

- 14** When a frictionless and well-insulated bicycle pump is used to pump up a basketball, the air in the ball becomes hotter than the surrounding air.

Which of the following statements best describes this observation?

- A** Thermal energy is supplied to the air during the pumping action, but the internal energy remains unchanged.
- B** Work is done on the air and since little thermal energy escapes, the internal energy increases.
- C** The internal energy of the air increases because thermal energy is supplied and work is done on the air.
- D** After compression, the internal energy decreases as thermal energy is lost to the surroundings.

- 15** Which of the following statements is true for an object undergoing very lightly damped