Results for sample general2015 test paper

Your answers are marked like this:

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

x *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: G0A12

What precaution should you take whenever you make adjustments or repairs to an antenna?

A. Ensure that you and the antenna structure are grounded

✔ **B. Turn off the transmitter and disconnect the feed line**

C. Wear a radiation badge

D. All of these choices are correct

2: G0B05

Which of the following conditions will cause a Ground Fault Circuit Interrupter (GFCI) to disconnect the 120 or 240 Volt AC line power to a device?

xA. Current flowing from one or more of the voltage-carrying wires to the neutral wire

✔ **B. Current flowing from one or more of the voltage-carrying wires directly to ground**

C. Overvoltage on the voltage-carrying wires

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: G1B02

With which of the following conditions must beacon stations comply?

A. A beacon station may not use automatic control
B. The frequency must be coordinated with the National Beacon Organization
C. The frequency must be posted on the Internet or published in a national periodical
✔ **D. There must be no more than one beacon signal transmitting in the same band from the same station location**

5: G1C09

What is the maximum symbol rate permitted for RTTY or data emission transmitted on the 1.25-meter and 70-centimeter bands?

✔ **A. 56 kilobaud**
B. 19.6 kilobaud
C. 1200 baud
D. 300 baud

6: G1D07

Volunteer Examiners are accredited by what organization?

A. The Federal Communications Commission
B. The Universal Licensing System
✔ **C. A Volunteer Examiner Coordinator**
D. The Wireless Telecommunications Bureau

7: G1E05

What types of messages for a third party in another country may be transmitted by an amateur station?

A. Any message, as long as the amateur operator is not paid
B. Only messages for other licensed amateurs
✔ **C. Only messages relating to Amateur Radio or remarks of a personal character, or messages relating to emergencies or disaster relief**
D. Any messages, as long as the text of the message is recorded in the station log

Subelement G2

8: G2A05

Which mode of voice communication is most commonly used on the HF amateur bands?

A. Frequency modulation
B. Double sideband
✔ **C. Single sideband**
D. Phase modulation

9: G2B06

What is a practical way to avoid harmful interference on an apparently clear frequency before calling CQ on CW or phone?

✔ **A. Send "QRL?" on CW, followed by your call sign; or, if using phone, ask if the frequency is in use, followed by your call sign**

B. Listen for 2 minutes before calling CQ

C. Send the letter "V" in Morse code several times and listen for a response or say "test" several times and listen for a response

D. Send "QSY" on CW or if using phone, announce "the frequency is in use", then give your call and listen for a response

10: G2C04

What does the Q signal "QRL?" mean?

xA. "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: G2D01

What is the Amateur Auxiliary to the FCC?

✔ **A. Amateur volunteers who are formally enlisted to monitor the airwaves for rules violations**

B. Amateur volunteers who conduct amateur licensing examinations

C. Amateur volunteers who conduct frequency coordination for amateur VHF repeaters

xD. Amateur volunteers who use their station equipment to help civil defense organizations in times of emergency

12: G2E14

What could be wrong if you cannot decode an RTTY or other FSK signal even though it is apparently tuned in properly?

A. The mark and space frequencies may be reversed

B. You may have selected the wrong baud rate

C. You may be listening on the wrong sideband

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

Subelement G3

13: G3A16

What is a possible benefit to radio communications resulting from periods of high geomagnetic activity?

✔ **A. Auroras that can reflect VHF signals**

xB. Higher signal strength for HF signals passing through the polar regions

C. Improved HF long path propagation

D. Reduced long delayed echoes

14: G3B08

What does MUF stand for?

A. The Minimum Usable Frequency for communications between two points

✔ **B. The Maximum Usable Frequency for communications between two points**

C. The Minimum Usable Frequency during a 24 hour period
D. The Maximum Usable Frequency during a 24 hour period

15: G3C02
Where on the Earth do ionospheric layers reach their maximum height?
✔ **A. Where the Sun is overhead**
x B. Where the Sun is on the opposite side of the Earth
C. Where the Sun is rising
D. Where the Sun has just set

Subelement G4

16: G4A05
What is a reason to use Automatic Level Control (ALC) with an RF power amplifier?
x 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: G4B09
Which of the following can be determined with a field strength meter?
A. The radiation resistance of an antenna
✔ **B. The radiation pattern of an antenna**
C. The presence and amount of phase distortion of a transmitter
D. The presence and amount of amplitude distortion of a transmitter

18: G4C10
What could be a symptom of a ground loop somewhere in your station?
✔ **A. You receive reports of "hum" on your station's transmitted signal**
B. The SWR reading for one or more antennas is suddenly very high
C. An item of station equipment starts to draw excessive amounts of current
x D. You receive reports of harmonic interference from your station

19: G4D08
What frequency range is occupied by a 3 kHz LSB signal when the displayed carrier frequency is set to 7.178 MHz?
A. 7.178 to 7.181 MHz
B. 7.178 to 7.184 MHz
✔ **C. 7.175 to 7.178 MHz**
D. 7.1765 to 7.1795 MHz

20: G4E07
Which of the following may cause interference to be heard in the receiver of an HF radio installed in a recent model vehicle?
A. The battery charging system
B. The fuel delivery system

C. The vehicle control computer
✔ **D. All of these choices are correct**

Subelement G5

21: G5A01
What is impedance?
A. The electric charge stored by a capacitor
B. The inverse of resistance
✔ **C. The opposition to the flow of current in an AC circuit**
D. The force of repulsion between two similar electric fields

22: G5B11
What is the ratio of peak envelope power to average power for an unmodulated carrier?
A. 0.707
✔ **B. 1.00**
C. 1.414
D. 2.00

23: G5C07
What is the turns ratio of a transformer used to match an audio amplifier having 600 ohm output impedance to a speaker having 4 ohm impedance?
✔ **A. 12.2 to 1**
B. 24.4 to 1
C. 150 to 1
D. 300 to 1

Subelement G6

24: G6A18
What is an advantage of using a ferrite core toroidal inductor?
A. Large values of inductance may be obtained
B. The magnetic properties of the core may be optimized for a specific range of frequencies
C. Most of the magnetic field is contained in the core
✔ **D. All of these choices are correct**

25: G6B08
How is an LED biased when emitting light?
A. Beyond cutoff
B. At the Zener voltage
C. Reverse Biased

✔ **D. Forward Biased**

Subelement G7

26: G7A02

Which of the following components are used in a power supply filter network?

A. Diodes
B. Transformers and transducers
C. Quartz crystals

✔ **D. Capacitors and inductors**

27: G7B02

Which of the following is an advantage of using the binary system when processing digital signals?

✔ **A. Binary "ones" and "zeros" are easy to represent by an "on" or "off" state**

B. The binary number system is most accurate
C. Binary numbers are more compatible with analog circuitry
D. All of these choices are correct

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: G8A03

What is the name of the process that changes the instantaneous frequency of an RF wave to convey information?

A. Frequency convolution
B. Frequency transformation
C. Frequency conversion

✔ **D. Frequency modulation**

30: G8B07

What is the frequency deviation for a 12.21 MHz reactance modulated oscillator in a 5 kHz deviation, 146.52 MHz FM phone transmitter?

A. 101.75 Hz

✔ **B. 416.7 Hz**

xC. 5 kHz

D. 60 kHz

31: G8C02

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

✔ **A. The number varies**

B. 5
C. 7
D. 8

Subelement G9

32: G9A08

If the SWR on an antenna feed line is 5 to 1, and a matching network at the transmitter end of the feed line is adjusted to 1 to 1 SWR, what is the resulting SWR on the feed line?

A. 1 to 1

✔ **B. 5 to 1**

C. Between 1 to 1 and 5 to 1 depending on the characteristic impedance of the line
D. Between 1 to 1 and 5 to 1 depending on the reflected power at the transmitter

33: G9B06

Where should the radial wires of a ground-mounted vertical antenna system be placed?

A. As high as possible above the ground
B. Parallel to the antenna element

✔ **C. On the surface of the Earth or buried a few inches below the ground**

D. At the center of the antenna

34: G9C09

How does the gain of two 3-element horizontally polarized Yagi antennas spaced vertically 1/2 wavelength apart typically compare to the gain of a single 3-element Yagi?

A. Approximately 1.5 dB higher

✔ **B. Approximately 3 dB higher**

C. Approximately 6 dB higher
D. Approximately 9 dB higher

35: G9D01

What does the term NVIS mean as related to antennas?

A. Nearly Vertical Inductance System
B. Non-Varying Indicated SWR
C. Non-Varying Impedance Smoothing

✔ **D. Near Vertical Incidence sky-wave**

Results:

You scored 27 correct answers and 8 incorrect answers from a total of 35.

You would have passed the exam! Congratulations!

e)

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