Automotive Electrical and Engine Performance 9th Edition
Chapter 20 – Airbag and Pretensioner Circuits
Multiple Choice Questions Quiz B

1. What is the primary purpose of a seat belt pretensioner in a vehicle safety system?

a. To alert the driver of unsafe conditions

b. To eliminate slack in the belt during a collision

c. To monitor airbag deployment

d. To regulate passenger seat position

2. How do front airbags typically deploy during a frontal collision?

a. By electrical heating of the propellant in the inflator module

b. By mechanical release of compressed air

c. Through hydraulic pressure

d. By gradual inflation to cushion the impact

3. What is the recommended safe working distance from a driver's front airbag during maintenance?

a. 5 inches (13 cm)

b. 10 inches (25 cm)

c. 15 inches (38 cm)

d. 20 inches (50 cm)

4. Why are airbag-related circuits and connectors typically colored yellow?

a. To signify high voltage

b. To reduce electromagnetic interference

c. To prevent accidental deployment during servicing

d. For ease of identification

5. Which type of airbag inflator uses sodium azide pellets to generate nitrogen gas?

a. Compressed gas inflator

b. Capacitive inflator

c. Solid fuel inflator

d. Hybrid inflator

6. What is the role of the event data recorder (EDR) in an airbag system?

a. To control airbag deployment timing

b. To store vehicle parameters before and after airbag deployment

c. To diagnose system faults

d. To reset the airbag module after a crash

7. Which component provides electrical continuity to the inflator module in a steering wheel airbag system?

a. Clockspring

b. Squib

c. Forward sensor

d. Capacitor

8. What type of crash sensor is activated by a magnetically retained gold-plated ball?

a. Ribbon-type sensor

b. Integral sensor

c. Discrimination sensor

d. Magnetically retained sensor

9. How does the passenger presence system (PPS) adjust airbag deployment?

a. By detecting crash severity using accelerometers

b. By monitoring the passenger’s weight and seat position

c. By disabling airbags when seat belts are fastened

d. By sensing the passenger's proximity to the airbag

10. What is the typical time for an airbag to fully deploy after a collision?

a. 0.04 seconds

b. 0.25 seconds

c. 0.1 seconds

d. 0.5 seconds

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Answer Key Quiz B

Correct Answers:

1. b

2. a

3. b

4. d

5. c

6. b

7. a

8. d

9. b

10. c