

Class: X
Subject: Biology
Topic: Life processes
No. of Questions: 20
Duration: 60 Min
Maximum Marks: 60

Q1 In Photosynthetic process, atmospheric carbon di oxide is _____ to carbohydrates

- A. Oxidized
- B. Reduced
- C. Neutralized
- D. Burnt

Ans. B During photosynthesis carbon dioxide is reduced to carbohydrates and water is oxidized to release oxygen.

Q2 When water enters the guard cells the stomata

- A. Opens
- B. Closes
- C. Open or closes
- D. No effect

Ans. A Opening and closure of the stomata pore is mediated by changes in the turgor pressure of the two guard cells. The turgor pressure of guard cells is controlled by movements of large quantities of ions and sugars into and out of the guard cells.

Q3 On seeing good food our mouth waters. This fluid is actually

- A. Water
- B. Hormone
- C. Enzyme
- D. None of the above

Ans. C This fluid is actually saliva which contains an enzyme salivary amylase.

Q4 The enzyme Pepsin is inactive in stomach without the presence of

- A. Nitric Acid
- B. Hydrochloric acid
- C. Acetic acid
- D. Butyric acid

Ans. B Hydrochloric acid is secreted in the stomach which activates enzyme pepsin into its active form.

Q5 Villi present on the inner lining of the intestinal wall

- A. Secretes enzymes for digestion
- B. Secretes hormones
- C. Decreases the surface area for absorption
- D. Increases the surface area for absorption

Ans. D Intestinal villi are small, finger-like projections that protrude from the epithelial lining of the intestinal wall. Villi increase the internal surface area of the intestinal walls. Increased surface area allows for increased intestinal wall area that is available for absorption.

Q6 During cellular respiration one molecule of glucose is first broken down into two molecules of _____

- A. Acetic acid
- B. Pyruvic acid
- C. Lactic acid
- D. None of the above

Ans B Glycolysis is the metabolic pathway that converts glucose into pyruvic acid.

Q7 Rajib was absent in the class because of muscle pain which he claims to be due to excess physical exercise he had done yesterday. This pain is due to

- A. Formation of lactic acid
- B. Formation of acetic acid
- C. Formation of Pyruvic acid
- D. Formation of Hydrochloric acid

Ans. A As the lactic acid system is anaerobic, there is no oxygen present. Pyruvic acid without the presence of oxygen forms lactic acid.

Q8 Right part of the human heart contains

- A. Oxygenated blood
- B. Mixed blood
- C. Deoxygenated blood
- D. No blood

Ans. C Right part contains deoxygenated blood whereas left part contains oxygenated blood.

Q9 The transport of soluble products of photosynthesis is called translocation and it occurs in the part of the vascular tissue called

- A. Xylem
- B. Sclerenchyma
- C. Phloem
- D. Collenchyma

Ans. C Phloem helps in movement of food material and xylem helps in movement of water across the plants.

Q10 In normal expiration, the diaphragm is

- A. Arched
- B. Flattened
- C. Perforated
- D. None of these

Ans. A During inhalation, the diaphragm contracts, thus enlarging the thoracic cavity (the external intercostal muscles also participate in this enlargement). This reduces intra-thoracic pressure: in other words, enlarging the cavity creates suction that draws air into the lungs.

Q11 In human each kidney has large numbers of filtration units called ____

- A. Neutrons
- B. Neurons
- C. Neptune
- D. Nephrons

Ans. D Nephrons is the basic structural and functional unit of kidney.

Q12 Respiration is a process in which

- A. Energy is stored in the form of ATP
- B. Energy is released and stored in the form of ATP
- C. Energy is used up
- D. Energy is not released at all

Ans. B Cellular respiration is the set of metabolic reactions and processes that take place in the cells of organisms to convert biochemical energy from nutrients into adenosine triphosphate (ATP), and then release waste products.

Q13 The breakdown of pyruvate to give carbon dioxide, water and energy takes place in

- A. Cytoplasm
- B. Mitochondria
- C. Chloroplast
- D. Nucleus

Ans. B Mitochondria are sometimes described as "the powerhouse of the cell" because they generate most of the cell's supply of adenosine triphosphate (ATP), used as a source of chemical energy.

Q14 Where is bile produced?

- A. Gall bladder
- B. Blood
- C. Liver
- D. Spleen

Ans. C Bile is produced by liver and is stored in gall bladder.

Q15 Largest heart is found in

- A. Whale
- B. Giraffe
- C. Crocodile
- D. Lion

Ans. A The blue whale (*Balaenoptera musculus*) has the largest heart of any living creature. It can weigh over 1,500 lb (680 kg) and be as large as a small automobile.

Q16 Erythropoeisis may be stimulated by the deficiency of

- A. magnesium
- B. Oxygen
- C. Protein
- D. None of the above

Ans B Because RBCs carry oxygen and transport it to whole body.

Q17 If salivary amylase is lacking in the saliva, which of the following events in the mouth cavity will be affected?

- A. Proteins break down into amino acids
- B. Starch breaking down into sugars
- C. Fats breaking down into fatty acids and sugar
- D. Absorption of vitamins

Ans. B Amylase is an enzyme that catalyzes the hydrolysis of starch into sugars. Amylase is present in the saliva of humans and some other mammals, where it begins the chemical process of digestion. Foods that contain large amounts of starch but little sugar, such as rice and potatoes, may acquire a slightly sweet taste as they are chewed because amylase degrades some of their starch into sugar.

Q18 Which one is an anabolic process?

- A. Digestion
- B. Respiration
- C. Excretion
- D. Photosynthesis

Ans. B Anabolism is the set of metabolic pathways that construct molecules from smaller units. These reactions require energy.

Q19 Dead cells of phloem are

- A. Companion cells
- B. Phloem fibers
- C. Phloem parenchyma
- D. Sieve tubes

Ans. B Fibers are the long, narrow supportive cells that provide tension strength without limiting flexibility. They are also found in xylem, and are the main component of many textiles such as paper, linen, and cotton.

Q20 In which of the following vertebrate group or groups, heart does not pump oxygenated blood to different parts of the body?

- A. Pisces and amphibians
- B. Amphibians and reptiles
- C. Amphibians only
- D. Pisces only

Ans. D Fish have a closed-loop circulatory system. The heart pumps the blood in a single loop throughout the body.