

*Electric and Hybrid Electric Vehicles, 1st Edition*

**Quiz 2A**

NAME \_\_\_\_\_

1. Which type hybrid uses 36 to 42 volts? 1. \_\_\_\_\_
  - A) Mild hybrid
  - B) Medium hybrid
  - C) Full hybrid
  - D) Strong hybrid
  
2. An electric vehicle is also called a \_\_\_\_\_. 2. \_\_\_\_\_
  - A) self-driving vehicle
  - B) battery electric vehicle (BEV)
  - C) hybrid electric vehicle (HEV)
  - D) plug-in hybrid electric vehicle (PHEV)
  
3. A medium hybrid uses \_\_\_\_\_. 3. \_\_\_\_\_
  - A) A 12-volt battery and a 144-volt battery
  - B) Two 12-volt batteries
  - C) A 12-volt battery and a 42-volt battery
  - D) A 12-volt battery and a 300-volt battery
  
4. What is NOT an advantage of an EV? 4. \_\_\_\_\_
  - A) Higher cost.
  - B) Lack of required oil changes and other service that an ICE requires.
  - C) More economical to operate on a cost per mile basis.
  - D) All of the above
  
5. What is the typical battery configuration in a micro hybrid? 5. \_\_\_\_\_
  - A) A 12-volt battery and a 144-volt battery
  - B) Two 12-volt batteries
  - C) A 12-volt battery and a 42-volt battery
  - D) A 12-volt battery and a 300-volt battery
  
6. What is the difference between a hybrid electric vehicle (HEV) and a plug-in electric vehicle (PHEV)? 6. \_\_\_\_\_
  - A) Both an HEV and PHEV have to be plugged in.
  - B) Only the PHEV needs to be plugged in to achieve maximum range.
  - C) A PHEV does not use an ICE.
  - D) An HEV uses a high-voltage battery that has a higher capacity than a PHEV.
  
7. Electric motors are better than an internal combustion engine to propel a vehicle because \_\_\_\_\_. 7. \_\_\_\_\_
  - 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 require only a single speed transmission
  - D) All of the above are correct

8. Which of these is NOT an advantage of a series hybrid design? 8. \_\_\_\_\_
- A) Smaller internal combustion engine
  - B) A single-speed gearbox can be used
  - C) No transmission is necessary
  - D) All of these are advantages of the series hybrid design
9. 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? 9. \_\_\_\_\_
- A) Technician A only
  - B) Technician B only
  - C) Both technicians A and B
  - D) Neither technician A nor B
10. Technician A says that a diesel hybrid is not possible. Technician B says that a diesel hybrid is possible but is not in production at this time. Which technician is correct? 10. \_\_\_\_\_
- A) Technician A only
  - B) Technician B only
  - C) Both technicians A and B
  - D) Neither technician A nor B

## Answer Key

Testname: EV1\_2A

1. A  
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3. C  
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