

Biology (New Book) - 9th Class Biology Urdu Medium Short Question Preparations

Q1. Difference between catabolism and anabolism

Ans 1: Catabolism:

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.

ii. Lipolysis i.e. breakdown of lipids into fatty acids and glycerol, which can be used for energy production.

Ans 2: Anabolism"

Involves building up complex molecules from simpler ones. This process consumes energy.

Example:

i. Photosynthesis i.e. conversion of carbon dioxide and water into glucose and oxygen using sunlight.

ii. Protein synthesis i.e. formation of proteins from amino acids, which are vital for cell structure and function.

Q2. What is the function of the centrosome during cell division.

Ans 1: During cell division the centrosome of cell duplicates into two these two centrosomes migrate to the opposite side of the nucleus and make network of microtubules called spindle fibers. These spindle fibers ensure accurate separation of chromosomes.

Q3. Write names of five kingdoms of classification.

Ans 1: i. Kingdom Monera ii. Kingdom Plantae iii. Kingdom Protista iv. Kingdom Animalia
v. Kingdom Fungi

Q4. Define Dark Reaction

Ans 1: During this phase, carbon dioxide is reduced to make glucose, The details of dark reactions were discovered by Melvin Calvin.

Q5. Define Xylem

Ans 1: Xylem: It is the vascular tissue responsible for the transporting water and minerals absorbed by the roots from the soil to the parts of the plants.

Q6. What are the roles of these molecules for the cellular metabolism.

Ans 1: Cells get energy from the oxidation of food. They store this energy by combining ADP with P_i to form ATP

Q7. Define the Genetics

Ans 1: It is the branch of Biology that deals with the study of transfer of characteristics from parents to offspring.
Application :- In genetics, scientists also study the causes of genetic diseases, and develop better varieties of plants

Q8. Why cannot we classify viruses in any Kingdom.

Ans 1: Viruses are not included in any kingdom because they lack any of the characteristics of the three domains of life.

Q9. What is the optimum temperature for most of the human enzymes.

Ans 1: The optimum temperature for most of the human enzymes is 37 °C

Q10. Difference between epidermis and root hairs.

Ans 1: Epidermis:

The outermost covering of the root is called epidermis. It is a single layer of cells.

Root Hairs:

Many cells of epidermis have tiny hair-like extensions into the space among soil particles. These extensions are called root hairs.

Q11. How does the balance between photosynthesis and respiration affect gas exchange during the day and night.

Ans 1: During the day, leaves are releasing oxygen and taking carbon dioxide from the environment. During night, all cells are carrying out respiration while taking in oxygen and releasing carbon dioxide.

Q12. How do the smooth muscles contribute to the stomach's function.

Ans 1: Smooth muscles in the stomach contribute to the stomach's function by contracting and relaxing to mix and move food through the stomach.

Q13. Define Guttation

Ans 1: Guttation: The process that involves the release of water droplets through small pores located at the tips or edges of leaves.

Q14. Name the main steps of aerobic respiration.

Ans 1: i. glycolysis
ii. Krebs cycle
iii. Electron transport chain

Q15. Define transpiration and its types.

Ans 1: Define

The loss of water in the form of vapours from plant surface is called transpiration.

Types:

1. Stomatal transpiration
2. Cuticular transpiration
3. Lenticular transpiration.

Q16. Define Anaerobic Respiration.

Ans 1: Cellular respiration that occurs in the absence of oxygen is called anaerobic respiration.

Q17. Define Light Reactions

Ans 1: During light reaction, light energy is used to make high-energy molecules ATP and NADPH

Q18. Which enzymes are used for the removal of protein stains from clothes.

Ans 1: Protease enzymes are used for the removal of protein stains from clothes.

Q19. Enlist the distinguishing characteristics of Fungi

- Ans 1:**
1. Fungi are eukaryotic organisms
 2. They do not have cellulose in their cell walls but possess chitin
 3. they lack chlorophyll and hence cannot perform photosynthesis.
 4. They are multicellular

Q20. Write the uses of ATP

- Ans 1:**
- i. Muscle contractions and movement
 - ii. Replication of DNA and mitosis
 - iii. synthesis of biomolecules.