

Animation Worksheet: Hybrid Automatic Transmission

Name: _____ Date: _____

1. A hybrid automatic transmission integrates an internal combustion engine, an electric motor, and a high voltage _____ system to optimize efficiency.
2. The high voltage battery stores electrical energy as _____ voltage to power the electric motor.
3. The _____ is the component that converts high voltage DC from the battery to three-phase AC to drive the electric motor.
4. The electric motor/generator can operate as a motor to provide propulsion, or as a _____ to recharge the battery during regenerative braking.
5. A(n) _____ is used to engage or disengage the internal combustion engine from the transmission.
6. In electric-only mode, the clutch is _____, which disconnects the engine from the transmission.
7. During high-demand situations like hard acceleration, both the internal combustion engine and the high voltage battery provide _____ power.
8. Regenerative braking recovers energy that would otherwise be lost as _____ during braking.
9. When the vehicle decelerates, the electric motor switches to generator mode and converts kinetic energy from the wheels into high voltage 3-phase _____ current.
10. This hybrid automatic transmission design is commonly seen in _____ hybrid vehicles to enhance fuel economy and reduce emissions.