

## HYBRID-ELECTRIC ENERGY

**Fill in each blank with one most suitable word.**

As shown in Figure 1, the most common internal combustion engine in automobiles is the four-stroke engine, which completes a four-part cycle of intake, compression, ..... and exhaust. A crankshaft turns a ..... to draw in an ..... mixture in the first step, as is illustrated in the diagram. In Step 2, the engine compresses the mixture, causing Step 3, the firing of a ..... Finally, as is presented in the diagram, the exhaust valve is ....., resulting in the release of exhaust gases into the air through the vehicle's tailpipe.

**Choose A, B, C, or D**

1. Which pollutant is the least dangerous to people's health?
  - A. benzene
  - B. nitrogen oxides
  - C. aldehydes
  - D. methanol
2. Which is correct about Mumbai and Kolkata?
  - A. Vehicles in these two cities cause more pollution than in the USA
  - B. Pollution from vehicles accounts for more than 70 percent of pollution in the two cities.
  - C. One third of pollution in these two countries is not caused by vehicular pollution.
  - D. Pollutants from engine exhaust is less serious in these two countries than in the USA.
3. What does "such pollution" in paragraph 3 refer to?
  - A. Emissions
  - B. hydrocarbons
  - C. oxides of nitrogen
  - D. smog caused by the reaction between hydrocarbons and oxides of nitrogen
  - E. All of the above.
4. In what way is a hybrid-electric vehicle better than conventional internal combustion energy vehicle?
  - A. Because a postcombustion control devices is installed in it.
  - B. Because it reduces pollution from conventional transportation engines
  - C. Because it releases less emissions.
  - D. Because it uses cleaner fuels.

5. How can the electric motor support the engine in powering the vehicle when it is speeding up?
  - A. It uses the electricity stored in the battery.
  - B. It turns the motor to create resistance.
  - C. It creates electricity and stores it in the battery
  - D. It uses kinetic energy
6. In which circumstance does the electric motor NOT take over the job of the internal combustion energy in a hybrid system?
  - A. When the vehicle is not moving
  - B. When the vehicle stops for traffic light
  - C. When the vehicle moves slowly in heavy traffic
  - D. When the vehicle is speeding up
7. Which is right about the comparison between a stationary vehicle with a running engine and a moving one?
  - A. A moving vehicle releases more gas emission than a stationary vehicle.
  - B. The amount of gas emission released by a stationary vehicle with a running engine is way bigger than that by a moving one.
  - C. A stationary vehicle causes less air pollution than a moving one.
  - D. The amount of gas emission released by a moving vehicle is much smaller than that by a stationary one.
8. Which of these is NOT a disadvantage of all-electric engine?
  - A. The need for fossil fuel
  - B. Renewable energy
  - C. Battery production
  - D. Disposal issues