

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: G0A02

Which of the following properties is important in estimating whether an RF signal exceeds the maximum permissible exposure (MPE)?

✗ **A. Its duty cycle**

B. Its frequency

C. Its power density

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

2: G0B09

Why should soldered joints not be used with the wires that connect the base of a tower to a system of ground rods?

A. The resistance of solder is too high

B. Solder flux will prevent a low conductivity connection

✗ **C. Solder has too high a dielectric constant to provide adequate lightning protection**

✓ **D. A soldered joint will likely be destroyed by the heat of a lightning strike**

Subelement G1

3: G1A09

Which of the following frequencies is within the General Class portion of the 15-meter band?

A. 14250 kHz

B. 18155 kHz

✓ **C. 21300 kHz**

D. 24900 kHz

4: G1B02

With which of the following conditions must beacon stations comply?

- A. A beacon station may not use automatic control
- xB. 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

xD. 300 baud

6: G1D03

On which of the following band segments may you operate if you are a Technician Class operator and have a CSCE for General Class privileges?

- xA. Only the Technician band segments until your upgrade is posted in the FCC database**
- B. Only on the Technician band segments until your license arrives in the mail
- ✓ C. On any General or Technician Class band segment**
- D. On any General or Technician Class band segment except 30-meters and 60-meters

7: G1E02

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

- A. Under no circumstances
- xB. 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**

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: G2B11

What frequency should be used to send a distress call?

☒ **A. Whichever frequency has the best chance of communicating the distress message**

- B. Only frequencies authorized for RACES or ARES stations
- C. Only frequencies that are within your operating privileges
- D. Only frequencies used by police, fire or emergency medical services

10: G2C08

What prosign is sent to indicate the end of a formal message when using CW?

- A. SK
- B. BK

☒ **C. AR**

- D. KN

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: G2E13

Which communication system sometimes uses the Internet to transfer messages?

☒ **A. Winlink**

- B. RTTY
- C. ARES
- D. Skywarn

Subelement G3

13: G3A05

What is the solar flux index?

A. A measure of the highest frequency that is useful for ionospheric propagation between two points on the Earth

☒ **B. A count of sunspots which is adjusted for solar emissions**

- C. Another name for the American sunspot number

☒ **D. A measure of solar radiation at 10.7 centimeters wavelength**

14: G3B04

What is a reliable way to determine if the MUF is high enough to support skip propagation between your station and a distant location on frequencies between 14 and 30 MHz?

☒ **A. Listen for signals from an international beacon in the frequency range you plan to use**

- B. Send a series of dots on the band and listen for echoes from your signal

- C. Check the strength of TV signals from Western Europe
- D. Check the strength of signals in the MF AM broadcast band

15: G3C04

What does the term "critical angle" mean as used in radio wave propagation?

- A. The long path azimuth of a distant station
- B. The short path azimuth of a distant station
- C. The lowest takeoff angle that will return a radio wave to the Earth under specific ionospheric conditions
- ✓ D. The highest takeoff angle that will return a radio wave to the Earth under specific ionospheric conditions

Subelement G4

16: G4A11

Which of the following is a use for the IF shift control on a receiver?

- ✓ A. To avoid interference from stations very close to the receive frequency
- B. To change frequency rapidly
- C. To permit listening on a different frequency from that on which you are transmitting
- D. To tune in stations that are slightly off frequency without changing your transmit frequency

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: G4C12

Which of the following is an advantage of a receiver DSP IF filter as compared to an analog filter?

- ✓ A. A wide range of filter bandwidths and shapes can be created
- B. Fewer digital components are required
- C. Mixing products are greatly reduced
- D. The DSP filter is much more effective at VHF frequencies

19: G4D10

How close to the lower edge of the 40-meter General Class phone segment should your displayed carrier frequency be when using 3 kHz wide LSB?

- ✓ A. At least 3 kHz above the edge of the segment
- B. At least 3 kHz below the edge of the segment
- C. Your displayed carrier frequency may be set at the edge of the segment
- D. At least 1 kHz above the edge of the segment

20: G4E05

Which of the following most limits the effectiveness of an HF mobile transceiver operating in the 75-meter band?

- A. "Picket Fencing" signal variation
- B. The wire gauge of the DC power line to the transceiver
- ☒ **C. The antenna system**
- D. FCC rules limiting mobile output power on the 75-meter band

Subelement G5

21: G5A02

What is reactance?

- A. Opposition to the flow of direct current caused by resistance
- ☒ **B. Opposition to the flow of alternating current caused by capacitance or inductance**
- C. A property of ideal resistors in AC circuits
- D. A large spark produced at switch contacts when an inductor is de-energized

22: G5B10

What percentage of power loss would result from a transmission line loss of 1 dB?

- A. 10.9 percent
- ☒ **B. 12.2 percent**
- ☒ **C. 20.5 percent**
- D. 25.9 percent

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: G6A07

What are the stable operating points for a bipolar transistor used as a switch in a logic circuit?

- ☒ **A. Its saturation and cutoff regions**
- B. Its active region (between the cutoff and saturation regions)
- C. Its peak and valley current points
- D. Its enhancement and depletion modes

25: G6B04

What is meant by the term ROM?

- A. Resistor Operated Memory
- ✓ **B. Read Only Memory**
- C. Random Operational Memory
- D. Resistant to Overload Memory

Subelement G7

26: G7A07

What is the output waveform of an unfiltered full-wave rectifier connected to a resistive load?

- ✓ **A. A series of DC pulses at twice the frequency of the AC input**
- B. A series of DC pulses at the same frequency as the AC input
- C. A sine wave at half the frequency of the AC input
- x **D. A steady DC voltage**

27: G7B04

Which of the following describes the function of a two input NOR 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

28: G7C03

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

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

Subelement G8

29: G8A08

Which of the following is an effect of overmodulation?

- A. Insufficient audio
- B. Insufficient bandwidth
- C. Frequency drift
- ✓ **D. Excessive bandwidth**

30: G8B03

What is another term for the mixing of two RF signals?

- ✓ **A. Heterodyning**

- B. Synthesizing
- C. Cancellation
- D. Phase inverting

31: G8C09

What does the number 31 represent in "PSK31"?

- ☒ **A. The approximate transmitted symbol rate**
- B. The version of the PSK protocol
- C. The year in which PSK31 was invented
- D. The number of characters that can be represented by PSK31

Subelement G9

32: G9A11

What standing wave ratio will result when connecting a 50 ohm feed line to a non-reactive load having 50 ohm impedance?

- A. 2:1
- ☒ **B. 1:1**
- C. 50:50
- D. 0:0

33: G9B05

How does antenna height affect the horizontal (azimuthal) radiation pattern of a horizontal dipole HF antenna?

- A. If the antenna is too high, the pattern becomes unpredictable
- ☒ **B. Antenna height has no effect on the pattern**
- ☒ **C. If the antenna is less than 1/2 wavelength high, the azimuthal pattern is almost omnidirectional**
- D. If the antenna is less than 1/2 wavelength high, radiation off the ends of the wire is eliminated

34: G9C15

Approximately how long is each side of the reflector element of a quad antenna?

- A. Slightly less than 1/4 wavelength
- ☒ **B. Slightly more than 1/4 wavelength**
- C. Slightly less than 1/2 wavelength
- D. Slightly more than 1/2 wavelength

35: G9D10

Which of the following describes a Beverage antenna?

- A. A vertical antenna
- B. A broad-band mobile antenna
- C. A helical antenna for space reception
- ☒ **D. A very long and low directional receiving antenna**

Results:

You scored 24 correct answers and 11 incorrect answers from a total of 35.

Unfortunately, you had 11 wrong answers and you are only allowed 9.

e)

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