

Name _____

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

- 1) Electric motors are better than an internal combustion engine to propel a vehicle because _____ 1) _____
A) they produce high torque at low speeds
B) they do not burn fuel and therefore do not release carbon dioxide into the environment
C) they are quiet
D) All of the above are correct.

- 2) Which of these statements about series hybrid electric vehicles is (are) true? 2) _____
A) The internal combustion engine turns a generator to charge the battery.
B) The engine never powers the vehicle directly.
C) Both A and B
D) Neither A nor B

- 3) About how fast does a motor-generator crank the internal combustion engine? 3) _____
A) About 1000 RPM
B) About 2000 RPM
C) About 150-300 RPM
D) About 350-600 RPM

- 4) Technician A says that most hybrids use the series hybrid design. Technician B says that most hybrids have 42 volt batteries. Which technician is correct? 4) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician

- 5) All of the following are characteristic of a hybrid electric vehicle (HEV) EXCEPT _____. 5) _____
A) high voltages (safety issue)
B) lower fuel economy
C) lower amount of carbon dioxide released into the atmosphere
D) quiet

- 6) Technician A says that in a parallel hybrid design, only the electric motor is connected to the transmission. Technician B says that in a parallel hybrid design, the vehicle can be propelled by the electric traction motor, the internal combustion engine, or both. Which technician is correct? 6) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician

- 7) On a vehicle equipped with a belt-alternator-starter (BAS) hybrid system, the alternator is also used to _____. 7) _____
- A) circulate the coolant
 - B) pump refrigerant
 - C) start the engine
 - D) assist steering effort
- 8) Technician A says that full hybrid electric vehicles need to be plugged into a standard AC electrical outlet to charge. Technician B says that the high voltage battery in an HEV uses a generator driven by the internal combustion engine for recharging. Which technician is correct? 8) _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician
- 9) In a series hybrid vehicle, the internal combustion engine drives the vehicle only when increased horsepower is needed. 9) _____
- A) True
 - B) False
- 10) Which type of hybrid is capable of propelling the vehicle by just using the electric motor? 10) _____
- A) BAS type
 - B) Strong (full) hybrid
 - C) Medium hybrid
 - D) Mild hybrid

Answer Key

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1) D

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2) C

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3) A

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4) D

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5) B

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6) B

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7) C

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8) B

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9) B

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10) B

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