Automotive Electrical and Engine Performance 9th Edition
Chapter 17 – Lighting and Signal Circuits
Multiple Choice Questions Quiz A

1. What is the primary benefit of using LED lights in vehicle lighting systems?

a) Faster illumination for improved safety

b) Reduced voltage requirement

c) Greater color temperature flexibility

d) Higher current draw for brighter light

2. What is the function of the Body Control Module (BCM) in lighting systems for modern vehicles?

a) Directly connects high-current lighting circuits

b) Sends signals to operate lights via serial data lines

c) Provides a visual inspection protocol for headlights

d) Operates only interior lights

3. Which of the following is a characteristic of high-intensity discharge (HID) headlights?

a) Uses a filament to create light

b) Requires high current but low voltage

c) Produces a bright, white-blue light from an arc tube

d) Typically uses a tungsten filament

4. Which diagnostic method is most appropriate for identifying a non-operational brake light controlled by the BCM?

a) Inspecting the headlight switch assembly

b) Performing a bulb test with an ohmmeter

c) Using a scan tool to retrieve BCM diagnostic trouble codes

d) Replacing the entire rear light module

5. A visual inspection of a headlight shows a cloudy white color on the bulb glass. This is most likely due to:

a) Improper installation angle

b) Excessive voltage from the alternator

c) An air leak causing oxidation within the bulb

d) The natural aging of the filament

6. What type of light bulb is prone to cracking and failure if touched by bare hands due to skin oils?

a) HID bulbs

b) Halogen bulbs

c) Standard LED bulbs

d) Incandescent bulbs

7. What is the function of a vehicle's daytime running lights (DRLs)?

a) Illuminate the rear of the vehicle for enhanced visibility

b) Keep all lighting circuits operational at all times

c) Improve visibility during daylight by activating front lights

d) Automatically adjust brightness based on road conditions

8. Which system uses electrochromic technology to reduce glare from headlights of vehicles behind?

a) High-beam dimmer switch

b) Automatic headlight control

c) Adaptive front lighting system (AFS)

d) Automatic dimming mirrors

9. In adaptive front lighting systems (AFS), headlights are adjusted based on:

a) Brake pedal pressure

b) The angle of the steering wheel

c) Engine speed

d) External temperature

10. Which lighting system can present an electrical shock hazard during service if proper precautions are not followed?

a) Rear fog lights

b) HID headlights

c) LED brake lights

d) Halogen headlights

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Answer Key Quiz A

Correct Answers:

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