

Exam

Name \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) Scientific inquiry is based on 1) \_\_\_\_\_
  - A) stories that are passed down through generations.
  - B) cultural biases or traditions.
  - C) information found in a gossip magazine.
  - D) natural causes.
  
- 2) Which of the following is an example of a natural cause? 2) \_\_\_\_\_
  - A) Mice arise from discarded garbage.
  - B) If you sneeze, you will die.
  - C) Epilepsy is a disease caused by uncontrolled firing of nerve cells in the brain.
  - D) Maggots appear spontaneously on rotting meat.
  
- 3) Science cannot answer certain faith-based questions because 3) \_\_\_\_\_
  - A) scientists are not able to study human behavior.
  - B) there aren't enough variables.
  - C) faith requires deductive reasoning.
  - D) faith-based beliefs are impossible to either prove or disprove.
  
- 4) Which of the following is FALSE about scientific theories? 4) \_\_\_\_\_
  - A) They have been thoroughly tested.
  - B) They are used to support observations using deductive reasoning.
  - C) They can be either supported or modified by new observations.
  - D) They are firmly established and cannot be refuted.
  - E) They are developed by inductive reasoning.
  
- 5) Which of these would be an example of a NON-scientific study? 5) \_\_\_\_\_
  - A) NASA sends tadpoles up in the space shuttle to see how gravity affects their development.
  - B) People are immunized with different vaccines to determine their relative effectiveness against the flu virus.
  - C) Consumers are asked which tomato variety produces the best-tasting spaghetti sauce.
  - D) A study determines differences in the species composition in two parks.
  - E) A company uses different advertising methods for a product to determine which one produces the most sales.
  
- 6) The scientific method includes all of the following EXCEPT 6) \_\_\_\_\_
  - A) a hypothesis.
  - B) a testable theory.
  - C) conclusions.
  - D) an observation.
  - E) experimentation.

- 7) We use the scientific method every day. Imagine that your car doesn't start one morning before school. Which of these is a reasonable *hypothesis* regarding the problem? 7) \_\_\_\_\_
- A) I'm going to be late.
  - B) I should check whether the lights were left on and drained the battery.
  - C) If I put gas in my car, it will start.
  - D) I should add a quart of oil.
  - E) I should change the battery or the starter.
- 8) A scientific theory 8) \_\_\_\_\_
- A) is less reliable than a hypothesis.
  - B) is an educated guess.
  - C) will never be changed.
  - D) is a general explanation for natural phenomena.
- 9) A scientific explanation that is conditional and requires more investigation is called a(n) 9) \_\_\_\_\_
- A) hypothesis.
  - B) theory.
  - C) control.
  - D) observation.
  - E) fact.
- 10) A carefully formulated scientific explanation that is based on extensive observations and is in accord with scientific principles is called a 10) \_\_\_\_\_
- A) control.
  - B) fact.
  - C) theory.
  - D) hypothesis.
  - E) postulate.
- 11) All of the following are features of the scientific method EXCEPT 11) \_\_\_\_\_
- A) observation and experimentation.
  - B) repeatable by other scientists.
  - C) deductive reasoning.
  - D) hypothesis formulation.
  - E) supernatural causes.
- 12) Suppose you are testing a treatment for AIDS patients and find that 75% respond well, whereas 25% show no improvement or a decline in health. You should 12) \_\_\_\_\_
- A) begin work on developing a new drug.
  - B) conclude that you have proven the effectiveness of the drug.
  - C) conclude that only 75% of AIDS patients should be treated.
  - D) discontinue experimentation with this treatment because 25% of patients did not improve.
  - E) review the results, modify the drug or the dosage, and repeat the experiment.
- 13) Alexander Fleming observed a colony of mold that inhibited the growth of nearby bacteria. What was the hypothesis proposed by Fleming to explain this result? 13) \_\_\_\_\_
- A) The bacteria changed their DNA when growing near the mold.
  - B) The mold produced a substance that killed nearby bacteria.
  - C) The mold was dead.
  - D) The mold used all of the nutrients so that the bacteria couldn't grow.

- 14) Imagine that 1 milliliter of an experimental drug diluted in a saline solution is injected into 20 pregnant mice to determine possible side effects. Which of the following is a suitable control for this experiment? 14) \_\_\_\_\_
- A) 20 male mice injected with 1 milliliter of the drug
  - B) 20 male mice injected with 1 milliliter of saline
  - C) 20 non-pregnant mice injected with 1 milliliter of the drug
  - D) 20 pregnant mice injected with 1 milliliter of saline
  - E) 20 pregnant mice injected with 2 milliliters of the drug
- 15) Which of the following statements is a hypothesis rather than a theory? 15) \_\_\_\_\_
- A) Living things are made of cells.
  - B) Female birds prefer to mate with male birds that have longer tails.
  - C) Modern organisms descended from preexisting life-forms.
  - D) Matter is composed of atoms.
- 16) Which of the following is TRUE regarding faith-based beliefs and scientific theories? 16) \_\_\_\_\_
- A) Any and all faith-based beliefs can be disproven, but scientific theories cannot.
  - B) Any and all scientific theories can be disproven, but faith-based beliefs cannot.
  - C) Both faith-based beliefs and scientific theories can be proven.
  - D) Faith-based beliefs can become scientific theories.
  - E) Scientific theories are not modifiable, but faith-based beliefs are.
- 17) Which is the correct sequence of increasing organization? 17) \_\_\_\_\_
- A) Organelle, tissue, cell, organ
  - B) Cell, tissue, organ, organ system
  - C) Atom, molecule, tissue, cell
  - D) Molecule, cell, organelle, organ
  - E) Organ, tissue, cell, molecule
- 18) Which of the following levels of organization is the most inclusive (i.e., includes the most life-forms)? 18) \_\_\_\_\_
- A) Species
  - B) Population
  - C) Ecosystem
  - D) Community
  - E) Biosphere
- 19) The smallest units that still retain the characteristics of an element are called 19) \_\_\_\_\_
- A) atoms.
  - B) tissues.
  - C) cells.
  - D) organic molecules.
  - E) molecules.
- 20) Which of the following is an example of deductive reasoning? 20) \_\_\_\_\_
- A) If an object exhibits all the characteristics of life, it must be living.
  - B) Living objects are composed of cells.
  - C) All objects on Earth will fall down when dropped, and none will "fall up."
  - D) Atoms make up molecules, which make up cells, which make up tissues.

- 21) The experiments of Francesco Redi 21) \_\_\_\_\_  
 A) disproved the scientific method.  
 B) disproved the idea of spontaneous generation.  
 C) disproved that maggots and flies were related.  
 D) determined that fly larvae were present in raw meat, and when left on the counter they turned into flies.  
 E) used the scientific method to prove the idea of spontaneous generation.
- 22) Francesco Redi designed an experiment to test the notion of spontaneous generation. He left the first jar of meat open to the air and covered the second jar. The first jar would be called the \_\_\_\_\_ jar. 22) \_\_\_\_\_  
 A) control                      B) experimental                      C) hypothetical                      D) conclusive
- 23) To test the effect of vitamin D on growth, two groups of rats were raised under identical conditions and fed the same diet. One of the groups received daily injections of vitamin D. The other group received injections of saline, which did not contain vitamin D. All the rats were weighed weekly for 2 months. In this experiment, the control was the 23) \_\_\_\_\_  
 A) average weight gain of the rats.                      B) group receiving saline.  
 C) group receiving vitamin D.                      D) 2-month period of time.
- 24) Evolution is sometimes described as the change from preexisting life-forms to modern-day organisms. What actually changes, in every case of evolution, is the 24) \_\_\_\_\_  
 A) species' physical appearance.  
 B) genetic makeup of the species, due to mutations.  
 C) energy and nutritional demands of the organism.  
 D) rate of reproduction.  
 E) ability of organisms to respond to external stimuli.
- 25) All of the following are important to the theory of evolution EXCEPT 25) \_\_\_\_\_  
 A) mutations.  
 B) inheritance of traits.  
 C) variation in traits within an entire population.  
 D) changes in individuals within their lifetimes.  
 E) environmental change.
- 26) Which is NOT an example of evolution? 26) \_\_\_\_\_  
 A) The development of antibiotic-resistant bacteria  
 B) A dog learning how to open the cabinet where its food is kept  
 C) Flightless birds living on islands without predators  
 D) Annual changes in the flu virus due to mutations  
 E) The 2- to 3-year effectiveness of most commercial pesticides in killing insects
- 27) A mutation can be the cause for 27) \_\_\_\_\_  
 A) sexual reproduction.  
 B) sperm and egg formation.  
 C) growth and development.  
 D) natural selection.  
 E) environmental change.

- 28) A mutation is a 28) \_\_\_\_\_  
A) change in the DNA sequence.  
B) physical deformity, such as the loss of a limb.  
C) defective egg or sperm cell.  
D) dose of radiation.
- 29) In a word, "evolution" means 29) \_\_\_\_\_  
A) change.                      B) improvement.                      C) selection.                      D) nature.
- 30) The concept of evolution is based on 30) \_\_\_\_\_  
A) survival and successful reproduction in organisms with favorable variations.  
B) parents with variations that pass these variations on to their offspring.  
C) all genetic variation in a population being equally successful in the same environment.  
D) any type of genetic variation within a population.
- 31) All of the following are examples of adaptations EXCEPT 31) \_\_\_\_\_  
A) mice learning a maze to get food.  
B) insects that resemble twigs.  
C) larger teeth in beavers for gnawing wood.  
D) flower coloration that attracts pollinators.  
E) different beak shapes for birds that eat seeds or insects.
- 32) Suppose an organism has an enzyme that repairs changes in its DNA. The result is a decrease in mutations. This trait would definitely influence the organism's ability to 32) \_\_\_\_\_  
A) maintain homeostasis.                      B) obtain energy.  
C) evolve.                      D) move.
- 33) The variation among individuals, on which natural selection acts, describes 33) \_\_\_\_\_  
A) random occurrences in the lifetimes of individuals.  
B) physical training and exercise.  
C) genetic differences.  
D) nutritional differences.
- 34) Chromosomes are made of 34) \_\_\_\_\_  
A) cells.  
B) DNA.  
C) carbohydrates.  
D) proteins.  
E) DNA and proteins.
- 35) A change in the genetic makeup of a species over time is called 35) \_\_\_\_\_  
A) adaptation.                      B) natural causality.  
C) evolution.                      D) mutation.
- 36) Adaptations include all of the following EXCEPT 36) \_\_\_\_\_  
A) teaching a pet parrot to talk.  
B) larger body size in male gorillas, which fight over females.  
C) inborn migratory behavior of young birds born in the Arctic.  
D) reduced heart rate and oxygen consumption in seals that dive deep for long periods of time.

- 37) Dinosaurs are not alive today because they 37) \_\_\_\_\_  
A) evolved adaptations that were beneficial in their constant, unchanging environment.  
B) did not possess the genetic material that beneficial mutations act on.  
C) did not evolve fast enough to keep up with rapid environmental change.  
D) evolved too quickly in response to a changing environment.
- 38) Which of the following is a characteristic of living organisms? 38) \_\_\_\_\_  
A) Have membrane-bound organelles  
B) Eat other organisms  
C) Have a nucleus  
D) Ability to produce energy  
E) Maintenance and regulation of internal conditions
- 39) All of the following are true of all living organisms EXCEPT that they 39) \_\_\_\_\_  
A) can grow.  
B) can reproduce themselves.  
C) respond to stimuli.  
D) are made of cells.  
E) possess either DNA or RNA.
- 40) After you drink a glass of acidic lemonade, your body's pH does not change. This is an example of 40) \_\_\_\_\_  
how humans and other organisms  
A) maintain precise internal conditions through homeostasis.  
B) maintain cellular organization.  
C) are immune to weak acids.  
D) evolve in response to the environment.
- 41) Why do humans born without sweat glands usually not survive? 41) \_\_\_\_\_  
A) Sweating is an important mechanism for maintaining the correct body temperature.  
B) Sweating is important for eliminating impurities from the body.  
C) Sweat glands create openings in the skin where gas exchange occurs.  
D) Sweating is the only way the body eliminates excess water.
- 42) An organism's ability to detect stimuli from either the internal or external environment is called 42) \_\_\_\_\_  
A) evolution.  
B) DNA.  
C) mutation.  
D) responsiveness.  
E) natural selection.
- 43) You observe a plant on your windowsill that is growing at an angle toward the outside. This is an 43) \_\_\_\_\_  
example of a living thing  
A) evolving. B) reproducing.  
C) responding to stimuli. D) maintaining precise internal conditions.

- 44) Using its antennae, the male moth finds female moths by following a trail of airborne chemicals, called *pheromones*, upwind from the female producing them. This is an example of how living things \_\_\_\_\_
- A) maintain precise internal conditions.
  - B) grow.
  - C) detect and respond to stimuli.
  - D) reproduce.
  - E) acquire nutrients.
- 45) An organism in the domain Eukarya is characterized by all of the following EXCEPT \_\_\_\_\_
- A) being composed of prokaryotic cells.
  - B) the ability to maintain precise internal conditions.
  - C) ingestion of organic matter to acquire nutrients.
  - D) the potential to grow and reproduce.
- 46) Why do heterotrophs require "food" for survival? \_\_\_\_\_
- A) Food provides at least half of the water required by heterotrophs.
  - B) Heterotrophs cannot photosynthesize without the chemicals provided by food.
  - C) Food is an alternative source of energy for heterotrophs when sunlight is unavailable.
  - D) Food provides the organic chemicals needed by heterotrophs.
- 47) The main difference between an autotroph and a heterotroph is \_\_\_\_\_
- A) how they respond to stimuli.
  - B) how they reproduce.
  - C) how they obtain energy.
  - D) their ability to move.

MATCHING. Choose the item in column 2 that best matches each item in column 1.

For the following question(s), choose the characteristic of a living organism that best corresponds to each statement. Selections may be used once, more than once, or not at all.

- |   |                                     |           |
|---|-------------------------------------|-----------|
| 48) A sunflower follows the sun as it moves across the sky during the period of a single day.               | A) Response to stimuli<br>B) Growth | 48) _____ |
| 49) A puppy is born weighing 5 pounds and eventually becomes a 75- pound golden retriever.                  |                                     | 49) _____ |
| 50) At the beginning of the week, a plant is 3 inches tall and at the end of the week, it is 4 inches tall. |                                     | 50) _____ |

- 51) A paramecium moves from direct light toward the dark. A) Reproduction 51) \_\_\_\_\_
- B) Response to stimuli
- 52) A bacterium divides into two bacteria that are identical to, but smaller than, the original bacterium. C) Evolution 52) \_\_\_\_\_
- 53) Over time, the average neck length of giraffes has increased. Only those giraffes with longer necks survived by eating the leaves high up on the trees, and they were able to reproduce and pass those long-neck genes on to the next generation. 53) \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 54) Of the following levels of organization, Archaea have 54) \_\_\_\_\_
- A) molecules only.
- B) organs only.
- C) atoms only.
- D) atoms, molecules, and organs.
- E) atoms and molecules.
- 55) In evolutionary terms, which of the following cells is considered to be the most primitive? 55) \_\_\_\_\_
- A) Heterotroph      B) Eukaryote      C) Autotroph      D) Prokaryote
- 56) In which kingdom does a multicellular, eukaryotic, photosynthetic organism belong? 56) \_\_\_\_\_
- A) Animalia      B) Fungi      C) Plantae      D) Protists
- 57) A basic difference between a prokaryotic cell and a eukaryotic cell is that the prokaryotic cell 57) \_\_\_\_\_
- A) lacks a nucleus.
- B) possesses membrane-bound organelles.
- C) lacks DNA.
- D) is considerably larger.
- E) is structurally more complex.
- 58) Which of the following statements about the Bacteria and Eukarya domains is TRUE? 58) \_\_\_\_\_
- A) All members of Bacteria are prokaryotic cells and all members of Eukarya are eukaryotic cells.
- B) All members of Bacteria acquire nutrients via ingestion and all members of Eukarya acquire nutrients by photosynthesis.
- C) All members of Bacteria are single-celled and all members of Eukarya are multicellular.
- D) Only members of Eukarya have the ability to grow and reproduce.
- 59) Which group has prokaryotic individuals? 59) \_\_\_\_\_
- A) Kingdom Fungi
- B) Kingdom Animalia
- C) Protist kingdoms
- D) Kingdom Plantae
- E) Domain Archaea



- 60) Which kingdom possesses unicellular animal-like species and unicellular plantlike species? 60) \_\_\_\_\_  
 A) Fungi                                      B) Plantae                                      C) Protista                                      D) Animalia
- 61) A cell that lacks organelles is a(n) 61) \_\_\_\_\_  
 A) prokaryotic cell.                                      B) animal cell.  
 C) eukaryotic cell.                                      D) member of the Kingdom Plantae.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 62) Scientific theories are the same in any part of the world (meaning they do not vary by location). 62) \_\_\_\_\_
- 63) Scientific experimentation generally leads to more questions. 63) \_\_\_\_\_
- 64) A good experiment should include as many variables as possible at the same time. 64) \_\_\_\_\_
- 65) A hypothesis is typically stated as an "If . . . then" statement. 65) \_\_\_\_\_
- 66) Variation among organisms is due to mutations. 66) \_\_\_\_\_
- 67) Adaptations aid in the survival and reproduction of an organism in a particular environment. 67) \_\_\_\_\_
- 68) The energy that sustains life ultimately comes from sunlight. 68) \_\_\_\_\_
- 69) Photosynthetic bacteria are examples of autotrophs. 69) \_\_\_\_\_
- 70) Prokaryotic cells have a true nucleus and eukaryotic cells do not. 70) \_\_\_\_\_
- 71) Biodiversity is the total number of organisms in an ecosystem. 71) \_\_\_\_\_




SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 72) All scientific study begins with \_\_\_\_\_ and the formation of testable hypotheses. 72) \_\_\_\_\_
- 73) A group of individuals who are able to interbreed, regardless of their geographical location, is defined as a(n) \_\_\_\_\_. 73) \_\_\_\_\_
- 74) A group of similar, interbreeding individuals that live in the same area is a(n) \_\_\_\_\_. 74) \_\_\_\_\_
- 75) The basic unit of life is the \_\_\_\_\_. 75) \_\_\_\_\_
- 76) Errors or changes in the DNA of an organism are called \_\_\_\_\_. 76) \_\_\_\_\_
- 77) The three natural processes that underlie evolution are genetic variation, inheritance, and \_\_\_\_\_. 77) \_\_\_\_\_
- 78) Single-celled organisms that lack a nucleus belong to the domains Bacteria and \_\_\_\_\_. 78) \_\_\_\_\_

- 79) Cells that contain a nucleus are eukaryotic, and cells without a nucleus are \_\_\_\_\_. 79) \_\_\_\_\_
- 80) Photosynthetic plants are considered "self-feeders," or \_\_\_\_\_. 80) \_\_\_\_\_
- 81) Consider the observation that people taking Drug X for headaches also seem to have low blood pressure. Design a simple experiment based on this observation, and include a hypothesis statement and your actual experimental design for the study. 81) \_\_\_\_\_
- 82) The instructions for producing and maintaining life are contained in what molecule? 82) \_\_\_\_\_
- 83) Evolution is based on adaptations that aid in the survival and reproduction of a species. List three different adaptations. 83) \_\_\_\_\_
- 84) Imagine that in 2020 you are the top biologist at a research station studying biodiversity in Costa Rica. A young scientist brings you a sample from a previously unexplored site. She asks you to look at the sample and determine whether it indeed contains microscopic, living organisms. As you begin your investigations, you must first decide what characteristics distinguish life from nonlife. How would you differentiate a living organism from nonliving matter (including viruses and prions)? 84) \_\_\_\_\_
- 85) Define *biodiversity*. 85) \_\_\_\_\_
- 86) List four characteristics of living things, and give an example to illustrate each. 86) \_\_\_\_\_
- 87) Describe at least two cellular-level differences between a photosynthetic prokaryote and a plant. 87) \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

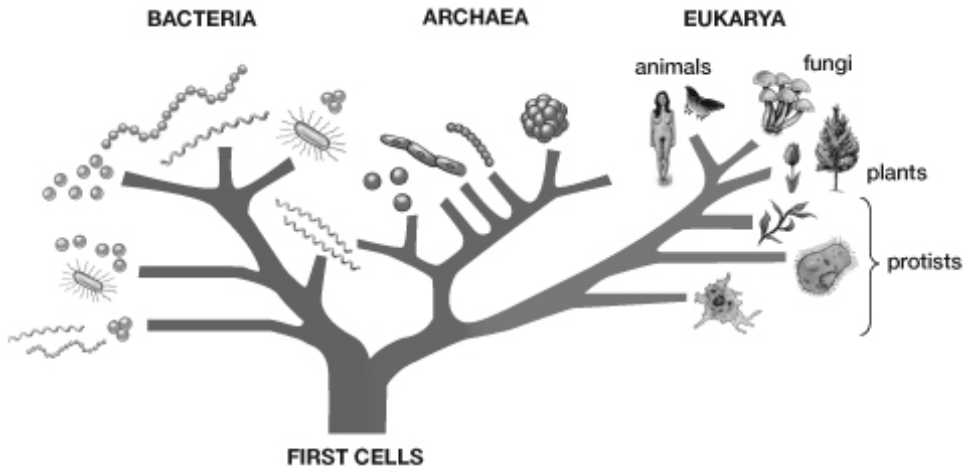
- 88) Which of the following is NOT a part of the community shown in this figure? 88) \_\_\_\_\_

<b>Ecosystem</b>	A community together with its nonliving surroundings	 snake, antelope, hawk, bushes, grass, rocks, stream
<b>Community</b>	Populations of different species that live in the same area and interact with one another	 snake, antelope, hawk, bushes, grass
<b>Species</b>	All organisms that are similar enough to interbreed	 herd of pronghorn antelope
<b>Population</b>	All the members of a species living in the same area	

- A) Stream
- B) Pronghorn antelope
- C) Hawk
- D) Snake
- E) Grass

89) The "first cells" shown at the bottom of this illustration were most likely

89) \_\_\_\_\_



- A) fungi.
- B) protists.
- C) prokaryotes.
- D) animals.
- E) plants.

90) A 57-year-old woman was admitted to a hospital with an infected toe, and the infection was spreading rapidly. The damage was being caused by an unknown microorganism that could not be cultured in the lab. Doctors observed that antibiotics, which kill only prokaryotes, were ineffective. They suspected that the microbe was a fungus, so they tried the drug Amphotericin, which targets the ergosterols in fungal cells. Because animal cells contain cholesterol, not ergosterols, they are unaffected by the drug. Shortly after receiving Amphotericin, the patient improved, her infection ceased, and she was released from the hospital.

90) \_\_\_\_\_

In this scenario, what was the hypothesis?

- A) If the infection is caused by an animal, then Amphotericin will cure the patient.
- B) Why didn't the antibiotics kill the microbe that caused the infection?
- C) The infection will spread rapidly.
- D) Antibiotics will not kill the microbe because it is a fungal species.
- E) A microbe that has cholesterol is causing the infection.

91) Suppose that a meteorite crashes into Earth and a sample of it is taken to a local research lab for analysis. Embedded several inches within the rocky structure, a microscopic cluster of dormant, spore-like structures is found. The scientists culture some of this material in a standard microbiological nutrient broth, and they are surprised to find many single-celled "organisms" moving around, growing, and reproducing in the broth. The "organisms" behave the same in both daylight and dark conditions, do not require oxygen, and thrive under a wide range of temperatures and pH levels. They stop moving, growing, and reproducing, however, when fewer nutrients are available in the medium.

91) \_\_\_\_\_

In this scenario, the "organisms" most closely resemble a(n)

- A) nonliving virus.
- B) photosynthetic species of Bacteria.
- C) autotrophic species of Eukarya.
- D) heterotrophic species of Archaea.
- E) heterotrophic species of Eukarya.

## Answer Key

Testname: UNTITLED1

- 1) D
- 2) C
- 3) D
- 4) D
- 5) C
- 6) B
- 7) C
- 8) D
- 9) A
- 10) C
- 11) E
- 12) E
- 13) B
- 14) D
- 15) B
- 16) B
- 17) B
- 18) E
- 19) A
- 20) A
- 21) B
- 22) A
- 23) B
- 24) B
- 25) D
- 26) B
- 27) D
- 28) A
- 29) A
- 30) A
- 31) A
- 32) C
- 33) C
- 34) E
- 35) C
- 36) A
- 37) C
- 38) E
- 39) E
- 40) A
- 41) A
- 42) D
- 43) C
- 44) C
- 45) A
- 46) D
- 47) C
- 48) A
- 49) B
- 50) B

## Answer Key

Testname: UNTITLED1

- 51) B
- 52) A
- 53) C
- 54) E
- 55) D
- 56) C
- 57) A
- 58) A
- 59) E
- 60) C
- 61) A
- 62) FALSE
- 63) TRUE
- 64) FALSE
- 65) FALSE
- 66) TRUE
- 67) TRUE
- 68) TRUE
- 69) TRUE
- 70) FALSE
- 71) FALSE
- 72) observations
- 73) species
- 74) population
- 75) cell
- 76) mutations
- 77) natural selection
- 78) Archaea
- 79) prokaryotic
- 80) autotrophs
- 81) Answers should include a controlled variable, repetition, and a hypothesis statement.
- 82) DNA
- 83) There are many correct answers. Some acceptable answers are roots of plants that help land plants gain water, fleshy fish fins that allow for movement across a surface, and wings of eagles that aid in hunting.
- 84) Answers should describe several characteristics of a living organism.
- 85) Biodiversity is the number of species in a given geographic region.
- 86) There are many correct answers. Some acceptable answers are: Living things are both complex and organized (cells have organelles with specific organization); living things respond to stimuli (plants grow toward light); living things maintain homeostasis (the human body maintains its body temperature); living things acquire and use energy (plants use photosynthesis); living things grow (animals grow during their lifetime); living things reproduce (organisms produce offspring); living things have the capacity to evolve (bacteria have evolved antibiotic resistance).
- 87) The prokaryote does not have any membrane-bound organelles (including a nucleus), but the plant (being a eukaryote) does. The prokaryote is unicellular, whereas the plant is multicellular.
- 88) A
- 89) C
- 90) D
- 91) D