

Name _____

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

- 1) 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? 1) _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician

- 2) Which type of hybrid electric vehicle has idle stop operation? 2) _____
 - A) Strong hybrids only
 - B) Strong, mild, and medium hybrids
 - C) Mild hybrids only
 - D) Medium hybrids only

- 3) 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? 3) _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician

- 4) Which type of hybrid is capable of propelling the vehicle by just using the electric motor? 4) _____
 - A) BAS type
 - B) Strong (full) hybrid
 - C) Medium hybrid
 - D) Mild hybrid

- 5) About how fast does a motor-generator crank the internal combustion engine? 5) _____
 - A) About 1000 RPM
 - B) About 2000 RPM
 - C) About 150-300 RPM
 - D) About 350-600 RPM

- 6) Electric motors are better than an internal combustion engine to propel a vehicle because _____ 6) _____
 - 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.

- 7) Technician A says that most hybrids require that they be plugged into an electrical outlet at night to provide the electrical power to help propel the vehicle. Technician B says that the internal combustion engine in an HEV will often stop running when the vehicle is stopped. Which technician is correct? 7) _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician
- 8) 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? 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 motor or engine produces more torque at lower speed? 10) _____
- A) Electric motor
 - B) Gasoline motor
 - C) Air motor
 - D) Hydro-generator