A. The average amount of power developed by the transmitter over a specific 24 hour period
- 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**

2: G0B07

Which of these choices should be observed when climbing a tower using a safety belt or harness?

- A. Never lean back and rely on the belt alone to support your weight

✓ **B. Confirm that the belt is rated for the weight of the climber and that it is within its allowable service life**

- C. Ensure that all heavy tools are securely fastened to the belt D-ring
- D. All of these choices are correct

Subelement G1

3: G1A07

Which of the following frequencies is within the General Class portion of the 20-meter phone band?

- A. 14005 kHz
- B. 14105 kHz

✓ **C. 14305 kHz**

- D. 14405 kHz

4: G1B12

Who or what determines "good engineering and good amateur practice" as applied to the operation of an amateur station in all respects not covered by the Part 97

rules?

✓ **A. The FCC**

x B. The Control Operator

C. The IEEE

D. The ITU

5: G1C05

Which of the following is a limitation on transmitter power on the 28 MHz band for a General Class control operator?

A. 100 watts PEP output

B. 1000 watts PEP output

✓ **C. 1500 watts PEP output**

D. 2000 watts PEP output

6: G1D11

If a person has an expired FCC issued amateur radio license of General Class or higher, what is required before they can receive a new license?

A. They must have a letter from the FCC showing they once held an amateur or commercial license

B. There are no requirements other than being able to show a copy of the expired license

C. The applicant must be able to produce a copy of a page from a call book published in the USA showing his or her name and address

✓ **D. The applicant must pass the current element 2 exam**

7: G1E04

Which of the following conditions require a licensed Amateur Radio operator to take specific steps to avoid harmful interference to other users or facilities?

A. When operating within one mile of an FCC Monitoring Station

B. When using a band where the Amateur Service is secondary

C. When a station is transmitting spread spectrum emissions

✓ **D. All of these choices are correct**

Subelement G2

8: G2A09

Why do most amateur stations use lower sideband on the 160-meter, 75-meter and 40-meter bands?

A. Lower sideband is more efficient than upper sideband at these frequencies

B. Lower sideband is the only sideband legal on these frequency bands

C. Because it is fully compatible with an AM detector

✓ **D. Current amateur practice is to use lower sideband on these frequency bands**

9: G2B10

When may the FCC restrict normal frequency operations of amateur stations participating in RACES?

A. When they declare a temporary state of communication emergency

B. When they seize your equipment for use in disaster communications

C. Only when all amateur stations are instructed to stop transmitting

✓ **D. When the President's War Emergency Powers have been invoked**

10: G2C04

What does the Q signal "QRL?" mean?

- A. "Will you keep the frequency clear?"
- B. "Are you operating full break-in" or "Can you operate full break-in?"
- C. "Are you listening only for a specific station?"

✓ **D. "Are you busy?", or "Is this frequency in use?"**

11: G2D03

What skills learned during hidden transmitter hunts are of help to the Amateur Auxiliary?

- A. Identification of out of band operation

✓ **B. Direction finding used to locate stations violating FCC Rules**

- C. Identification of different call signs
- D. Hunters have an opportunity to transmit on non-amateur frequencies

12: G2E08

In what segment of the 20-meter band are most PSK31 operations commonly found?

- A. At the bottom of the slow-scan TV segment, near 14.230 MHz
- B. At the top of the SSB phone segment, near 14.325 MHz
- C. In the middle of the CW segment, near 14.100 MHz

✓ **D. Below the RTTY segment, near 14.070 MHz**

Subelement G3

13: G3A01

What is the significance of the sunspot number with regard to HF propagation?

✓ **A. Higher sunspot numbers generally indicate a greater probability of good propagation at higher frequencies**

- B. Lower sunspot numbers generally indicate greater probability of sporadic E propagation
- C. A zero sunspot number indicate radio propagation is not possible on any band
- D. All of these choices are correct.

14: G3B07

What does LUF stand for?

✓ **A. The Lowest Usable Frequency for communications between two points**

- B. The Longest Universal Function for communications between two points
- C. The Lowest Usable Frequency during a 24 hour period
- D. The Longest Universal Function during a 24 hour period

15: G3C07

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**

Subelement G4

16: G4A05

What is a reason to use Automatic Level Control (ALC) with an 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

17: G4B05

Why is high input impedance desirable for a voltmeter?

- A. It improves the frequency response
- B. It decreases battery consumption in the meter

x **C. It improves the resolution of the readings**

✓ **D. It decreases the loading on circuits being measured**

18: G4C09

How can a ground loop be avoided?

- A. Connect all ground conductors in series
- B. Connect the AC neutral conductor to the ground wire
- C. Avoid using lock washers and star washers when making ground connections

✓ **D. Connect all ground conductors to a single point**

19: G4D06

Where is an S meter found?

✓ **A. In a receiver**

- B. In an SWR bridge
- C. In a transmitter
- D. In a conductance bridge

20: G4E02

What is the purpose of a corona ball on a HF mobile antenna?

- A. To narrow the operating bandwidth of the antenna
- B. To increase the "Q" of the antenna
- C. To reduce the chance of damage if the antenna should strike an object

✓ **D. To reduce high voltage discharge from the tip of the antenna**

Subelement G5

21: G5A06

How does a capacitor react to AC?

✓ **A. As the frequency of the applied AC increases, the reactance decreases**

x **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

22: G5B03

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

23: G5C01

What causes a voltage to appear across the secondary winding of a transformer when an AC voltage source is connected across its primary winding?

- A. Capacitive coupling
- B. Displacement current coupling
- ✓ C. Mutual inductance
- D. Mutual capacitance

Subelement G6

24: G6A12

What is the primary purpose of a screen grid in a vacuum tube?

- ✓ A. To reduce grid-to-plate capacitance
- B. To increase efficiency
- C. To increase the control grid resistance
- D. To decrease plate resistance

25: G6B11

What is a microprocessor?

- A. A low power analog signal processor used as a microwave detector
- ✓ B. A computer on a single integrated circuit
- C. A microwave detector, amplifier, and local oscillator on a single integrated circuit
- D. A low voltage amplifier used in a microwave transmitter modulator stage

Subelement G7

26: G7A04

What is the peak-inverse-voltage across the rectifier in a half-wave power supply?

- A. One-half the normal peak output voltage of the power supply
- B. One-half the normal output voltage of the power supply
- C. Equal to the normal output voltage of the power supply
- ✓ D. Two times the normal peak output voltage of the power supply

27: G7B08

How is the efficiency of an RF power amplifier determined?

- A. Divide the DC input power by the DC output power
- ✓ B. Divide the RF output power by the DC input power
- C. Multiply the RF input power by the reciprocal of the RF output power
- D. Add the RF input power to the DC output power

28: G7C05

Which of the following is an advantage of a transceiver controlled by a direct digital synthesizer (DDS)?

- A. Wide tuning range and no need for band switching
- B. Relatively high power output
- C. Relatively low power consumption

☒ **D. Variable frequency with the stability of a crystal oscillator**

Subelement G8

29: G8A09

What control is typically adjusted for proper ALC setting on an amateur single sideband transceiver?

- A. The RF clipping level

☒ **B. Transmit audio or microphone gain**

- C. Antenna inductance or capacitance
- D. Attenuator level

30: G8B09

Why is it good to match receiver bandwidth to the bandwidth of the operating mode?

- A. It is required by FCC rules
- B. It minimizes power consumption in the receiver
- C. It improves impedance matching of the antenna

☒ **D. It results in the best signal to noise ratio**

31: G8C04

Which of the following describes Baudot code?

☒ **A. A 7-bit code with start, stop and parity bits**

- B. A code using error detection and correction

☒ **C. A 5-bit code with additional start and stop bits**

- D. A code using SELCAL and LISTEN

Subelement G9

32: G9A14

What is the interaction between high standing wave ratio (SWR) and transmission line loss?

- A. There is no interaction between transmission line loss and SWR

☒ **B. If a transmission line is lossy, high SWR will increase the loss**

- C. High SWR makes it difficult to measure transmission line loss

☒ **D. High SWR reduces the relative effect of transmission line loss**

33: G9B10

What is the approximate length for a 1/2 wave dipole antenna cut for 14.250 MHz?

- A. 8 feet
- B. 16 feet

C. 24 feet

✓ D. 32 feet

34: G9C07

What does "front-to-back ratio" mean in reference to a Yagi antenna?

A. The number of directors versus the number of reflectors

B. The relative position of the driven element with respect to the reflectors and directors

✓ C. The power radiated in the major radiation lobe compared to the power radiated in exactly the opposite direction

D. The ratio of forward gain to dipole gain

35: G9D11

Which of the following is a disadvantage of multiband antennas?

A. They present low impedance on all design frequencies

B. They must be used with an antenna tuner

C. They must be fed with open wire line

✓ D. They have poor harmonic rejection

Results:

You scored 30 correct answers and 5 incorrect answers from a total of 35.

You would have passed the exam! Congratulations!

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