|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  | | --- | --- | | Question 1 of 35 | 3.0 Points |   Deep-sea hydrothermal vents provide energy for a thriving community of living organisms in the absence of sunlight. The vents emit hot gases rich in reducing compounds such as methane and hydrogen sulfide. A single-celled organism has been found around these vents that has a circular chromosome and membrane phospholipids with ester-linked fatty acid chains. Based on this information, this organism belongs to which domain of life?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. Archaea only |  | | orrect | |  | | --- | |  | | B. Bacteria only |  | |  | |  | | --- | |  | | C. Eukaryotes only |  | |  | |  | | --- | |  | | D. Either Archaea or Bacteria |  | |  | |  | | --- | |  | | E. Either Bacteria or Eukaryotes |  |  |  | | --- | | Answer Key: B | |  | |
| |  |  | | --- | --- | | Question 2 of 35 | 3.0 Points |   Which of these molecules found in ocean water around these hydrothermal vents can pass through cell membranes by simple diffusion?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. methane |  | | ncorrect | |  | | --- | |  | | B. phosphate |  | |  | |  | | --- | |  | | C. Na+ ions |  | |  | |  | | --- | |  | | D. pyruvate |  | |  | |  | | --- | |  | | E. Cl- ions |  |  |  | | --- | | Answer Key: A | |  | |
| |  |  | | --- | --- | | Question 3 of 35 | 3.0 Points |   Vent communities have worms and bivalves found nowhere else. Some of these are able to tolerate temperatures up to 60 degrees C. Compared to their cold-water relatives, how would the cell membranes of these heat-tolerant animals differ?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. the heat-tolerant animals will have more unsaturated fatty acids |  | | orrect | |  | | --- | |  | | B. the heat-tolerant animals will have more sterols and more saturated fatty acids |  | |  | |  | | --- | |  | | C. the heat-tolerant animals will have more sterols and more unsaturated fatty acids |  | |  | |  | | --- | |  | | D. the heat-tolerant animals will have less sterols and more saturated fatty acids. |  | |  | |  | | --- | |  | | E. the heat-tolerant animals will have similar membrane lipids as their cold-water relatives. |  |  |  | | --- | | Answer Key: B | |  | |
| |  |  | | --- | --- | | Question 4 of 35 | 3.0 Points |   Sterols are synthesized by enzymes in the smooth endoplasmic reticulum. Where do the sterol molecules go next?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. to the plasma membrane via secretory vesicles |  | | orrect | |  | | --- | |  | | B. to the Golgi via transport vesicles |  | |  | |  | | --- | |  | | C. to the rough ER via a direct connection |  | |  | |  | | --- | |  | | D. to the mitochondria |  |  |  | | --- | | Answer Key: B | |  | |
| |  |  | | --- | --- | | Question 5 of 35 | 3.0 Points |   Mad cow disease is a neurodegenerative disorder in humans caused by eating beef from cows affected with the disease. In cows and people afflicted with mad cow disease, the prion protein is altered. The normal form of the prion protein is mostly alpha-helix, monomeric, soluble, and can be degraded by protease enzymes. The disease form of the prion protein is mostly beta-sheet and assembles into insoluble, multimeric complexes that are highly resistant to proteases. The amino acid sequences of the normal and disease forms are identical. What level of protein structure is the same between the normal and disease forms of the prion protein?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | orrect | |  | | --- | |  | | A. primary structure |  | |  | |  | | --- | |  | | B. secondary structure |  | |  | |  | | --- | |  | | C. tertiary structure |  | |  | |  | | --- | |  | | D. quaternary structure |  | |  | |  | | --- | |  | | E. all of the above |  |  |  | | --- | | Answer Key: A | |  | |
| |  |  | | --- | --- | | Question 6 of 35 | 3.0 Points |   What elemental isotope would be incorporated into newly synthesized prion protein, but not into lipids, carbohydrates or nucleic acids?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. Carbon-14 |  | |  | |  | | --- | |  | | B. Hydrogen-3 (tritrium) |  | |  | |  | | --- | |  | | C. Nitrogen-15 |  | |  | |  | | --- | |  | | D. Phosphorus-32 |  | | orrect | |  | | --- | |  | | E. Sulfur-35 |  |  |  | | --- | | Answer Key: E | |  | |
| |  |  | | --- | --- | | Question 7 of 35 | 3.0 Points |   What forces or bonds link amino acids to make the primary structure of proteins?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. phosphodiester bonds |  | | orrect | |  | | --- | |  | | B. peptide bonds |  | |  | |  | | --- | |  | | C. hydrogen bonds |  | |  | |  | | --- | |  | | D. hydrophobic interactions |  | |  | |  | | --- | |  | | E. ionic bonds |  |  |  | | --- | | Answer Key: B | |  | |
| |  |  | | --- | --- | | Question 8 of 35 | 3.0 Points |   The prion protein is located in the cytoplasm of neural cells. Where in the neural cell is this protein synthesized?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | orrect | |  | | --- | |  | | A. by free cytoplasmic ribosomes |  | |  | |  | | --- | |  | | B. by ribosomes docked to the ER membrane |  | |  | |  | | --- | |  | | C. by ribosomes in the nucleus |  | |  | |  | | --- | |  | | D. by ribosomes in the mitochondria |  |  |  | | --- | | Answer Key: A | |  | |
| |  |  | | --- | --- | | Question 9 of 35 | 3.0 Points |   A heritable version of the prion disease is caused by a change of an aspartic acid, an amino acid with a negatively charged side chain, to valine, with a hydrophobic side chain. Where in the normal prion protein would you expect to find aspartic acid?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. on the surface of the protein interacting with water |  | |  | |  | | --- | |  | | B. in the interior of the protein interacting with hydrophobic amino acids |  | | ncorrect | |  | | --- | |  | | C. on the exterior of the protein interacting with other aspartic acid side chains |  | |  | |  | | --- | |  | | D. on the surface of the protein interacting with a positively charged amino acid side chain |  | |  | |  | | --- | |  | | E. a) or d) |  |  |  | | --- | | Answer Key: E | |  | |
| |  |  | | --- | --- | | Question 10 of 35 | 3.0 Points |   The diagram below refers to the following reaction: A + B → C + D Which letter in the diagram represents the deltaG for the enzyme-catalyzed reaction?   |  |  | | --- | --- | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | ncorrect | |  | | --- | |  | | A. letter a |  | |  | |  | | --- | |  | | B. letter b |  | |  | |  | | --- | |  | | C. letter c |  | |  | |  | | --- | |  | | D. letter d |  | |  | |  | | --- | |  | | E. letter e |  |  |  | | --- | | Answer Key: D | |  | |
| |  |  | | --- | --- | | Question 11 of 35 | 3.0 Points |   Which letter in the diagram represents the activation energy required for the reverse enzyme-catalyzed reaction C+D → A+B?   |  |  | | --- | --- | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | orrect | |  | | --- | |  | | A. letter a |  | |  | |  | | --- | |  | | B. letter b |  | |  | |  | | --- | |  | | C. letter c |  | |  | |  | | --- | |  | | D. letter d |  | |  | |  | | --- | |  | | E. letter e |  |  |  | | --- | | Answer Key: A | |  | |
| |  |  | | --- | --- | | Question 12 of 35 | 3.0 Points |   The reaction A+B → C+D is:   |  |  | | --- | --- | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. Endergonic, deltaG is positive |  | | orrect | |  | | --- | |  | | B. Exergonic, deltaG is negative |  | |  | |  | | --- | |  | | C. At equilibrium |  | |  | |  | | --- | |  | | D. Irreversible |  | |  | |  | | --- | |  | | E. Both exergonic and at equilibrium |  |  |  | | --- | | Answer Key: B | |  | |
| |  |  | | --- | --- | | Question 13 of 35 | 3.0 Points |   What determines the rate of a reaction?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. the change in the enthalpy. |  | |  | |  | | --- | |  | | B. the change in entropy. |  | |  | |  | | --- | |  | | C. the change in free energy. |  | | orrect | |  | | --- | |  | | D. the activation energy. |  | |  | |  | | --- | |  | | E. none of the above. |  |  |  | | --- | | Answer Key: D | |  | |
| |  |  | | --- | --- | | Question 14 of 35 | 3.0 Points |   Which of the types of proteins below are NOT synthesized in the rough ER?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. endoplasmic reticulum proteins. |  | |  | |  | | --- | |  | | B. nuclear envelope proteins. |  | |  | |  | | --- | |  | | C. secreted proteins. |  | | orrect | |  | | --- | |  | | D. mitochondrial proteins. |  | |  | |  | | --- | |  | | E. plasma membrane proteins |  |  |  | | --- | | Answer Key: D | |  | |
| |  |  | | --- | --- | | Question 15 of 35 | 3.0 Points |   Which of the following is an argument for the theory that mitochondria and chloroplasts evolved from prokaryotic endosymbionts?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. Mitochondria and chloroplasts have double membranes. |  | |  | |  | | --- | |  | | B. Mitochondrial and chloroplast genes resemble bacterial genes. |  | |  | |  | | --- | |  | | C. Mitochondria and chloroplasts have their own DNA. |  | |  | |  | | --- | |  | | D. The mitochondrial and chloroplast genomes are circular. |  | | orrect | |  | | --- | |  | | E. All of the above are arguments for the endosymbiotic theory. |  |  |  | | --- | | Answer Key: E | |  | |
| |  |  | | --- | --- | | Question 16 of 35 | 3.0 Points |   In the figure above, which letter best represents active transport of a molecule into the cell?   |  |  | | --- | --- | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | orrect | |  | | --- | |  | | A. curve A |  | |  | |  | | --- | |  | | B. curve B |  | |  | |  | | --- | |  | | C. curve C |  | |  | |  | | --- | |  | | D. none of these curves |  |  |  | | --- | | Answer Key: A | |  | |
| |  |  | | --- | --- | | Question 17 of 35 | 3.0 Points |   A person from a seacoast town flies to Denver, Colorado and visits Rocky Mountain National Park. He soon begins to experience symptoms of altitude sickness: fatigue, dizziness, nausea, and hypoxia (not enough oxygen). How will the lower atmospheric oxygen level affect NADH levels in this person's mitochondria?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. the mitochondrial NADH level will stay the same |  | |  | |  | | --- | |  | | B. the mitochondrial NADH level will decrease |  | | orrect | |  | | --- | |  | | C. the mitochondrial NADH level will increase |  |  |  | | --- | | Answer Key: C | |  | |
| |  |  | | --- | --- | | Question 18 of 35 | 3.0 Points |   What will happen to the proton gradient and the rate of ATP synthesis in the mitochondria of this person's muscle cells?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. both the proton gradient and the rate of ATP synthesis will increase |  | |  | |  | | --- | |  | | B. both the proton gradient and the rate of ATP synthesis will decrease |  | | ncorrect | |  | | --- | |  | | C. the proton gradient will increase, the rate of ATP synthesis will decrease |  | |  | |  | | --- | |  | | D. the proton gradient will decrease, the rate of ATP synthesis will increase |  | |  | |  | | --- | |  | | E. the proton gradient will stay the same, the rate of ATP synthesis will decrease |  |  |  | | --- | | Answer Key: B | |  | |
| |  |  | | --- | --- | | Question 19 of 35 | 3.0 Points |   The person at high altitude exhales a reduced amount of carbon dioxide compared to at sea level. Which of these metabolic pathways release carbon dioxide from a molecule of glucose?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. glycolysis only |  | |  | |  | | --- | |  | | B. the citric acid cycle only |  | |  | |  | | --- | |  | | C. both the citric acid cycle and the electron transport chain |  | | orrect | |  | | --- | |  | | D. both pyruvate oxidation and the citric acid cycle |  | |  | |  | | --- | |  | | E. both glycolysis and pyruvate oxidation |  |  |  | | --- | | Answer Key: D | |  | |
| |  |  | | --- | --- | | Question 20 of 35 | 3.0 Points |   If the person's muscle cells ferment glucose to lactic acid, what will be the net energy yield per molecule of glucose?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | ncorrect | |  | | --- | |  | | A. zero |  | |  | |  | | --- | |  | | B. 2 ATP |  | |  | |  | | --- | |  | | C. 2 ATP + 2 NADH |  | |  | |  | | --- | |  | | D. 4 ATP |  | |  | |  | | --- | |  | | E. 32-34 ATP |  |  |  | | --- | | Answer Key: B | |  | |
| |  |  | | --- | --- | | Question 21 of 35 | 3.0 Points |   What molecules produced by mitochondria are used by chloroplasts, and vice versa, without involving any cytoplasmic pathways?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. carbon dioxide and ATP |  | |  | |  | | --- | |  | | B. ATP and NADH |  | |  | |  | | --- | |  | | C. carbon dioxide and glucose |  | | orrect | |  | | --- | |  | | D. carbon dioxide and oxygen |  | |  | |  | | --- | |  | | E. glucose, ATP, and oxygen |  |  |  | | --- | | Answer Key: D | |  | |
| |  |  | | --- | --- | | Question 22 of 35 | 3.0 Points |   A mouse cell line has been genetically engineered with a deficiency in complex I of the mitochondrial electron transport chain (see figure above). What metabolic pathways would still operate if NADH cannot be oxidized to NAD+ in the mitochondria?   |  |  | | --- | --- | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | orrect | |  | | --- | |  | | A. glycolysis and lactic acid fermentation |  | |  | |  | | --- | |  | | B. pyruvate oxidation |  | |  | |  | | --- | |  | | C. citric acid cycle |  | |  | |  | | --- | |  | | D. all of the above |  | |  | |  | | --- | |  | | E. none of the above |  |  |  | | --- | | Answer Key: A | |  | |
| |  |  | | --- | --- | | Question 23 of 35 | 3.0 Points |   Complex IV is at the end of the mitochondrial electron transport chain. Where do the electrons go from Complex IV?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. to the ATP synthase to make ATP from ADP and Pi |  | |  | |  | | --- | |  | | B. to ADP to make ATP |  | |  | |  | | --- | |  | | C. to H+ to generate H2 |  | |  | |  | | --- | |  | | D. to CO2 to make carbohydrate |  | | orrect | |  | | --- | |  | | E. to O2 to make H2O |  |  |  | | --- | | Answer Key: E | |  | |
| |  |  | | --- | --- | | Question 24 of 35 | 3.0 Points |   What pathway produces FADH2?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. glycolysis |  | |  | |  | | --- | |  | | B. pyruvate oxidation |  | | orrect | |  | | --- | |  | | C. citric acid cycle |  | |  | |  | | --- | |  | | D. lactic acid fermentation |  | |  | |  | | --- | |  | | E. none of the above |  |  |  | | --- | | Answer Key: C | |  | |
| |  |  | | --- | --- | | Question 25 of 35 | 3.0 Points |   Where is ATP synthase located in plant cells?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. in the plasma membrane only |  | |  | |  | | --- | |  | | B. in the thylakoid membrane of chloroplasts only |  | |  | |  | | --- | |  | | C. in the mitochondrial inner membrane only |  | | orrect | |  | | --- | |  | | D. in both the chloroplast thylakoid membrane and the mitochondrial inner membrane |  | |  | |  | | --- | |  | | E. in both the plasma membrane and the chloroplast thylakoid membrane |  |  |  | | --- | | Answer Key: D | |  | |
| |  |  | | --- | --- | | Question 26 of 35 | 3.0 Points |   Where does the Calvin cycle occur in plant cells?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. in the cytoplasm |  | |  | |  | | --- | |  | | B. in mitochondria |  | |  | |  | | --- | |  | | C. in the chloroplast thylakoid membrane |  | |  | |  | | --- | |  | | D. in the chloroplast stroma |  | | ncorrect | |  | | --- | |  | | E. in the lumen (the interior space) of the chloroplast thylakoids |  |  |  | | --- | | Answer Key: D | |  | |
| |  |  | | --- | --- | | Question 27 of 35 | 3.0 Points |   The Calvin cycle produces G3P, a 3-carbon sugar. Two molecules of G3P can combine to make a molecule of glucose with no further energy input. What are the inputs into the Calvin cycle required to produce two molecules of G3P?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. 6 CO2, 6 ATP, 6 NADPH |  | |  | |  | | --- | |  | | B. 6 CO2, 12 ATP, 12 NADPH |  | | orrect | |  | | --- | |  | | C. 6 CO2, 18 ATP, 12 NADPH |  | |  | |  | | --- | |  | | D. 6 CO2, 6 RuBP, 12 ATP, 12 NADPH |  | |  | |  | | --- | |  | | E. 6 CO2, 6 RuBP, 6 ATP, 6 NADPH |  |  |  | | --- | | Answer Key: C | |  | |
| |  |  | | --- | --- | | Question 28 of 35 | 3.0 Points |   What do C3 plants do during the night?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. C3 plants run the Calvin cycle to fix carbon dioxide at night |  | | orrect | |  | | --- | |  | | B. Their chloroplasts accumulate 3-phosphoglycerate until ribulose-bisphosphate is depleted |  | |  | |  | | --- | |  | | C. Their chloroplasts accumulate ribulose-bisphosphate, but glyceraldehydes-3-phosphate is depleted |  | |  | |  | | --- | |  | | D. all the Calvin cycle intermediates will be depleted |  | |  | |  | | --- | |  | | E. all the Calvin cycle intermediates will accumulate |  |  |  | | --- | | Answer Key: B | |  | |
| |  |  | | --- | --- | | Question 29 of 35 | 3.0 Points |   Equal numbers of alfalfa seeds are germinated with water in the light or with water in the dark. After 10 days, both sprout and produce leaves. A control flask has the same weight of seeds, but without water the seeds do not sprout. Which flasks will have the highest and lowest levels of oxygen gas?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | orrect | |  | | --- | |  | | A. highest with light-germinated seeds; lowest with dark-germinated seeds |  | |  | |  | | --- | |  | | B. highest with light-germinated seeds; lowest in the control seeds |  | |  | |  | | --- | |  | | C. highest with control seeds; lowest with light-germinated seeds |  | |  | |  | | --- | |  | | D. highest with dark-germinated seeds; lowest with light-germinated seeds |  | |  | |  | | --- | |  | | E. All flasks will have the same amounts of oxygen gas. |  |  |  | | --- | | Answer Key: A | |  | |
| |  |  | | --- | --- | | Question 30 of 35 | 3.0 Points |   What evolutionary innovations enabled cyanobacteria to transform planet Earth?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. They invented chlorophyll. |  | |  | |  | | --- | |  | | B. They evolved non-cyclic electron flow with two photosystems. |  | | ncorrect | |  | | --- | |  | | C. Their photosystem I evolved the ability to extract electrons from water molecules |  | |  | |  | | --- | |  | | D. They invented Rubisco. |  | |  | |  | | --- | |  | | E. All of the above. |  |  |  | | --- | | Answer Key: B | |  | |
| |  |  | | --- | --- | | Question 31 of 35 | 3.0 Points |   How do C4 plants differ from C3 plants?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. C4 plants are able to minimize the oxygenase activity of Rubisco in hot, dry weather. |  | | ncorrect | |  | | --- | |  | | B. C4 plants do not use Rubisco |  | |  | |  | | --- | |  | | C. C4 plants make a 4-carbon compound that goes into the citric acid cycle, instead of the Calvin cycle. |  | |  | |  | | --- | |  | | D. all of the above |  | |  | |  | | --- | |  | | E. both A) and B) |  |  |  | | --- | | Answer Key: A | |  | |
| |  |  | | --- | --- | | Question 32 of 35 | 3.0 Points |   Which of the following are products of the Calvin cycle that are returned to the light reactions?   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. ribulose and O2 |  | |  | |  | | --- | |  | | B. ATP and NADPH |  | |  | |  | | --- | |  | | C. excited electrons and H+ |  | | orrect | |  | | --- | |  | | D. ADP, Pi, and NADP+ |  | |  | |  | | --- | |  | | E. CO2 and glucose |  |  |  | | --- | | Answer Key: D | |  | |
| |  |  | | --- | --- | | Question 33 of 35 | 3.0 Points |   The oxygen gas generated by photosynthesis comes from the oxygen atoms in:   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | orrect | |  | | --- | |  | | A. H2O |  | |  | |  | | --- | |  | | B. CO2 |  | |  | |  | | --- | |  | | C. both H2O and CO2 |  | |  | |  | | --- | |  | | D. PO4 |  | |  | |  | | --- | |  | | E. ribulose-1,5-bisphosphate |  |  |  | | --- | | Answer Key: A | |  | |
| |  |  | | --- | --- | | Question 34 of 35 | 3.0 Points |   At high temperatures, high O2 concentrations and low CO2 concentrations, Rubisco oxygenates RuBP. Oxygen is\_\_\_\_\_\_   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. a competitive inhibitor of Rubisco. |  | |  | |  | | --- | |  | | B. a noncompetitive inhibitor of Rubisco. |  | | orrect | |  | | --- | |  | | C. an alternative substrate for Rubisco. |  | |  | |  | | --- | |  | | D. a cofactor needed for Rubisco activity. |  | |  | |  | | --- | |  | | E. an allosteric regulator of Rubisco. |  |  |  | | --- | | Answer Key: C | |  | |
| |  |  | | --- | --- | | Question 35 of 35 | 3.0 Points |   The reaction directly catalyzed by Rubisco is   |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | A. exergonic |  | | ncorrect | |  | | --- | |  | | B. endergonic |  | |  | |  | | --- | |  | | C. very rapid compared to other enzyme-catalyzed reactions |  | |  | |  | | --- | |  | | D. unique to C3 plants |  |  |  | | --- | | Answer Key: A | |  | |