In **negative feedback systems**, the response reverses a change in a controlled condition

In **positive feedback systems**, the response strengthens the change in a controlled condition.

**State whether each of the following indicates negative or positive feedback:**

1. If blood temperature rises too high, specialized neurons in the hypothalamus of the brain sense the change. These neurons signal other nerve centers, which in turn send signals to the blood vessels of the skin. As these blood vessels dilate, more blood flows close to the body surface and excess heat radiates from the body.
2. If the blood temperature falls too low, specialized neurons in the hypothalamus of the brain sense the change and signals are sent to the cutaneous arteries (those supplying the skin) to constrict them. Warm blood is then retained deeper in the body and less heat is lost from the surface.
3. Part of the complex biochemical pathway of blood clotting is the production of an enzyme that forms the matrix of the blood clot. This has a self- catalytic, or self-accelerating effect, so that once the clotting process begins, it runs faster and faster until, ideally, bleeding stops.
4. During childbirth stretching of the uterus triggers the secretion of the hormone oxytocin, which stimulates uterine contractions and speeds up labor.
5. The body regulates blood pressure in a process in which nerves sense the blood flow resistance associated with higher blood pressure; the nerves relay this message to the brain; the brain then slows down the heart rate and dilates the blood vessels, lowering the blood pressure.
6. A negative feedback loop is essential in maintaining homeostasis. In negative feedback, any deviation from normal levels is resisted. Which of the following is not an example of negative feedback?
7. Saliva production is increased when a person is hungry.

b. Increased blood pressure causes blood vessels to dilate.

c. Increased insulin is produced when blood sugar levels increase.

d. Metabolic rate lowers when the body is deprived of food over a period of time.