

## KCET 2025 Sample Questions For Biology

Question:

- Which of the following is based on the principle of antigen-antibody interaction?
- (A) PCR. (B) ELISA. (C) rDNA technology. (D) Gel Electrophoresis.
  
- Answer:
  - (B) ELISA.
  - Explanation:
    - ELISA (Enzyme-Linked Immunosorbent Assay) relies on the specific binding of antigens and antibodies.

Question:

- Homeostasis is a condition where the organisms:
- (A) Maintain a constant internal environment in an ever-changing external environment.
- (B) Do not maintain a constant internal environment.
- (C) Change their internal environment according to their external environment.
- (D) Change their internal environment when the external environment is constant.
  
- Answer:
  - (A) Maintain a constant internal environment in an ever-changing external environment.

Question:

- Which of the following hormones is responsible for the "fight or flight" response?
- (A) Insulin. (B) Adrenaline. (C) Thyroxine. (D) Estrogen.

Answer: (B) Adrenaline.

Question:

- The process of formation of gametes is called:
- (A) Gametogenesis. (B) Sporogenesis. (C) Organogenesis. (D) Metamorphosis.

Answer: (A) Gametogenesis.

Question:

- Which of the following is a vestigial organ in humans?
- (A) Heart. (B) Lungs. (C) Appendix. (D) Kidney.

Answer: (C) Appendix.

Question:

- The functional unit of a kidney is:
- (A) Neuron. (B) Nephron. (C) Alveoli. (D) Villi.

Answer: (B) Nephron.

Question:

- Which vitamin is essential for blood clotting?

- (A) Vitamin A. (B) Vitamin B. (C) Vitamin C. (D) Vitamin K.

Answer: (D) Vitamin K.

Question:

- The process of conversion of glucose into pyruvate is:
- (A) Krebs cycle. (B) Glycolysis. (C) Electron transport chain. (D) Fermentation.

Answer: (B) Glycolysis.

Question:

- DNA replication occurs during which phase of the cell cycle?
- (A) G1 phase. (B) S phase. (C) G2 phase. (D) M phase.

Answer: (B) S phase.

Question:

- Which of the following is a greenhouse gas?
- (A) Oxygen. (B) Nitrogen. (C) Carbon dioxide. (D) Hydrogen.

Answer: (C) Carbon dioxide.

Question:

- The study of fossils is known as:
- (A) Ecology. (B) Palaeontology. (C) Genetics. (D) Physiology.

Answer: (B) Paleontology.

Question:

- Which of the following is a bacterial disease?
- (A) AIDS. (B) Influenza. (C) Tuberculosis. (D) Measles.

Answer: (C) Tuberculosis.

Question:

- The primary function of the xylem tissue in plants is:
- (A) Transport of food. (B) Transport of water. (C) Storage of nutrients. (D) Photosynthesis.

Answer: (B) Transport of water.

Question:

- The process of pollination by insects is called:
- (A) Hydrophily. (B) Anemophily. (C) Entomophily. (D) Ornithophily.

Answer: (C) Entomophily.

Question:

- Which enzyme breaks down starch into maltose?
- (A) Protease. (B) Lipase. (C) Amylase. (D) Nuclease.

Answer: (C) Amylase.

Question:

- The main function of the red blood cells is:
- (A) Blood clotting. (B) Oxygen transport. (C) Defence against infection. (D) Nutrient transport.

Answer: (B) Oxygen transport.

Question:

- The process of programmed cell death is called:
- (A) Mitosis. (B) Meiosis. (C) Apoptosis. (D) Necrosis.

Answer: (C) Apoptosis.

Question:

- Which of the following is a single-celled organism?
- (A) Hydra. (B) Mushroom. (C) Amoeba. (D) Earthworm.

Answer: (C) Amoeba.

Question:

- The part of the brain that controls balance and posture is:
- (A) Cerebrum. (B) Cerebellum. (C) Medulla. (D) Hypothalamus.

Answer: (B) Cerebellum.

Question:

- The process of nitrogen fixation is carried out by:
- (A) Fungi. (B) Viruses. (C) Bacteria. (D) Algae.

Answer: (C) Bacteria.

Question:

- The "powerhouse" of the cell is:
- (A) Golgi apparatus. (B) Endoplasmic reticulum. (C) Mitochondria. (D) Ribosome.

Answer: (C) Mitochondria.

Question:

- Which of the following is a genetic disorder?
- (A) Cholera. (B) Typhoid. (C) Down syndrome. (D) Malaria.

Answer: (C) Down syndrome.

Question:

- Which of the following is responsible for the formation of spindle fibers during cell division?
- (A) Golgi apparatus. (B) Centrosome. (C) Endoplasmic reticulum. (D) Lysosomes.
- Answer: (B) Centrosome.

Question:

- The process of transcription involves the synthesis of:

- (A) DNA from DNA. (B) RNA from DNA. (C) Protein from RNA. (D) Protein from DNA.

Answer: (B) RNA from DNA.

Question:

- Which of the following is a water-soluble vitamin?
- (A) Vitamin A. (B) Vitamin D. (C) Vitamin E. (D) Vitamin C.

Answer: (D) Vitamin C.

Question:

- The process of mineral absorption by plants mainly occurs through:
- (A) Xylem. (B) Phloem. (C) Root hairs. (D) Stomata.

Answer: (C) Root hairs.

Question:

- Which of the following is a viral disease in plants?
- (A) Rust. (B) Smut. (C) Tobacco mosaic virus. (D) Blight.

Answer: (C) Tobacco mosaic virus.

Question:

- The primary function of platelets in the blood is:
- (A) Oxygen transport. (B) Carbon dioxide transport. (C) Blood clotting. (D) Defence against infection.

Answer: (C) Blood clotting.

Question:

- Which of the following is a product of anaerobic respiration?
- (A) Carbon dioxide and water. (B) Glucose and oxygen. (C) Lactic acid and carbon dioxide. (D) ATP and oxygen.

Answer: (C) Lactic acid and carbon dioxide.

Question:

- The term "biodiversity" refers to:
- (A) The variety of ecosystems. (B) The variety of species. (C) The variety of genes. (D) All of the above.

Answer: (D) All of the above.

Question:

- Which of the following is a connective tissue?
- (A) Muscle tissue. (B) Nervous tissue. (C) Epithelial tissue. (D) Bone tissue.

Answer: (D) Bone tissue.

Question:

- The hormone that regulates blood glucose levels is:
- (A) Adrenaline. (B) Thyroxine. (C) Insulin. (D) Growth hormone.

Answer: (C) Insulin.

Question:

- The process of imbibition involves:
- (A) Absorption of water by solids. (B) Loss of water from liquids. (C) Movement of water through a semi-permeable membrane. (D) Evaporation of water.

Answer: (A) Absorption of water by solids.

Question:

- Which of the following is a free-living nitrogen-fixing bacteria?
- (A) Rhizobium. (B) Azotobacter. (C) Pseudomonas. (D) Escherichia coli.

Answer: (B) Azotobacter.

Question:

- The "law of segregation" is associated with:
- (A) Darwin's theory. (B) Mendel's laws. (C) Lamarck's theory. (D) DeVries' theory.

Answer: (B) Mendel's laws.

Question:

- The function of the gall bladder is to:
- (A) Produce bile. (B) Store bile. (C) Secrete enzymes. (D) Absorb nutrients.

Answer: (B) Store bile.

Question:

- The process of transpiration in plants helps in:
- (A) Absorption of minerals. (B) Cooling of the plant. (C) Transport of food. (D) All of the above.

Answer: (D) All of the above.

Question:

- Which of the following is a component of chlorophyll?
- (A) Iron. (B) Calcium. (C) Magnesium. (D) Potassium.

Answer: (C) Magnesium.

Question:

- The part of the human eye that controls the size of the pupil is:
- (A) Retina. (B) Cornea. (C) Iris. (D) Lens.

Answer: (C) Iris.

Question:

- The process of eutrophication is mainly caused by:
- (A) Air pollution. (B) Water pollution. (C) Soil pollution. (D) Noise pollution.

Answer: (B) Water pollution.

Question:

- Which of the following is a vector for dengue fever?
- (A) Anopheles mosquito. (B) Culex mosquito. (C) Aedes mosquito. (D) Housefly.

Answer: (C) Aedes mosquito.

Question:

- The function of the "phloem" tissue is to:
- (A) Transport water. (B) Transport food. (C) Provide mechanical support. (D) Store minerals.

Answer: (B) Transport food.

