

IJMB Biology Past Questions (Compiled)

Biology Questions

1. Describe the structure and functions of the cell membrane.
2. Explain the process of photosynthesis and its importance to plants.
3. Differentiate between mitosis and meiosis.
4. Discuss the structure and function of DNA.
5. Explain the principles of genetics and Mendel's laws.
6. Describe the human circulatory system and the function of the heart.
7. Outline the structure and functions of the human respiratory system.
8. Explain the nitrogen cycle and its significance in the environment.
9. Describe the different types of plant tissues and their functions.
10. Explain how enzymes function and factors affecting their activity.

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Answers

1. The cell membrane is a phospholipid bilayer with embedded proteins that controls the movement of substances in and out of the cell...
2. Photosynthesis is the process by which green plants use sunlight to synthesize food from carbon dioxide and water, producing oxygen as a byproduct...
3. Mitosis results in two identical daughter cells for growth and repair; meiosis produces four genetically varied gametes for sexual reproduction...
4. DNA is a double helix molecule carrying genetic instructions vital for growth, development, and reproduction...
5. Mendel's laws explain inheritance patterns through segregation and independent assortment of alleles...
6. The circulatory system transports nutrients and oxygen; the heart pumps blood through arteries and veins...
7. The respiratory system allows gas exchange; lungs inhale oxygen and exhale carbon dioxide...
8. The nitrogen cycle converts nitrogen into usable forms for plants, maintaining soil fertility...
9. Plant tissues include meristematic (growth), parenchyma (photosynthesis), xylem (water transport), and phloem (food transport)...
10. Enzymes catalyze biochemical reactions; temperature, pH, and substrate concentration affect activity...