# 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: G0A05

What must you do if an evaluation of your station shows RF energy radiated from your station exceeds permissible limits?

- ✓ A. Take action to prevent human exposure to the excessive RF fields
  - B. File an Environmental Impact Statement (EIS-97) with the FCC
- C. Secure written permission from your neighbors to operate above the controlled MPE limits
  - D. All of these choices are correct

2: G0B13

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

# **Subelement G1**

3: G1A08

Which of the following frequencies is within the General Class portion of the 80-meter band?

- A. 1855 kHz
- B. 2560 kHz
- ✓ C. 3560 kHz
  - D. 3650 kHz

4: G1B01

What is the maximum height above ground to which an antenna structure may be erected without requiring notification to the FAA and registration with the FCC, provided it is not at or near a public use airport?

xA. 50 feet

- B. 100 feet
- ✓ C. 200 feet
  - D. 300 feet

5: G1C02

What is the maximum transmitting power an amateur station may use on the

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#### 12-meter band?

- A. 50 watts PEP output
- B. 200 watts PEP output

## C. 1500 watts PEP output

D. An effective radiated power equivalent to 100 watts from a half-wave dipole

#### 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: G2A04

# Which mode is most commonly used for voice communications on the 17-meter and 12-meter bands?

### A. Upper sideband

- B. Lower sideband
- C. Vestigial sideband
- D. Double sideband

### 9: G2B07

# Which of the following complies with good amateur practice when choosing a frequency on which to initiate a call?

- A. Check to see if the channel is assigned to another station
- B. Identify your station by transmitting your call sign at least 3 times
- C. Follow the voluntary band plan for the operating mode you intend to use
- xD. All of these choices are correct

### 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: G2D04

## Which of the following describes an azimuthal projection map?

- A. A map that shows accurate land masses
- ✓ B. A map that shows true bearings and distances from a particular location
  - C. A map that shows the angle at which an amateur satellite crosses the equator
- D. A map that shows the number of degrees longitude that an amateur satellite appears to move westward at the equator with each orbit

### 12: G2E10

Which of the following is a way to establish contact with a digital messaging

## system gateway station?

- A. Send an email to the system control operator
- xB. Send QRL in Morse code
  - C. Respond when the station broadcasts its SSID
- ✓ D. Transmit a connect message on the station's published frequency

## **Subelement G3**

13: G3A02

# What effect does a Sudden Ionospheric Disturbance have on the daytime ionospheric propagation of HF radio waves?

- A. It enhances propagation on all HF frequencies
- ✓ B. It disrupts signals on lower frequencies more than those on higher frequencies
  - C. It disrupts communications via satellite more than direct communications
  - D. None, because only areas on the night side of the Earth are affected

14: G3B02

# 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

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: G4A07

### What condition can lead to permanent damage to a solid-state RF power amplifier?

- A. Insufficient drive power
- B. Low input SWR
- C. Shorting the input signal to ground
- D. Excessive drive power

17: G4B10

### Which of the following can be determined with a directional wattmeter?

- A. Standing wave ratio
  - B. Antenna front-to-back ratio
  - C. RF interference
  - D. Radio wave propagation

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

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### D. Connect all ground conductors to a single point

19: G4D11

How close to the upper edge of the 20-meter General Class band should your displayed carrier frequency be when using 3 kHz wide USB?

- A. At least 3 kHz above the edge of the band
- B. At least 3 kHz below the edge of the band
  - C. Your displayed carrier frequency may be set at the edge of the band
  - D. At least 1 kHz below 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: G5A11

Which of the following describes one method of impedance matching between two AC circuits?

- A. Insert an LC network between the two circuits
  - B. Reduce the power output of the first circuit
  - C. Increase the power output of the first circuit
  - D. Insert a circulator between the two circuits

22: G5B09

What is the RMS voltage of a sine wave with a value of 17 volts peak?

- A. 8.5 volts
- ✓ B. 12 volts
  - C. 24 volts
  - D. 34 volts

23: G5C11

What is the inductance of a 20 millihenry inductor connected in series with a 50 millihenry inductor?

- A. 0.07 millihenrys
- B. 14.3 millihenrys
- C. 70 millihenrys
  - D. 1000 millihenrys

# Subelement G6

24: G6A11

Which of the following solid state devices is most like a vacuum tube in its general operating characteristics?

- A. A bipolar transistor
- B. A field effect transistor
  - C. A tunnel diode
  - D. A varistor

25: G6B06

### What kind of device is an integrated circuit operational amplifier?

- A. Digital
- B. MMIC
- C. Programmable Logic
- D. Analog

# **Subelement G7**

26: G7A09

## Which symbol in figure G7-1 represents a field effect transistor?

- A. Symbol 2
- B. Symbol 5
- C. Symbol 1
  - D. Symbol 4

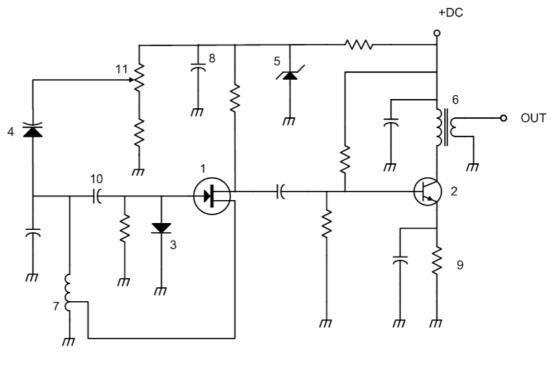


Figure G7-1

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: G7C09

## Which of the following is needed for a Digital Signal Processor IF filter?

- A. An analog to digital converter
- B. A digital to analog converter
- C. A digital processor chip
- D. All of the these choices are correct

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# **Subelement G8**

29: G8A05

What type of modulation varies the instantaneous power level of the RF signal?

- A. Frequency shift keying
- B. Phase modulation
- C. Frequency modulation
- D. Amplitude modulation

30: G8B05

What is the approximate bandwidth of a PACTOR3 signal at maximum data rate?

xA. 31.5 Hz

B. 500 Hz

C. 1800 Hz

✓ D. 2300 Hz

31: G8C01

Which of the following digital modes is designed to operate at extremely low signal strength on the HF bands?

A. FSK441 and Hellschreiber

- B. JT9 and JT65
  - C. Clover
  - D. RTTY

# **Subelement G9**

32: G9A01

Which of the following factors determine the characteristic impedance of a parallel conductor antenna feed line?

- A. The distance between the centers of the conductors and the radius of the conductors
  - B. The distance between the centers of the conductors and the length of the line
  - C. The radius of the conductors and the frequency of the signal
  - D. The frequency of the signal and the length of the line

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: G9C14

How does the forward gain of a two-element quad antenna compare to the forward gain of a three-element Yagi antenna?

- A. About 2/3 as much
- B. About the same
  - C. About 1.5 times as much
  - D. About twice as much

35: G9D06

## Which of the following is an advantage of a log periodic antenna?

- A. Wide bandwidth
  - B. Higher gain per element than a Yagi antenna
  - C. Harmonic suppression
  - D. Polarization diversity

### Results:

You scored 31 correct answers and 4 incorrect answers from a total of 35.

## You would have passed the exam! Congratulations!

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