

**Automotive Electrical and Engine Performance 8th Edition**  
**Chapter 21 – Fuel Pumps, Lines, and Filters**  
**Quiz A**

1. Which of the following is a key characteristic of a gerotor fuel pump?
  - a. It uses a central impeller disk with free-sliding rollers.
  - b. It uses meshing internal and external gear teeth for pressurization.
  - c. It relies on hydrokinetic flow for fuel pressure.
  - d. It contains a single-stage impeller for fuel delivery.
  
2. What component prevents fuel from being siphoned through the filler neck?
  - a. Check ball tube
  - b. Inertia switch
  - c. Rollover valve
  - d. Pressure vacuum filler cap
  
3. What is the primary function of a fuel pickup tube's filter sock?
  - a. Reduce fuel vaporization in the tank
  - b. Separate water and sediment from fuel
  - c. Maintain constant pressure in the fuel pump
  - d. Act as a check valve for the fuel line
  
4. Which material is not recommended for replacing rigid fuel lines in a fuel system?
  - a. Steel tubing
  - b. Nylon tubing
  - c. Copper tubing
  - d. Manufacturer-specified synthetic hoses

5. In a modular fuel sender assembly, what is the role of the jet pump?
- Reduce noise and pulsations in the fuel flow
  - Transfer excess fuel back to the reservoir
  - Adjust fuel pressure within the pump housing
  - Prevent vapor lock during fuel delivery
6. How does a positive displacement pump ensure fuel flow?
- By accelerating fuel particles using impellers
  - By pressurizing fuel via an internal gear mechanism
  - By forcing all fuel entering the pump to leave through the outlet
  - By using a turbine to increase the boiling point of the fuel
7. What is the main advantage of placing a fuel pressure regulator near the fuel tank in returnless systems?
- Minimizes heat transfer from the engine
  - Reduces fuel vapor emissions
  - Ensures higher fuel pressures in the rail
  - Improves durability of the pressure regulator
8. What is the typical fuel pressure range for a multiport fuel injection system?
- 10–15 PSI
  - 20–30 PSI
  - 35–50 PSI
  - 70–90 PSI
9. Why do fuel-pump modules often include spring-loaded components?
- To prevent vapor lock in the fuel system
  - To ensure constant contact with the bottom of the tank
  - To dampen pressure pulses in the pump housing
  - To assist with fitting the module during installation

10. What is the most likely cause of a fuel pressure drop when the engine is turned off?

a. Faulty pulsator

b. Leaking injector

c. Defective fuel pump check valve

d. All of the above

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**Correct Answers:**

1. b

2. a

3. b

4. c

5. b

6. c

7. a

8. c

9. b

10. d