

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: G0A09

What type of instrument can be used to accurately measure an RF field?

A. A receiver with an S meter

✓ **B. A calibrated field strength meter with a calibrated antenna**

C. An SWR meter with a peak-reading function

D. An oscilloscope with a high-stability crystal marker generator

2: G0B14

Which of the following is covered by the National Electrical Code?

A. Acceptable bandwidth limits

B. Acceptable modulation limits

✓ **C. Electrical safety inside the ham shack**

✗ D. RF exposure limits of the human body

Subelement G1

3: G1A04

Which of the following amateur bands is restricted to communication on only specific channels, rather than frequency ranges?

A. 11 meters

B. 12 meters

C. 30 meters

✓ **D. 60 meters**

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: G1D10

What is the minimum age that one must be to qualify as an accredited Volunteer Examiner?

- A. 12 years
- ✓ **B. 18 years**
- C. 21 years
- D. There is no age limit

7: G1E12

Under what circumstances are messages that are sent via digital modes exempt from Part 97 third party rules that apply to other modes of communication?

- ✓ **A. Under no circumstances**
- B. When messages are encrypted
- C. When messages are not encrypted
- D. When under automatic control

Subelement G2

8: G2A06

Which of the following is an advantage when using single sideband as compared to other analog voice modes on the HF amateur bands?

- A. Very high fidelity voice modulation
- ✓ **B. Less bandwidth used and greater power efficiency**
- C. Ease of tuning on receive and immunity to impulse noise
- D. Less subject to interference from atmospheric static crashes

9: G2B08

What is the "DX window" in a voluntary band plan?

- ✓ **A. A portion of the band that should not be used for contacts between stations within the 48 contiguous United States**
- B. An FCC rule that prohibits contacts between stations within the United States and possessions in that portion of the band

- C. An FCC rule that allows only digital contacts in that portion of the band
- D. A portion of the band that has been voluntarily set aside for digital contacts only

10: G2C02

What should you do if a CW station sends "QRS"?

- ☒ **A. Send slower**
- B. Change frequency
- C. Increase your power
- D. Repeat everything twice

11: G2D08

What is a reason why many amateurs keep a station log?

- A. The ITU requires a log of all international contacts
- B. The ITU requires a log of all international third party traffic
- C. The log provides evidence of operation needed to renew a license without retest
- ☒ **D. To help with a reply if the FCC requests information**

12: G2E02

How can a PACTOR modem or controller be used to determine if the channel is in use by other PACTOR stations?

- A. Unplug the data connector temporarily and see if the channel-busy indication is turned off
- ☒ **B. Put the modem or controller in a mode which allows monitoring communications without a connection**
- C. Transmit UI packets several times and wait to see if there is a response from another PACTOR station
- D. Send the message: "Is this frequency in use?"

Subelement G3

13: G3A04

Which of the following are least reliable for long distance communications during periods of low solar activity?

- A. 80 meters and 160 meters
- B. 60 meters and 40 meters
- C. 30 meters and 20 meters
- ☒ **D. 15 meters, 12 meters and 10 meters**

14: G3B09

What is the approximate maximum distance along the Earth's surface that is normally covered in one hop using the F2 region?

- A. 180 miles
- ☒ **B. 1,200 miles**
- ☒ **C. 2,500 miles**
- D. 12,000 miles

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: G4A10

What is the purpose of an electronic keyer?

- A. Automatic transmit/receive switching
- ☒ **B. Automatic generation of strings of dots and dashes for CW operation**
- C. VOX operation
- D. Computer interface for PSK and RTTY operation

17: G4B13

What is a use for an antenna analyzer other than measuring the SWR of an antenna system?

- A. Measuring the front to back ratio of an antenna
- B. Measuring the turns ratio of a power transformer
- ☒ **C. Determining the impedance of an unknown or unmarked coaxial cable**
- D. Determining the gain of a directional antenna

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: G4E01

What is the purpose of a capacitance hat on a mobile antenna?

- A. To increase the power handling capacity of a whip antenna
- B. To allow automatic band changing
- ☒ **C. To electrically lengthen a physically short antenna**
- D. To allow remote tuning

Subelement G5

21: G5A13

Which of the following devices can be used for impedance matching at radio frequencies?

- A. A transformer
- ☐ B. A Pi-network
- C. A length of transmission line
- ☒ D. All of these choices are correct

22: G5B01

What dB change represents a two-times increase or decrease in power?

- A. Approximately 2 dB
- ☒ B. Approximately 3 dB
- C. Approximately 6 dB
- D. Approximately 12 dB

23: G5C13

Which of the following components should be added to a capacitor to increase the capacitance?

- A. An inductor in series
- B. A resistor in series
- ☒ C. A capacitor in parallel
- D. A capacitor in series

Subelement G6

24: **You forgot to answer this one!** G6A05

What is the approximate junction threshold voltage of a conventional silicon diode?

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

25: G6B02

What is meant by the term MMIC?

- A. Multi Megabyte Integrated Circuit
- ☒ B. Monolithic Microwave Integrated Circuit
- C. Military Manufactured Integrated Circuit
- D. Mode Modulated Integrated Circuit

Subelement G7

26: G7A05

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

27: G7B06

What is a shift register?

- ✓ **A. A clocked array of circuits that passes data in steps along the array**
- B. An array of operational amplifiers used for tri-state arithmetic operations
- C. A digital mixer
- D. An analog mixer

28: G7C06

What should be the impedance of a low-pass filter as compared to the impedance of the transmission line into which it is inserted?

- A. Substantially higher
- ✓ **B. About the same**
- C. Substantially lower
- D. Twice the transmission line impedance

Subelement G8

29: G8A04

What emission is produced by a reactance modulator connected to a transmitter RF amplifier stage?

- A. Multiplex modulation
- ✓ **B. Phase modulation**
- xC. Amplitude modulation
- D. Pulse modulation

30: G8B01

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

31: G8C07

How does the receiving station respond to an ARQ data mode packet containing errors?

- A. It terminates the contact
- ☒ **B. It requests the packet be retransmitted**
- C. It sends the packet back to the transmitting station
- D. It requests a change in transmitting protocol

Subelement G9

32: G9A12

What standing wave ratio will result when connecting a 50 ohm feed line to a non-reactive load having 25 ohm impedance?

- ☒ **A. 2:1**
- B. 2.5:1
- C. 1.25:1
- D. You cannot determine SWR from impedance values

33: G9B01

What is one disadvantage of a directly fed random-wire HF antenna?

- A. It must be longer than 1 wavelength
- ☒ **B. You may experience RF burns when touching metal objects in your station**
- C. It produces only vertically polarized radiation
- D. It is more effective on the lower HF bands than on the higher bands

34: G9C02

What is the approximate length of the driven element of a Yagi antenna?

- A. 1/4 wavelength
- ☒ **B. 1/2 wavelength**
- C. 3/4 wavelength
- D. 1 wavelength

35: G9D04

What is the primary purpose of antenna traps?

- ☒ **A. To permit multiband operation**
- B. To notch spurious frequencies
- C. To provide balanced feed point impedance
- D. To prevent out of band operation

Results:

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

You also forgot to answer 1 questions in the exam.

You would have passed the exam! Congratulations!

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