

1. What is the main focus of the lecture?

- A. How DNA is transcribed and translated into proteins
- B. The structure of cellular organelles and their functions
- C. The concept of chemical pathways in cells and how they are regulated
- D. The principles of enzyme catalysis

2. How does the speaker organize the lecture?

- A. First describes what pathways are, then explains feedback mechanisms, followed by external influences
- B. By types of cells, then types of reactions, then types of enzymes
- C. Listing metabolic pathways one by one with their chemical equations
- D. Comparing animal cells and plant cells in terms of pathway operation

3. According to the lecture, how is a pathway in a cell built up?

- 1.
- 2.
- 3.
- 4.

4. What are the two kinds of feedback mechanisms mentioned in the lecture, and how do they differ in their effect on a chemical pathway?

- A. Positive feedback increases the production of enzymes, while negative feedback stops enzyme production completely in all cases.
- B. Positive feedback amplifies the activity of the pathway, while negative feedback reduces or shuts it down when enough product is made.
- C. Positive feedback helps turn off the pathway once the product is made, and negative feedback keeps it running longer.
- D. Positive feedback slows down the pathway, while negative feedback speeds it up to meet energy demands.

5. The lecture refers to “external signals” from outside the cell. What role do these external signals play in the regulation of chemical pathways?

- A. They supply the energy needed to power the chemical reactions in the pathway.
- B. They randomly trigger enzymes to start or stop working without any specific pattern.
- C. They permanently alter the DNA to create new chemical pathways in the cell.
- D. They activate or inhibit pathways by signaling the cell to respond to environmental changes.

6. Which of the following is not discussed in the lecture?

- A. Enzymes catalyzing individual steps in a pathway
- B. Negative and positive feedback mechanisms
- C. Role of ATP in energy transfer for pathways
- D. Influence of external signals on pathway regulation

7. Which of these diagrams most closely represents the pathways and feedback loops?

