

Question **1**

Not yet answered

Marked out of 1.00

The basic structural and physiological unit of all living organisms is the

Select one:

- cell.
- organism.
- membrane.
- organelle.
- aggregate.

Question **2**

Not yet answered

Marked out of 1.00

Which of the following represents a correct ordering of the levels of complexity at which life is studied, from most simple to most complex?

Select one:

- Cell, tissue, organ, organism, population, community.
- Cell, organ, tissue, organism, population, community.
- Cell, tissue, organ, population, organism, community.
- Tissue, organ, cell, population, organism, community.
- Community, population, organism, organ, tissue, cell.

Question **3**

Not yet answered

Marked out of 1.00

Amino acids can be classified by the

Select one:

- characteristics of their side chains, or 'R' groups.
- number of carbon-carbon double bonds in their fatty acids.
- number of peptide bonds they can form.
- number of monosaccharides they contain.
- number of disulfide bridges they can form.

Question **4**

Not yet answered

Marked out of 1.00

A protein can best be defined as a polymer

Select one:

- of amino acids.
- containing 20 peptide linkages.
- containing 20 amino acids.
- containing one or more polypeptide chains.
- containing double helices.

Question **5**

Not yet answered

Marked out of 1.00

Enzymes are

Select one:

- proteins.
- lipids.
- carbohydrates.
- DNA.
- amino acids.

Question **6**

Not yet answered

Marked out of 1.00

Carbohydrates are

Select one:

- nucleosides.
- lipids.
- aldehydes or ketones with multiple hydroxyl groups.
- fatty acids.
- polypeptides

Question **7**

Not yet answered

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In animals, glucose is stored in the compound

Select one:

- fructose.
- amylose.
- cellobiose.
- cellulose.
- glycogen.

Question **8**

Not yet answered

Marked out of 1.00

The main function of cellulose, the most abundant organic compound on Earth, is

Select one:

- to provide mechanical strength to plant cell walls.
- as a storage compound for energy in plant cells.
- to store genetic information.
- as a storage compound for energy in animal cells.
- as a component of biological membranes.

Question **9**

Not yet answered

Marked out of 1.00

A nucleotide contains a pentose sugar, a phosphate group, and

Select one:

- an amino acid.
- a glycerol.
- an acid.
- a nitrogen-containing base.
- a lipid.

Question **10**

Not yet answered

Marked out of 1.00

DNA carries genetic information in its

Select one:

- sequence of amino acids.
- sequence of bases.
- tertiary sequence.
- helical form.
- phosphate groups.

Question **11**

Not yet answered

Marked out of 1.00

The central dogma of molecular biology states that

Select one:

- the information flow between DNA, RNA, and a protein is reversible.
- the information flow in a cell is from protein to RNA to DNA.
- the genetic code is ambiguous.
- the information flow in a cell is from DNA to a protein to RNA.
- the information flow in a cell is from DNA to RNA to protein.

Question **12**

Not yet answered

Marked out of 1.00

Lipids are

Select one:

- important constituents of biological membranes.
- important for energy storage.
- hydrophobic.
- All of the given
- insoluble in water.

Question **13**

Not yet answered

Marked out of 1.00

Which of the following is not a function in which lipids play an important role?

Select one:

- Vision
- Chemical signaling
- Storing genetic information
- Membrane structure
- Storing energy

Question **14**

Not yet answered

Marked out of 1.00

What is the major distinction between a prokaryotic and a eukaryotic cell?

Select one:

- Prokaryotic cells have not prospered, whereas eukaryotic cells are evolutionary "successes."
- A prokaryotic cell is smaller than a eukaryotic cell.
- A prokaryotic cell cannot obtain energy from its environment.
- A prokaryotic cell does not have a nucleus, whereas a eukaryotic cell does.
- A prokaryotic cell does not have DNA, whereas a eukaryotic cell does.

Question **15**

Not yet answered

Marked out of 1.00

Ribosomes are made up of

Select one:

- DNA and RNA.
- RNA and proteins.
- proteins.
- DNA.
- DNA and proteins.

Question **16**

Not yet answered

Marked out of 1.00

During photosynthesis, plants use light energy to synthesize glucose from carbon dioxide. However, plants do not use up energy during photosynthesis; they merely convert it from light energy to chemical energy. This process is an illustration of

Select one:

- the second law of thermodynamics.
- a spontaneous reaction.
- the first law of thermodynamics.
- chemical equilibrium.
- increasing entropy.

Question **17**

Not yet answered

Marked out of 1.00

The first phase of photosynthesis, a series of reactions that requires the absorption of photons to form ATP and NADPH, is referred to as the _____ phase.

Select one:

- carbon fixation
- None of them
- light reactions (or photophosphorylation)
- dark reactions
- reduction

Question **18**

Not yet answered

Marked out of 1.00

The Intergovernmental Panel of Climate Change, sponsored by the United Nations, may be able to impact global climate change by

Select one:

- light energy that is not absorbed.
- wavelengths of lights that are not part of the absorption spectrum.
- inefficiency chemical energy storage of photosynthetic products.
- inefficiency of light reactions that convert light to chemical energy.
- reducing carbon dioxide emissions.

Question **19**

Not yet answered

Marked out of 1.00

Because all animals must take in nutrients from their environment and digest their food internally, the nutritional mode of animals is called

Select one:

- chemoautotrophic.
- photoautotrophic.
- chemolithotrophic.
- heterotrophic.
- photoheterotrophic.

Question **20**

Not yet
answered

Marked out of
1.00

Which of the following statements about metabolic pathways is true?

Select one:

- In eukaryotes, they occur in the cytoplasm.
- Each one is regulated by specific enzymes.
- They vary from organism to organism.
- Complex chemical transformations in the cell occur in a single reaction.
- Each reaction requires oxygen.

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