Automotive Electrical and Engine Performance 9th Edition
Chapter 34 – Fuel Pumps, Lines, and Filters
Multiple Choice Questions Quiz B

1. What is the purpose of the fuel-pressure regulator in a fuel delivery system?

a. To eliminate vapor lock by controlling fuel return volume

b. To prevent fuel contamination by routing vapors to the EVAP system

c. To maintain consistent fuel pressure for proper injector operation

d. To limit fuel tank vapor expansion

2. How does a turbine fuel pump operate?

a. By drawing fuel using an internal rotor and external teeth

b. By accelerating fuel particles through impeller blades

c. By creating high-pressure zones with rolling diaphragms

d. By pushing fuel through a hydrokinetic flow chamber

3. What is the role of the check valve in an electric fuel pump?

a. To prevent fuel overflow during tank refilling

b. To ensure residual fuel pressure for easier engine starting

c. To avoid vapor release into the atmosphere

d. To control injector spray patterns

4. What feature helps prevent static electricity buildup during refueling?

a. A ground strap attached to the filler neck

b. An anti-siphon check valve in the filler tube

c. A plastic liner in the fuel tank interior

d. A pressurized safety cap

5. What is a significant advantage of a gerotor pump design?

a. Reduced electrical current draw for extended lifespan

b. Higher resistance to vapor lock due to vented impellers

c. Uniform fuel delivery with minimal noise

d. Consistent pressure output under high-load conditions

6. How is fuel contamination managed by the fuel system?

a. A pressurized return system to redirect unburned particles

b. A charcoal canister for vapor absorption

c. A strainer and fuel filter to remove particles and water

d. A centrifugal filter in the pump module

7. What does a high fuel-pump current draw indicate during testing?

a. A partially clogged filter sock

b. Proper operation of the pump motor

c. Excessive wear or internal resistance in the pump

d. Incorrect placement of the pump module

8. Why is a pressure-vacuum filler cap used in modern vehicles?

a. To relieve pressure or vacuum buildup inside the tank

b. To prevent fuel vapor loss during engine operation

c. To support a closed-loop evaporative control system

d. To regulate backflow in the fuel return line

9. What component ensures the fuel tank does not collapse under vacuum?

a. A tank vent system with a check valve

b. An anti-siphon tube in the filler neck

c. A dome-shaped baffle for vapor expansion

d. A vented safety cap with integrated relief valves

10. How does a rollover valve contribute to safety in fuel systems?

a. By routing excess fuel to a recovery reservoir

b. By shutting off the fuel supply in case of an accident

c. By equalizing tank pressure during a collision

d. By maintaining a sealed environment under all conditions

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Answer Key Quiz B

Correct Answers:

1. c

2. a

3. b

4. a

5. d

6. c

7. c

8. a

9. a

10. b