

**General Class Training Pre-Study Worksheet**  
**Use with the Gordon West General Class license Manual**  
**2015-2019 Question Pool**

**Please  
complete this  
worksheet and  
bring it to the  
first class  
session**

**GENERAL CLASS PRIVILEGES (pages 1 - 8)**

1. What sideband on 160m and 40 m, upper or lower? \_\_\_\_\_
2. What are the General voice limits on 75 m? \_\_\_\_\_
3. How much power is allowed on 60 m? \_\_\_\_\_
4. What emission is used on 30 m? \_\_\_\_\_
5. What sideband on 20 – 10 m, upper or lower? \_\_\_\_\_
6. What are the General voice band limits on 20 m? \_\_\_\_\_
7. What are the General voice band limits on 15 m? \_\_\_\_\_
8. What are the General voice band limits on 10 m? \_\_\_\_\_
9. On which bands did Generals recently gain additional voice spectrum? \_\_\_\_\_

**A LITTLE HAM HISTORY (page 9 - 16)**

1. In 1979, what requirement was eliminated for operation above 30 MHz? \_\_\_\_\_
2. Which test element is Element 3? \_\_\_\_\_
3. Which test element is Element 3? \_\_\_\_\_
4. Must you learn Morse code to pass an Amateur Radio license exam? \_\_\_\_\_

**GETTING READY FOR THE EXAM (pages 17 - 22)**

1. How many questions on your upcoming General test? \_\_\_\_\_
2. May VE examiners change to wording of a test question? \_\_\_\_\_
3. How many questions can you miss and still pass the General test? \_\_\_\_\_

**YOUR PASSING CSCE (pages 23 - 25)**

What does CSCE stand for? \_\_\_\_\_

Append these two letters to your Technician call sign when you pass the General: \_\_\_\_\_

**YOUR NEW GENERAL BANDS (pages 26 - 33)**

1. Formula to convert frequency to wavelength and wavelength to frequency: \_\_\_\_\_
2. What are the General voice privileges on 15 meters? \_\_\_\_\_
3. What are the General voice privileges on 40 meters? \_\_\_\_\_
4. Maximum power output ERP on 60 meters is: \_\_\_\_\_
5. What are the General voice privileges on 75 meters? \_\_\_\_\_
6. Where on 10 meters will you find beacons? \_\_\_\_\_

## **FCC RULES (pages 34 - 41)**

1. What part of the FCC rules covers the amateur radio service? \_\_\_\_\_
2. What items would you put in your station log? \_\_\_\_\_
3. Who REALLY helps enforce the rules? \_\_\_\_\_
4. What is generally prohibited in ham radio rules? \_\_\_\_\_
5. What do you call an unlicensed person who talks on your radio with you in charge? \_\_\_\_\_
6. Do we have a third party agreement with Japan? \_\_\_\_\_
7. May you travel to Italy and operate with a CEPT? \_\_\_\_\_

## **BE A VE (pages 42 - 43)**

1. At least how many VEs must be present to conduct an exam? \_\_\_\_\_
2. General Class VEs may conduct which exam? \_\_\_\_\_
3. Who accredits individual volunteer examiners? \_\_\_\_\_
4. What is the minimum age to become a VE? \_\_\_\_\_

## **VOICE OPERATION (pages 44 - 53)**

1. What does 73 mean? \_\_\_\_\_
2. What does QSL stand for? \_\_\_\_\_
3. What would you say to break into an on-going conversation? \_\_\_\_\_
4. What does CQ DX mean? \_\_\_\_\_
5. How many kilohertz separation between SSB signals? \_\_\_\_\_
6. What circuit triggers you radio to transmit when you talk? \_\_\_\_\_
7. On what bands do we use lower SSB signals? \_\_\_\_\_
8. On what bands do we use upper sidebands? \_\_\_\_\_
9. What band is channelized for only 5 channels? \_\_\_\_\_

## **CW LIVES! (pages 54 - 61)**

1. What does QRS mean in Morse code? \_\_\_\_\_
2. What does QSL stand for? \_\_\_\_\_
3. Will you be tested for Morse code on the General exam? \_\_\_\_\_

## **DIGITAL OPERATIONS (pages 62 - 75)**

1. Where might you find 20 meter PSK 31 transmissions? \_\_\_\_\_
2. *What does RTTY stand for?* \_\_\_\_\_
3. How many data bits in a single PSK 31 character? \_\_\_\_\_
4. Greater digital speeds require \_\_\_\_\_ frequency shifts.

5. For digital operation, your ham radio needs to be tied to what? \_\_\_\_\_
6. What is the name for sending photographs over high frequency? \_\_\_\_\_

### **IN AN EMERGENCY (pages 77-79)**

1. What emission mode is authorized for emergency communications? \_\_\_\_\_
2. First thing to find out when answering a distress call? \_\_\_\_\_
3. What does RACES stand for? \_\_\_\_\_

### **SKYWAVE EXCITEMENT (pages 80 - 96)**

1. Which furthest ionospheric layer refracts radio waves? \_\_\_\_\_
2. Which ionospheric layer absorbs radio waves? \_\_\_\_\_
3. What does MUF stand for? \_\_\_\_\_
4. Waves that hug the surface of the earth are called? \_\_\_\_\_
5. HF scatter signals usually sound? \_\_\_\_\_
6. Area too far for ground waves, yet too close for sky waves? \_\_\_\_\_
7. How long is a sunspot cycle? \_\_\_\_\_
8. HF sky wave conditions usually happen every \_\_\_\_\_ days.
9. Which index tells short term stability of the Earth's magnetic field? \_\_\_\_\_
10. What might you SEE during periods of high geomagnetic activity? \_\_\_\_\_
11. Charge particles from the Sun take \_\_\_\_\_ hours to reach the Earth.
12. Best band any time for long wave propagation? \_\_\_\_\_

### **YOUR HF TRANSMITTER (pages 97 - 110)**

1. What is the name of the process for changing voice to an intelligible radio signal? \_\_\_\_\_
2. What circuit in a transmitter combines signals? \_\_\_\_\_
3. What does a speech processor accomplish? \_\_\_\_\_
4. What does ALC stand for? \_\_\_\_\_
5. Should you adjust your microphone gain to attain flat topping? \_\_\_\_\_
6. What is the test for linearity? \_\_\_\_\_
7. What emission comes from a reactance modulator? \_\_\_\_\_
8. Peak power to average power, multiply by this? \_\_\_\_\_
9. Average power to peak power, multiply by this? \_\_\_\_\_
10. Two times gain equals \_\_\_\_\_ dB.
11. Are Class C amplifiers efficient? \_\_\_\_\_
12. Are Class A amplifiers linear? \_\_\_\_\_
13. Do this with your transmitter to minimize positive feedback? \_\_\_\_\_

**OSCILLATORS & COMPONENTS (pages 119 – 131)**

1. All oscillators have this? \_\_\_\_\_
2. What is the junction threshold voltage of a Germanium diode? \_\_\_\_\_
3. What type of display requires back lighting? \_\_\_\_\_
4. What does LED stand for? \_\_\_\_\_
5. What does a shift register do? \_\_\_\_\_
6. What does ROM stand for? \_\_\_\_\_

**ELECTRICAL PRINCIPLES (pages 132 - 143)**

1. Draw Ohm's Law Circle
2. The formula for Ohm's Law for power is? \_\_\_\_\_
3. A half-wave rectifier works on which portion of the cycle? \_\_\_\_\_
4. A full-wave rectifier works on which portion of the cycle? \_\_\_\_\_
5. What components are in a power supply filter network? \_\_\_\_\_
6. Name a rechargeable battery \_\_\_\_\_
7. What process changes sunlight into electricity? \_\_\_\_\_
8. Can you run your new HF radio using an automobile cigarette lighter plug? \_\_\_\_\_

**CIRCUITS (pages 146 - 161)**

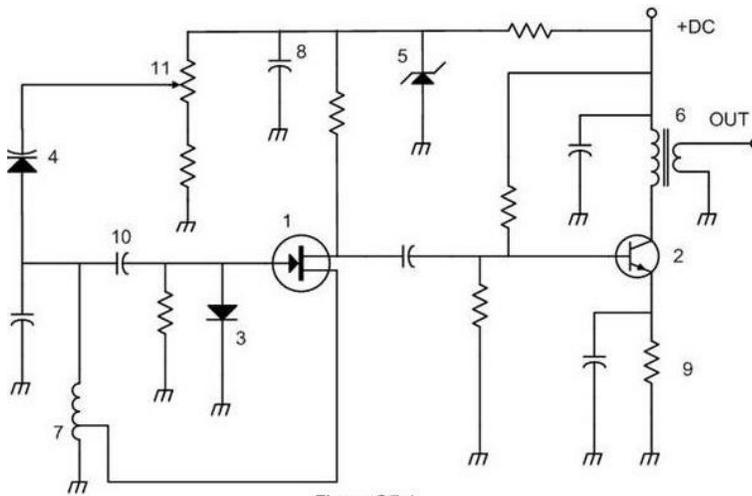


Figure G7-1

1. In schematic G7-1, what is #1 ? \_\_\_\_\_
2. In schematic G7-1, what is #2 ? \_\_\_\_\_
3. In schematic G7-1, what is #5 ? \_\_\_\_\_
4. In schematic G7-1, what is #7 ? \_\_\_\_\_
5. In schematic G7-1, what is #6 ? \_\_\_\_\_

6. In schematic G7-1, what is #8? \_\_\_\_\_
7. How do resistors combine in series? \_\_\_\_\_
8. How do resistors combine in parallel? \_\_\_\_\_
9. Reactance is the opposition to the flow of? \_\_\_\_\_
10. What is the unit of impedance? \_\_\_\_\_
11. What does a ferrite core do to a toroidal inductor? \_\_\_\_\_
12. A transformer's primary is connected to? \_\_\_\_\_

### **GOOD GROUNDS and GOOD HF ANTENNAS (pages 162 - 187)**

1. What is one reason for good grounding of your equipment? \_\_\_\_\_
2. Do we ground with a wide foil strap or a big round wire? \_\_\_\_\_
3. What creates the musical whine in your automobile ham radio? \_\_\_\_\_
4. Formula for constructing a half-wave dipole, end to end, in feet? \_\_\_\_\_
5. How long, in feet, is a quarter-wave vertical antenna for 20 meters? \_\_\_\_\_
6. Which type of antenna concentrates energy in one general direction? \_\_\_\_\_
7. What is the common match used with a Yagi antenna? \_\_\_\_\_
8. What might an antenna trap do? \_\_\_\_\_
9. What type of antenna is constructed of a square  $\frac{1}{4}$  wave elements? \_\_\_\_\_
10. What is the advantage of a log periodic antenna? \_\_\_\_\_
11. Which meter might indicate radiation patterns of an antenna? \_\_\_\_\_

### **COAX CABLE (pages 188 - 198)**

1. What is the usual impedance of coax used for ham radio? \_\_\_\_\_
2. What is the impedance of flat ribbon twin lead? \_\_\_\_\_
3. What might be a poor SWR reading? \_\_\_\_\_
4. What is the big benefit of a type N connector? \_\_\_\_\_

### **RF and ELECTRICAL SAFETY (pages 199 - 207)**

1. You wear this when climbing a tower: \_\_\_\_\_
2. What does MPE stand for? \_\_\_\_\_
3. What might RF energy do to your eyes? \_\_\_\_\_
4. Which circuit purposely disconnects AC line power when a fault is detected? \_\_\_\_\_
5. How many amps for #14 gauge wiring? \_\_\_\_\_
6. How many amps for #12 gauge wiring? \_\_\_\_\_
7. What is the danger of lead-tin solder? \_\_\_\_\_
8. What is the danger of a generator near your ham shack? \_\_\_\_\_