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

1. What is the primary function of the receiver in a vehicle's audio system?

a. To generate radio waves for FM modulation

b. To amplify weak antenna signals into usable audio signals

c. To convert electrical signals into sound waves

d. To synchronize Bluetooth connections

2. Which type of antenna is best suited for AM radio reception?

a. Fixed mast antenna

b. Shark-fin antenna

c. Integrated windshield antenna

d. Rear window defogger grid

3. What is the frequency range for FM radio waves?

a. 530 to 1,710 kHz

b. 87.9 to 107.9 MHz

c. 2.4 to 2.4835 GHz

d. 125 Hz and lower

4. What is the decibel (dB) scale used to measure?

a. Sound power

b. Radio wave frequency

c. Electrical resistance

d. Antenna length

5. How do satellite radios ensure consistent reception in urban areas?

a. By using long antennas

b. By including land-based repeater stations

c. By increasing the satellite transmission power

d. By adding low-frequency wave support

6. What does "modulation" refer to in the context of audio systems?

a. The process of adding information to a constant frequency

b. The amplification of weak signals

c. The conversion of sound waves into electrical energy

d. The synchronization of multiple audio channels

7. Which type of speaker is designed to handle the lowest frequency sounds?

a. Tweeter

b. Midrange

c. Crossover

d. Subwoofer

8. What is a common cause of FM multipath interference?

a. High antenna resistance

b. Lightning strikes near the receiver

c. Multiple reflected signals arriving at the antenna at different times

d. Misalignment of the vehicle's amplifier

9. What is the typical range of Bluetooth connectivity?

a. 10 feet

b. 33 feet

c. 100 feet

d. 300 feet

10. What key feature of shark-fin antennas makes them unique?

a. They are optimized for AM radio reception.

b. They use mechanical modulation instead of electronic.

c. They are built only for Bluetooth connectivity.

d. They combine multiple functions, including radio, GPS, and cellular signals.

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Correct Answers:

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