G4A01 (B) p.120
What is the purpose of the "notch filter" found on many HF transceivers?
A. To restrict the transmitter voice bandwidth
B. To reduce interference from carriers in the receiver passband
C. To eliminate receiver interference from impulse noise sources
D. To enhance the reception of a specific frequency on a crowded band

G4A13 (A) p.115
What is one reason to use the attenuator function that is present on many HF transceivers?
A. To reduce signal overload due to strong incoming signals
B. To reduce the transmitter power when driving a linear amplifier
C. To reduce power consumption when operating from batteries
D. To slow down received CW signals for better copy

G4C11 (B) p.119
Which of the following is a function of a digital signal processor?
A. To provide adequate grounding
B. To remove noise from received signals
C. To increase antenna gain
D. To increase antenna bandwidth

G4C12 (A) p.121
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

G4C13 (B) p.121
Which of the following can perform automatic notching of interfering carriers?
A. Bandpass tuning
B. A Digital Signal Processor (DSP) filter
C. Balanced mixing
D. A noise limiter

G4D01 (A) p.115
What is the purpose of a speech processor as used in a modern transceiver?
A. Increase the intelligibility of transmitted phone signals during poor conditions
B. Increase transmitter bass response for more natural sounding SSB signals
C. Prevent distortion of voice signals
D. Decrease high-frequency voice output to prevent out of band operation

G4D02 (B) p.115
Which of the following describes how a speech processor affects a transmitted single sideband phone signal?
A. It increases peak power
B. It increases average power
C. It reduces harmonic distortion
D. It reduces intermodulation distortion

G4D03 (D) p.115
Which of the following can be the result of an incorrectly adjusted speech processor?
A. Distorted speech
B. Splatter
C. Excessive background pickup
D. All of these choices are correct

G4D04 (C) p.113
What does an S meter measure?
A. Conductance
B. Impedance
C. Received signal strength
D. Transmitter power output

G4D05 (D) p.114
How does a signal that reads 20 dB over S9 compare to one that reads S9 on a receiver, assuming a properly calibrated S meter?
A. It is 10 times less powerful
B. It is 20 times less powerful
C. It is 20 times more powerful
D. It is 100 times more powerful

G4D06 (A) p.113
Where is an S meter found?
A. In a receiver
B. In an SWR bridge
C. In a transmitter
D. In a conductance bridge

G4D07 (C) p.114
How much must the power output of a transmitter be raised to change the
S meter reading on a distant receiver from S8 to S9?
A. Approximately 1.5 times
B. Approximately 2 times
C. Approximately 4 times
D. Approximately 8 times

G7C05 (D) p.122
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

G7C09 (D) p.119
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

G7C10 (B) p.119
How is Digital Signal Processor filtering accomplished?
A. By using direct signal phasing
B. By converting the signal from analog to digital and using digital processing
C. By differential spurious phasing
D. By converting the signal from digital to analog and taking the difference of mixing products

G7C11 (A) p.122
What is meant by the term "software defined radio" (SDR)?
A. A radio in which most major signal processing functions are performed by software
B. A radio that provides computer interface for automatic logging of band and frequency
C. A radio that uses crystal filters designed using software
D. A computer model that can simulate performance of a radio to aid in the design process

G8B09 (D) p.121
Why is it good to match receiver bandwidth to the bandwidth of the operating mode?
A. It is required by FCC rules
B. It minimizes power consumption in the receiver
C. It improves impedance matching of the antenna
D. It results in the best signal to noise ratio