Biological Science

Kelli Adamson (Pre and Post-Test performance)

Pre-Test

1. Question 1

/ 1

As autumn approaches, white-tailed deer begin to accumulate a layer of body fat. This is an example of which characteristic of life?

Hide answer choices

1. **Incorrect:**

   maintaining homeostasis

2. **metabolism**

3. **response to the environment**

   Correct answer

4. **energy regulation**

5. **organization**

2. Question 2

/ 1

In science, a theory

Hide answer choices

1. **Incorrect:**

is tested by an experiment.

2.

is more narrow in scope than a hypothesis.

3.

encompasses many hypotheses.

Correct answer

4.

cannot be tested.

5.

is held to be an absolutely correct answer to a question.

3. Question 3

/ 1

The purpose of a control group in an experiment is

Hide answer choices

1.

to prove the hypothesis.

2.

for comparison to the other test groups.

Correct answer

3. **Incorrect:**

for comparison to the results of other experiments.

4.

to prove the prediction.

5.

to control the dependent variable.

4. Question 4

/ 1

Which of the following pairs of words is matched correctly?

Hide answer choices

1.

brain - organ

Correct answer

2.

neuron - tissue

3. **Incorrect:**

osteocyte - organelle

4.

gene - atom

5.

heart - organ system

5. Question 5

/ 1

Which of the following is true about ecosystems?

Show answer choices

6. Question 6

/ 1

Which of the following is the most inclusive level of organization?

Hide answer choices

1.

class

2.

population

3.

ecosystem

Correct answer

4.

species

5. **Incorrect:**

cells

7. Question 7

/ 1

The development of new technologies is based on science.

1. T

True*Correct answer*

2. F

Incorrect: False

8. Question 8

/ 1

Which of the following can be categorized as prokaryotic?

Hide answer choices

1. **domain Eukarya**

2. **kingdom Plantae**

3. **kingdom Protista**

4. **domain Archaea**

Correct answer

5. **Incorrect:**

kingdom Animalia

9. Question 9

/ 1

Which of the following correctly lists the classification categories from least to most inclusive?

Hide answer choices

1. **kingdom, phylum, domain, class, order family, genus, species**

2. **domain, kingdom, class, order, family, phylum, genus, species**

3. **Incorrect:**

species, genus, family, class, order, domain, phylum, kingdom

4. ☐

species, genus, family, order, class, phylum, kingdom, domain

Correct answer

5. ☐

phylum, species, genus, kingdom, domain, order, class, family

10. Question 10

/ 1

Which of the following statements about basic solutions is true?

Hide answer choices

1. ☐

Basic solutions have high concentrations of H^+.

2. ☐

Basic solutions have a pH under 7.

3. ☐

Basic solutions release OH^-.

Correct answer

4. ☐

Basic solutions release both H+ and OH^-.

5. ☐ **Incorrect:**

Basic solutions have a neutral pH.

11. Question 11

/ 1

Which property of water causes sugar to dissolve in coffee?

Show answer choices

12. Question 12

/ 1

Which of the following statement(s) is/are true with respect to scientific theory?

Show answer choices

13. Question 13

/ 1

Heartburn occurs when stomach acid escapes the stomach and burns the tissues of the esophagus. Baking soda is sometimes used as an antacid. How does baking soda help relieve symptoms of heartburn?

Hide answer choices

1. **The baking soda is serving as a buffer to take up excess H^+ ions from stomach acid.**

Correct answer

2. **The baking soda is able to coat the lining of the esophagus thereby protecting it from the acid.**

3. **The baking soda increases the acidity of the stomach.**

4. **The baking soda releases salt which draws more water into the esophagus thereby diluting the acid.**

5. **Incorrect:**

The baking soda relaxes the stomach muscles.

14. Question 14

/ 1

Chemical bonds involve

Hide answer choices

1.

the giving and taking of electrons.

2.

the giving and taking of protons.

3.

the giving, taking, or sharing of electrons.

Correct answer

4.

the giving, taking, or sharing of protons.

5. **Incorrect:**

the sharing of electrons.

15. Question 15

/ 1

Which of the following is a true statement about extinction?

Show answer choices

16. Question 16

/ 1

Which of the following correctly lists the levels of biological organization from simplest to most complex?

Show answer choices

17. Question 17

/ 1

Which one of the following is the smallest unit of matter that has all the properties of an element?

Hide answer choices

1.

molecule

2.

proton

3.

atom

Correct answer

4. **Incorrect:**

compound

5.

electron

18. Question 18

/ 1

Which of the following statements is correctly matched to the step of the scientific method?

Hide answer choices

1.

Biologists suggested that 2-3 cups of coffee per day can decrease death rates among women. (Hypothesis)

2. **Incorrect:**

Leslie set up mist nets to catch bats flying over a small stream. Each bat that was caught was weighed and sexed. (Experimental design)

3. ☐

Bethany watched butterflies feeding in a large field of wild flowers. She noticed that more butterflies approached the yellow and purple flowers than the red flowers. (Observation)

4. ☐

A researcher reported that red-foot tortoises preferred red-colored fruits and vegetables to those that were green or white. (Conclusion)

5. ☐

All of the above statements are correctly matched.

Correct answer

19. Question 19

/ 1

Which kingdom includes both unicellular and multicellular organisms?

Hide answer choices

1. ☐

Eukarya

2. ☐ **Incorrect:**

Bacteria

3. ☐

Protista

Correct answer

4. ☐

Fungi

5. ☐

Plantae

20. Question 20

/ 1

Scientists were studying temperature selection amongst pregnant big brown bats. What would be the best control group for this study?

Hide answer choices

1. **Incorrect:**

pregnant bats

2.

female bats that were not pregnant

Correct answer

3.

male bats

4.

juvenile male bats

5.

juvenile female bats

21. Question 21

/ 1

The number of neutrons present in the nucleus of an average atom of any given element is best estimated by

Hide answer choices

1.

adding the number of electrons and protons together.

2.

subtracting the number of electrons from the number of protons.

3. **Incorrect:**

adding the mass number to the number of electrons.

4.

subtracting the number of protons from the mass number.

Correct answer

5.

adding the atomic number and atomic mass together.

22. Question 22

/ 1

Managing emerging diseases such as SARS is just one of the many challenges facing science today.

1. T

True*Correct answer*

2. F

False

23. Question 23

/ 1

Which of the following statements inaccurately describes biodiversity?

Hide answer choices

1.

Biodiversity is the total number and relative abundance of species, the variability of their genes, and the different ecosystems in which they live.

2.

The biodiversity of our planet has been estimated to be around 8.7 million species.

3. **Incorrect:**

The impact of human activities on biodiversity loss is one of the most significant bioethical issues that we face today.

4.

So far, approximately 6 million species have been identified and named.

Correct answer

5.

Biologists are alarmed about the current rate of extinction.

24. Question 24

/ 1

All the chemical reactions that occur in a cell are collectively called

Hide answer choices

1. **Incorrect:**

mitosis.

2.

photosynthesis.

3.

cellular respiration.

4.

meiosis.

5.

metabolism.

Correct answer

25. Question 25

/ 1

Which of the following classification categories for humans is correct?

Hide answer choices

1.

***Homosapiens*: binomial name**

Correct answer

2. **Incorrect:**

***Homo:* species**

3.

Fungi: kingdom

4.

***sapiens*: family**

5.

Domain: Archaea

26. Question 26

/ 1

Which of the following levels of biological organization is correctly matched with an example?

Hide answer choices

1. **Incorrect:**

a herd of bison - community

2.

a spider - organ system

3.

flowers and insects in a garden - organism

4.

a rock garden with various plants and rocks of different sizes - population

5.

a desert with little water, high heat, sand, cacti, and some mammals- ecosystem

Correct answer

27. Question 27

/ 1

For metabolic processes to occur within their cells, all living organisms need to maintain homeostasis which means they need

Hide answer choices

1.

to maintain the correct internal temperature, moisture level, and acidity as well as other factors.

Correct answer

2.

to rely on the external conditions in the environment to maintain their body temperature.

3.

minute to minute and day to day fluctuations in body temperature, moisture level and acidity.

4.

to eat other organisms for energy and nutrition.

5. **Incorrect:**

to constantly evolve as the environment changes around them.

28. Question 28

/ 1

An atom's valence electron shell

Hide answer choices

1.

is filled when it has three electrons.

2.

determines its chemical reactivity.

Correct answer

3. **Incorrect:**

determines its atomic mass.

4.

is filled with positively charged particles.

5.

is filled identically for every element.

29. Question 29

/ 1

All atoms of the same element have the same

Hide answer choices

1.

number of neutrons.

2.

atomic number.

Correct answer

3.

number of electrons.

4. **Incorrect:**

atomic mass.

5.

number of ions.

30. Question 30

/ 1

Which of the following is a molecule?

Hide answer choices

1. **Incorrect:**

H_2O

2.

O_2

Correct answer

3.

NaCl

4.

CO_2

5.

$MgCl_2$

31. Question 31

/ 1

When a sodium atom transfers an electron to a chlorine atom

Show answer choices

32. Question 32

/ 1

The reactivity of an atom depends on the number of

Hide answer choices

1.

protons.

2.

neutrons.

3. **Incorrect:**

protons plus neutrons.

4.

valence electrons.

Correct answer

5.

protons and electrons.

33. Question 33

/ 1

An atom with a neutral charge has

Hide answer choices

1.

equal numbers of neutrons and electrons.

2.

more neutrons making it more neutral.

3. **Incorrect:**

the same number of protons and neutrons.

4.

equal numbers of protons and electrons.

Correct answer

5.

more protons than it does electrons.

34. Question 34

/ 1

The scientific method

Show answer choices

35. Question 35

/ 1

The pH scale is a mathematical indicator of the

Show answer choices

36. Question 36

/ 1

Scientists were studying temperature selection among pregnant big brown bats. What would the test group be in this experiment?

Hide answer choices

1. ☐

pregnant bats

Correct answer

2. ☐ **Incorrect:**

female bats that were not pregnant

3. ☐

male bats

4. ☐

juvenile male bats

5. ☐

juvenile female bats

37. Question 37

/ 1

Glucose, $C_6H_{12}O_6$, is best described as a(n)

Hide answer choices

1. ☐

element.

2. ☐ **Incorrect:**

isotope.

3. ☐

compound.

Correct answer

4.

ion.

5.

atom.

38. Question 38

/ 1

A covalent bond occurs when

Hide answer choices

1.

protons are transferred from one atom to another.

2.

neutrons are shared between two atoms to form an isotope.

3.

electrons are shared between two atoms to complete their octets.

Correct answer

4.

the hydrogen of one water molecule is attracted to the oxygen of another water molecule.

5. **Incorrect:**

electrons are transferred from one atom to another.

39. Question 39

/ 1

Isotopes of an atom differ in their

Hide answer choices

1.

atomic number.

2.

atomic mass.

Correct answer

3.

number of electrons.

4. **Incorrect:**

atomic radius.

5.

number of protons.

40. Question 40

/ 1

A biologist is studying how acid rain affects earthworm and beetle populations in a portion of Yellowstone National Park. What level of organization is she studying?

Hide answer choices

1.

population

2.

community

3.

ecosystem

Correct answer

4. **Incorrect:**

biosphere

5.

cells

41. Question 41

/ 1

In general, evolutionary processes lead to organisms that

Show answer choices

42. Question 42

/ 1

Based on the evolutionary tree of the three domains, which of the following statements is true?

Hide answer choices

1.

All three domains have a common ancestor.

Correct answer

2.

Domain Bacteria and domain Eukarya are more closely related to each other than to domain Archaea.

3.

The Eukarya have remained the same throughout evolutionary time.

4. **Incorrect:**

All three domains are equally related to one another.

5.

The Eukarya are the common ancestor to the three domains.

43. Question 43

/ 1

Didinium are carnivorous protistansthat prey on other, slower moving protistans. How should *Didinium* be classified?

Show answer choices

44. Question 44

/ 1

Is the following statement true or false? The mountain zebra (Equus zebra) and the donkey (Equus asinus) belong to the same species.

Hide answer choices

1.

true, because they both start with *Equus*

2. **Incorrect:**

true, because they are both related to horses

3.

false, because the specific epithet is different

Correct answer

4.

false, because they have no similarities to each other

5.

true, because they belong to the same genus

45. Question 45

/ 1

The process of _____ leads to organisms that are _____ that environment.

Hide answer choices

1.

natural selection; adapted to

Correct answer

2.

adaption; evolved for

3.

homeostasis; suited to

4. **Incorrect:**

natural selection; perfect for

5.

adaptation; only found in

46. Question 46

/ 1

Which of the following statements about atoms is correct?

Hide answer choices

1.

An element may be composed of several types of atoms.

2.

The nucleus of an atom contains protons and electrons.

3.

The number and arrangement of electrons in an atom governs its chemical activity.

Correct answer

4. **Incorrect:**

The positive charges of an element are carried by the electrons.

5.

The neutral charges of an element are carried by the protons.

47. Question 47

/ 1

Is the following statement true or false? The only single-celled organismsare prokaryotes, such asarchaeans and bacteria.

Show answer choices

48. Question 48

/ 1

Which of the following best describes the structure of how water molecules form?

Hide answer choices

1.

Hydrogen atoms covalently bond with each other to create one stable valence shell of electrons. The hydrogen molecule then forms a hydrogen bond with an oxygen atom to create the water molecule.

2. **Incorrect:**

One oxygen atom transfers an electron to each of two hydrogen atoms, forming an ionic bond.

3.

The oxygen atom and hydrogen atoms form a covalent bond with one another to create stable valence shells of electrons. The electrons are shared unequally resulting in a polar molecule.

Correct answer

4. ☐

Hydrogen bonds are formed between the two hydrogen atoms and the oxygen atom.

5. ☐

Because of its strong electronegativity, oxygenremoves one electron from two different hydrogen atoms. This satisfies the valence shell of oxygen. Then hydrogen bonds form between the two hydrogen atoms which keeps them in the vicinity of the oxygen atom.

49. Question 49

/ 1

Which of the following would be considered a trace element in living things?

Show answer choices

50. Question 50

/ 1

Which of the following processes transforms solar energy into chemical energy?

Show answer choices

Final Exam (Post-Test)

1. Question 1

/ 1.25

Which of the following is the most inclusive level of organization?

Show answer choices

2. Question 2

/ 1.25

For the figure shown here, indicate the correct stage of meiosis and whether the cell is haploid (n) or diploid (2n).

Hide answer choices

1. **Incorrect:**

metaphase II, 2n

2.

metaphase II, n

3.

metaphase I, 2n

Correct answer

4.

metaphase I, n

5.

anaphase I, 2n

3. Question 3

/ 1.25

The garden pea was a good model for Mendel's genetics experiments. Which of the following is a true statement regarding this model organism?

Show answer choices

4. Question 4

/ 1.25

tRNAs carrying the correct amino acid recognize the proper codons on the mRNA because

Show answer choices

5. Question 5

/ 1.25

Plant cells are connected to one another by

Show answer choices

6. Question 6

/ 1.25

Sickle-cell disease is caused by a single mutation in the DNA of a particular gene. A person with this disease has red blood cells that lose their original donut shape and form a sickle shape. People with this disorder suffer from low energy levels, blood clots, and strokes. This is an example of

Show answer choices

7. Question 7

/ 1.25

In science, a theory

Hide answer choices

1.

is tested by an experiment.

2. **Incorrect:**

is more narrow in scope than a hypothesis.

3.

encompasses many hypotheses.

Correct answer

4.

cannot be tested.

5.

is held to be an absolutely correct answer to a question.

8. Question 8

/ 1.25

According to Chargaff's data, _____ must pair with _____, and _____ must pair with _____.

Show answer choices

9. Question 9

/ 1.25

Living organisms must constantly take in energy in order to power functions necessary to remain alive. All of the chemical reactions that involve energy conversions within a cellare called

Show answer choices

10. Question 10

/ 1.25

In photosynthesis, the light reactions _____ while the Calvin cycle _____.

Show answer choices

11. Question 11

/ 1.25

If a cell has 46 chromosomes at the beginning of mitosis, then at the end of anaphase there would be a total of

Hide answer choices

1.

23 chromatids.

2.

23 chromosomes.

3.

46 chromatids.

4. **Incorrect:**

46 chromosomes.

5.

92 chromosomes.

Correct answer

12. Question 12

/ 1.25

Which of the following processes transforms solar energy into chemical energy?

Show answer choices

13. Question 13

/ 1.25

During crossing-over,

Show answer choices

14. Question 14

/ 1.25

The circulatory system of a whale is considered an organ system because it is composed of different

Hide answer choices

1. **Incorrect:**

cells.

2.

tissues.

3.

organs.

Correct answer

4. ☐

molecules.

5. ☐

hearts.

15. Question 15

/ **1.25**

The process of _____ leads to organisms that are _____ that environment.

Show answer choices

16. Question 16

/ **1.25**

DNA replication makes a(n) _____ copy of the DNA strand, while transcription makes a(n) _____ copy of the DNA strand.

Show answer choices

17. Question 17

/ **1.25**

A saturated fat has

Show answer choices

18. Question 18

/ **1.25**

A product of glycolysis is _____.

Show answer choices

19. Question 19

/ 1.25

The purpose of a control group in an experiment is

Show answer choices

20. Question 20

/ 1.25

During photosynthesis, _____ is oxidized, while _____ is reduced.

Show answer choices

21. Question 21

/ 1.25

Red-green color blindness is a recessive X-linked trait. If a female is red-green color-blind, which of the following is true?

Hide answer choices

1. **Incorrect:**

Her mother must be color-blind.

2.

Both her parents must be color-blind.

3.

Both her parents are carriers of the recessive allele.

4.

Her father must be color-blind.

Correct answer

5.

Women cannot exhibit red-green color blindness because they have two X chromosomes.

22. Question 22

/ 1.25

The mitotic spindle is composed of _____, which originate from the _____.

Hide answer choices

1.

microtubules; centrosome

Correct answer

2.

asters; spindle equator

3.

centrosomes; aster

4. **Incorrect:**

microtubules; chromatid

5.

microtubules; cleavage furrow

23. Question 23

/ 1.25

The figure below is depicting the interaction of water molecules with one another. The weak attractions between water molecules are known as

Show answer choices

24. Question 24

/ 1.25

The figure below shows a cell in which stage of the cell cycle?

Hide answer choices

1. **anaphase**

2. **interphase**

Correct answer

3. **metaphase**

4. **Incorrect:** **prophase**

5. **telophase**

25. Question 25

/ 1.25

Which of the following correctly lists the classification categories from least to most inclusive?

Show answer choices

26. Question 26

/ 1.25

The stack of thylakoids labeled "A" in this figure is called

Show answer choices

Show feedback

27. Question 27

/ 1.25

Because of the area of study that it addresses, proteomics will play an important role in which of the following fields?

Show answer choices

28. Question 28

/ 1.25

What organelle is used during the process of cellular respiration?

Show answer choices

29. Question 29

/ 1.25

The type of bond that would form from the transfer of an electron from one atom to another is a(n) _____ bond.

Show answer choices

30. Question 30

/ 1.25

Amino acids are needed to build _____,just as _____ are needed to create DNA.

Show answer choices

31. Question 31

/ 1.25

Some insects can stride on the surface of water because water

Show answer choices

32. Question 32

/ 1.25

Skin color is coded for by several different genes which results in a range of skin colors from very dark to very light. This is an example of

Show answer choices

33. Question 33

/ 1.25

mRNA processed in the nucleus and moved cytoplasm before being used in protein synthesis.

1. T

True*Correct answer*

2. F

False

34. Question 34

/ 1.25

The citric acid cycle starts with _____ and yields _____.

Show answer choices

35. Question 35

/ 1.25

Which of the following is the opposite of cellular respiration?

Show answer choices

36. Question 36

/ 1.25

The various species of honeycreepers have an assortment of different beak shapes,but all honeycreeper species have a similar size and body shape. This is an example of

Show answer choices

37. Question 37

/ 1.25

mRNA is processed in the cytoplasm before being used in protein synthesis.

1. T

Incorrect: True

2. F

False*Correct answer*

38. Question 38

/ 1.25

In the reaction $6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$ carbon dioxide is one of the

Show answer choices

39. Question 39

/ 1.25

Organisms that have had foreign genes inserted into them are called transgenic organisms.

1. T

True*Correct answer*

2. F

False

40. Question 40

/ 1.25

Fermentation occurs if _____.

Show answer choices

41. Question 41

/ 1.25

Managing emerging diseases such as SARS is just one of the many challenges facing science today.

1. T

True*Correct answer*

2. F

False

42. Question 42

/ 1.25

For the figure shown here, indicate the correct stage of meiosis and the whether the cell is haploid (n) or diploid (2n).

Hide answer choices

1.

prophase I, n

2. **Incorrect:**

prophase II, 2n

3.

metaphase I, n

4.

metaphase II, 2n

5.

prophase II, n

Correct answer

43. Question 43

/ 1.25

The figure below shows a cell in the mitotic stage of

Hide answer choices

1. **Incorrect:**

anaphase.

2.

interphase.

3.

metaphase.

Correct answer

4.

prophase.

5.

telophase.

44. Question 44

/ 1.25

Scientists were studying temperature selection among pregnant big brown bats. What would the test group be in this experiment?

Show answer choices

45. Question 45

/ 1.25

As electrons are passed down the electron transport chain, the energy released is used immediately to _____.

Show answer choices

46. Question 46

/ 1.25

Deoxyribose is a sugar found in

Show answer choices

47. Question 47

/ 1.25

DNA ligase

Show answer choices

48. Question 48

/ 1.25

What two stages of cellular respiration produce the carbon dioxide you exhale?

Show answer choices

49. Question 49

/ 1.25

Which of the following is a true statement?

Show answer choices

50. Question 50

/ 1.25

Based on the evolutionary tree of the three domains, which of the following statements is true?

Show answer choices

51. Question 51

/ 1.25

Which of the following is a characteristic of someone with Down syndrome?

Show answer choices

52. Question 52

/ 1.25

In a monohybrid cross, how many traits are examined?

Show answer choices

53. Question 53

/ 1.25

A water molecule, as shown here, is polar because of

Show answer choices

54. Question 54

/ 1.25

A gene in DNA is the code for assembling a sequence of

Hide answer choices

1.

amino acids.

Correct answer

2.

glucose molecules.

3. ☐

fatty acids used in a fat.

4. ☐

sugars.

5. ☐ **Incorrect:**

functional groups.

55. Question 55

/ 1.25

Before entering the citric acid cycle, pyruvate is converted to _____.

Show answer choices

56. Question 56

/ 1.25

A tumor suppressor gene undergoes a mutation that causes it to lose its normal function. What would be the most likely result of this mutation?

Show answer choices

57. Question 57

/ 1.25

All the chemical reactions that occur in a cell are collectively called

Show answer choices

58. Question 58

/ 1.25

One major difference between meiosis I and meiosis II is that

Hide answer choices

1. ☐

sister chromatids are separated during meiosis I, while homologous chromosomes are separated during meiosis II.

2. ☐

crossing-over occurs in prophase of meiosis I but not in prophase of meiosis II.

Correct answer

3. ☐

the resulting cells at the end of meiosis I are diploid, while the cells at the end of meiosis II are haploid.

4. ☐ **Incorrect:**

in telophase of meiosis I, four gametes form from the parent cell, and in telophase of meiosis II, each parent cell gives rise to two identical daughter cells.

5. ☐

in meiosis I there is no pairing of chromosomes while homologues pair in meiosis II.

59. Question 59

/ 1.25

Which base is found in DNA, but not in RNA?

Show answer choices

60. Question 60

/ 1.25

The figure below represents the formation of a _____ molecule by the process of _____.

Show answer choices

61. Question 61

/ 1.25

Plant cells and animal cells differ in cytokinesis because

Hide answer choices

1. **plant cells need to build a cell wall, while animal cells do not.**

Correct answer

2. **animal cells need to build a cell wall, while plant cells do not.**

3. **animal cells need to build a cell membrane, while plant cells do not.**

4. **animal cells are living, while plant cells are not.**

5. **Incorrect:**

plant cells divide by mitosis, while animal cells divide by meiosis.

62. Question 62

/ 1.25

Isotopes of an element differ in their

Show answer choices

63. Question 63

/ 1.25

The CRISPR system involves the Cas9 enzyme, which identifies specific nucleotides to be cut using a(n) _____ molecule as a guide to identify the proper DNA sequence to edit.

Show answer choices

64. Question 64

/ 1.25

If a homozygous black bull is mated with a homozygous white cow and the calf is gray, this would be an example of _____. However, if the calf has black and white spots, this would be an example of_____.

Show answer choices

65. Question 65

/ 1.25

For the figure shown here, indicate the correct stage of meiosis and whether the cell is haploid (n) or diploid (2n).

Show answer choices

66. Question 66

/ 1.25

Which of the following is true with regards to the law of independent assortment?

Hide answer choices

1.

Each individual has two factors for each trait.

2.

Genes segregate during gamete formation.

3. **Incorrect:**

Gametes contain only one gene from each pair.

4.

During fertilization, each new individual obtains two genes for each trait.

5.

Each pair of alleles assorts independently of the other allele pairs.

Correct answer

67. Question 67

/ 1.25

A covalent bond occurs when

Show answer choices

Show feedback

68. Question 68

/ 1.25

Specialized cells differ from one another because they

Show answer choices

69. Question 69

/ 1.25

What does the field of proteomics study?

Hide answer choices

1.

The structure and function of cellular proteins and how they interact to contribute to traits.

Correct answer

2.

The structure and function of cellular lipids and how they interact to contribute to traits.

3.

The structure of carbohydrates and how they are converted into a useable form of energy for the body.

4. ☐

The structure of prions and how they can lead to various diseases within the body.

5. ☐ **Incorrect:**

The interaction between cellular proteins and how they make up the bulk of the cell membrane.

70. Question 70

/ 1.25

In a dihybrid cross where both parents are heterozygous, the expected phenotypic ratio is

Show answer choices

71. Question 71

/ 1.25

The filled-in squares of a Punnett square represent

Show answer choices

72. Question 72

/ 1.25

Ben was looking at onion root tip cells under the microscope in biology class. He saw one cell that had two nuclei within it. What stage of the cell cycle was this cell in?

Show answer choices

73. Question 73

/ 1.25

Proteins that are involved in the regulation of the cell cycle, and that show fluctuation in concentration during the cell cycle, are called

Hide answer choices

1. ☐ **Incorrect:**

centromeres.

2. ☐

kinetochores.

3. ☐

centrioles.

4. ☐

proton pumps.

5. ☐

cyclins.

Correct answer

74. Question 74

/ 1.25

An atom that has an electrical charge is called a(n)

Show answer choices

75. Question 75

/ 1.25

Cancer occurs when

Show answer choices

76. Question 76

/ 1.25

Which of the following correctly lists the levels of biological organization from simplest to most complex?

Show answer choices

77. Question 77

/ 1.25

Is the following statement true or false? The only single-celled organismsare prokaryotes, such asarchaeans and bacteria.

Show answer choices

78. Question 78

/ 1.25

Cell size is limited because _____ is critical to a cell's function.

Show answer choices

Show feedback

79. Question 79

/ 1.25

A nucleotide is made of which of the following chemical components?

Show answer choices

80. Question 80

/ 1.25

The development of new technologies is based on science.

1. T

True*Correct answer*

2. F

False