Automotive Electrical and Engine Performance 9th Edition
Chapter 22 – Audio System Operation and Diagnosis
Multiple Choice Questions Quiz A

1. What role does modulation play in radio transmission?

a) It describes the time interval of sound waves

b) It enables information to be added to a carrier wave

c) It measures the amplitude of sound in decibels

d) It determines the length of a radio antenna

2. Which of the following is the primary function of a vehicle's audio antenna?

a) To convert acoustical energy into electromagnetic waves

b) To capture radio waves and induce a small electrical signal

c) To amplify the audio signal before it reaches the receiver

d) To adjust sound output based on road noise

3. In vehicle audio systems, what is the function of the amplifier?

a) Convert AC signals to DC for speaker use

b) Strengthen weak radio signals to drive the speakers

c) Capture low-frequency signals for subwoofers

d) Convert electromagnetic waves into sound waves

4. When testing an antenna, what resistance should be observed between the center lead and the antenna case?

a) Less than 5 ohms

b) Around 50 ohms

c) Infinity (open circuit)

d) 500 ohms or less

5. What frequency range is typical for FM radio transmissions?

a) 530–1710 kHz

b) 30–300 MHz

c) 87.9–107.9 MHz

d) 2.4–2.5 GHz

6. What is the benefit of using a rear window defogger grid as an antenna?

a) It enables dual AM and FM functionality with a single component

b) It enhances reception through frequency modulation

c) It allows the defogger to operate without additional components

d) It improves signal strength for both AM and Bluetooth signals

7. What is the primary frequency range for Satellite Digital Audio Radio Services (SDARS)?

a) 540–1600 kHz

b) 87.9–107.9 MHz

c) 2.132–2.345 GHz

d) 300–3000 MHz

8. In an audio system, how does a tweeter differ from a subwoofer?

a) Tweeters reproduce low-frequency sounds, while subwoofers handle high frequencies

b) Tweeters produce high-frequency sounds, while subwoofers handle low frequencies

c) Tweeters are placed at the rear of the vehicle, while subwoofers are at the front

d) Tweeters are used for mid-range sounds, while subwoofers handle bass frequencies

9. What is a primary advantage of Bluetooth in automotive systems?

a) It operates over long distances up to 100 meters

b) It enables wireless, hands-free phone and audio control within a vehicle

c) It reduces power consumption by up to 50% in audio systems

d) It enhances FM radio reception within urban environments

10. What is the function of the Body Control Module (BCM) in managing vehicle audio functions?

a) Amplify sound signals before reaching the speakers

b) Control and manage audio inputs and outputs

c) Manage power distribution exclusively for the speakers

d) Enable user adjustments of bass and treble settings

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Answer Key Quiz A

Correct Answers:

1. b
2. b
3. b
4. c
5. c
6. a
7. c
8. b
9. b
10. b