

Biology (New Book) - 9th Class Biology Urdu Medium Chapter 7 Preparation

Q1. Which type of enzyme inhibitors inhibit the enzymes without attaching to the active site.
Ans 1: Non-competitive inbibitors do not attache to the active site of an enxyme. Rather, they attach to some other location of enzyme.
Q2. Write affect of change of pH
Ans 1: Change in pH can affect the ionization of the amino acids t the active site down enzyme activity o blocks it comletely. Differente enzymes have differente optimum pH values. For example, Pepsin works in acidic medium while trypsin works in alkaline medium.
Q3. Provide two examples of enzymes that operate optimally at specific pH.
Ans 1: Pepsin work in acidic medium trypsin works in alkaline medium.
Q4. Name the factors affecting enzyme activity.
Ans 1: 1) Temprature 2) Substrate Conscentration. 3) pH
Q5. What do you mean by Optimum Temperature
Ans 1: Optimum temperature: Each enzyme works at maximum rate at a specific temperture calle doptimum temperature. The optimum temperature for most of human enzyme in 37 oC
Q6. Which type of metabolism demands input of energy. Give an examples
Ans 1: Anabolism demands input of energy photosyntheiss. i.e., conversion of carbon dioxide and water into glucose and oxygen using sunlight.

Q7. Define Metabolism. Difference between catabolism and anabolism.

Metabolism is the sum of all chemical reactions that occur with an organism to sustain life.

Ans 1: Metabolism:

Ans 2: Catabolism:

Dfine:

It involves the breakdown of complex molecules into simpler ones, releasing energy in the process.

Example:

Cellular respiration i.e. oxidation of food into CO2 and H2O to get energy

Lipolysis i.e. break-down of lipids into fatty acids and glycerol, which can be used for energy production.

Ans 3: Anabolism:

Define: Involves building up complex molecules from simpler ones, thsi process consumes energy. Example:

- i. Photosynthesis i.e. conversion of carbon dioxide and water into glucose andoxygen using sunlight.
- ii. Protein syntesis i.e. formation of proteins form amino acids, which are vital for cell structure and function.
- Q8. How does pH affect enzyme activity.
 - **Ans 1:** Enzymes are sensitive to hydrogen ion concentration of he fuid in which they work. They show maximum acticity at a speecific pH. called their optimum pH.
- Q9. According to induced fit model. the active site is flexible. Does it mean that any substrate can attach with this flexible active site? If not, then explain.
 - **Ans 1:** Enzymes are very specific for the substrate. One enzyme can act on a particular substrate because ative sites posses specific geometric shapes that fit with specific substrates, According to induced fit model, the active site is slightly flexible but not flexible enough that any substrate can attach with active site.
- Q10. Which protein digestign enxyme functions in acidic medium?
 - Ans 1: Pepsin is a protein digesting enzyme which functions in acidic medium.