

Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) Two technicians are discussing deceleration rates. Technician A says that a one "g" stop is a gentle slowing of the vehicle. Technician B says that a stopping rate of 8 ft/sec² is a severe stop. Who is correct? 1) _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician

- 2) The hybrid vehicle electric motor is usually a(an) _____ type motor. 2) _____
 - A) DC
 - B) AC
 - C) HVAC
 - D) None of these

- 3) The high voltage batteries are designed to be charged no more than _____. 3) _____
 - A) 100%
 - B) 80%
 - C) 60%
 - D) None of these

- 4) When changing the brake pads on a Ford Escape hybrid, what precaution must be taken before removing the brake pads? 4) _____
 - A) Block all 4 wheels.
 - B) Use a scan tool to enter Pad Service Mode.
 - C) Only change one pad at a time.
 - D) Always change the rear pads before changing the front pads.

- 5) Some hybrid vehicles reduce the internal combustion engine's braking capacity during deceleration so that the regenerative braking is more efficient. This is done by _____. 5) _____
 - A) Closing the valves in some cylinders
 - B) Releasing compression in some cylinders
 - C) Disabling the spark in some cylinders
 - D) None of these

- 6) Regenerative braking uses the inertia of the vehicle to recapture energy during braking. Where is this recaptured energy stored? 6) _____
 - A) In the 12 volt battery bank
 - B) In the high voltage battery bank
 - C) In the electrohydraulic master cylinder
 - D) In large resistors

- 7) During braking on a hybrid electric vehicle equipped with a regenerative braking system, what occurs when the driver depresses the brake pedal? 7) _____
- A) The friction brakes are only used as a backup and not used during normal braking.
 - B) The motors become generators.
 - C) The driver needs to apply a braking lever instead of depressing the brake pedal to energize the regenerative braking system.
 - D) The batteries are charged to 100 percent SOC.
- 8) Technician A says that the powertrain control module (PCM) or controller can control the voltage to the motor(s) in a hybrid electric vehicle. Technician B says that the PCM or controller can control the electric motors by varying the frequency of the applied current. Which technician is correct? 8) _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician
- 9) When the electric motor is acting as a generator it produces alternating current (AC). This current is converted to direct current (DC) by use of _____. 9) _____
- A) Large diodes
 - B) Large capacity filters
 - C) Special AC batteries
 - D) None of these
- 10) What position is the throttle pedal in during regenerative braking? 10) _____
- A) Fully lifted
 - B) About 10%
 - C) The throttle is ignored
 - D) None of these

Answer Key

Testname: HYBRID4_10B

1) D

Page Ref: 145

2) B

Page Ref: 143

3) B

Page Ref: 144, 149

4) B

Page Ref: 149

5) A

Page Ref: 148

6) B

Page Ref: 142

7) B

Page Ref: 145

8) C

Page Ref: 143

9) A

Page Ref: 147

10) A

Page Ref: 145