

Test Bank for Living World 10th Johnson

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Living World 10th Edition by Johnson CH01

ANSWERS ARE LOCATED IN THE SECOND PART OF THIS DOCUMENT

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

1) Evolution is the genetic change in a species over time.

1) _____

- ☐ true
- ☐ false

Question Details

Section : 01.04

Topic : Characteristics of Life

Learning Objective : 01.04.01 List the five general themes that unify biology as a science.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

2) Some living organisms possess RNA as their only genetic material.

2) _____

- ☐ true
- ☐ false

Question Details

Section : 01.09

Bloom's : 2. Understand

Topic : Characteristics of Life

Learning Objective : 01.09.02 Define gene.

Accessibility : Keyboard Navigation

Chapter : 01

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

3) Which group includes the simplest of organisms that do not have a nucleus?

3) _____

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- A) Archaea
- B) Bacteria
- C) Protista
- D) Fungi
- E) Archaea and Bacteria

Question Details

Section : 01.01

Bloom's : 2. Understand

Topic : Levels of Biological Organization

Learning Objective : 01.01.01 List the six kingdoms of life.

Accessibility : Keyboard Navigation

Chapter : 01

- 4) Biologists study the diversity of life in many ways *except* the observation of:

4) _____

- A) behavior
- B) supernatural
- C) DNA
- D) fossils

Question Details

Section : 01.01

Bloom's : 2. Understand

Topic : Characteristics of Life

Learning Objective : 01.01.01 List the six kingdoms of life.

Accessibility : Keyboard Navigation

Chapter : 01

- 5) _____ is the process of the transmission of characteristics from parent to offspring.

5) _____

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- A) Movement
- B) Complexity
- C) Homeostasis
- D) Heredity
- E) Metabolism

Question Details

Section : 01.02

Topic : Characteristics of Life

Learning Objective : 01.02.01 List the five basic properties shared by all living things.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

6) The process of using and transforming energy is known as

6) _____

- A) response to stimulation.
- B) complexity.
- C) metabolism.
- D) homeostasis.
- E) cellular organization

Question Details

Section : 01.02

Topic : Characteristics of Life

Learning Objective : 01.02.01 List the five basic properties shared by all living things.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

7) Choose the property that *isnot* common to all living things.

7) _____

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- A) thought
- B) homeostasis
- C) cellular organization
- D) metabolism

Question Details

Section : 01.02

Bloom's : 2. Understand

Topic : Characteristics of Life

Learning Objective : 01.02.01 List the five basic properties shared by all living things.

Accessibility : Keyboard Navigation

Chapter : 01

8) All living things are able to maintain stable internal conditions, whether they are unicellular or complex, multicellular organisms. This property is called

8) _____

- A) metabolism.
- B) homeostasis.
- C) heredity.
- D) cellular organization.

Question Details

Section : 01.02

Topic : Characteristics of Life

Learning Objective : 01.02.01 List the five basic properties shared by all living things.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

9) In a multicellular organism, different tissues that function together are grouped into

9) _____

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- A) organisms.
- B) cells.
- C) organs.
- D) tissues.

Question Details

Section : 01.03

Topic : Levels of Biological Organization

Learning Objective : 01.03.01 List the 13 hierarchal levels of the organization of life.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

10) All the populations of a particular kind of organism are members of the same

10) _____

- A) community.
- B) species.
- C) habitat.
- D) ecosystem.

Question Details

Section : 01.03

Topic : Levels of Biological Organization

Learning Objective : 01.03.01 List the 13 hierarchal levels of the organization of life.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

11) The populations of all the different species in a given area make up a(n)

11) _____

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- A) community.
- B) habitat.
- C) ecosystem.
- D) population.

Question Details

Section : 01.03

Topic : Levels of Biological Organization

Learning Objective : 01.03.01 List the 13 hierarchal levels of the organization of life.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

12) Charles Darwin used _____ to illustrate the mechanisms of natural selection.

12) _____

- A) artificial selection
- B) biology
- C) natural history
- D) evolution

Question Details

Section : 01.04

Topic : Characteristics of Life

Learning Objective : 01.04.01 List the five general themes that unify biology as a science.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

13) Which of the following *isnot* an underlying theme of biology?

13) _____

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- A) cooperation
- B) flow of energy
- C) evolution
- D) creation

Question Details

Section : 01.04

Bloom's : 2. Understand

Topic : Characteristics of Life

Learning Objective : 01.04.01 List the five general themes that unify biology as a science.

Accessibility : Keyboard Navigation

Chapter : 01

14) The _____ of flowering plants and insects is responsible for much of the diversity of these groups.

14) _____

- A) natural selection
- B) cooperation
- C) artificial selection
- D) natural history

Question Details

Section : 01.04

Bloom's : 3. Apply

Topic : Characteristics of Life

Learning Objective : 01.04.01 List the five general themes that unify biology as a science.

Accessibility : Keyboard Navigation

Chapter : 01

15) Scientists employ _____ reasoning when performing the scientific process.

15) _____

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- A) inductive
- B) deductive
- C) reductive
- D) adductive

Question Details

Section : 01.05

Bloom's : 2. Understand

Topic : Scientific Method

Accessibility : Keyboard Navigation

Chapter : 01

Learning Objective : 01.05.02 Differentiate between deductive and inductive reasoning.

16) After Joseph Farman discovered, in 1985, that an ozone hole was developing over Antarctica, scientists measured levels of chemicals in the upper atmosphere. They found a surprising concentration of ozone-destroying

16) _____

- A) chlorine.
- B) helium.
- C) nitrates.
- D) mercury.

Question Details

Section : 01.06

Topic : Scientific Method

Learning Objective : 01.06.01 Describe the mechanism producing the ozone "hole" over Anta

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

17) The proper order for the scientific process is

17) _____

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- A) predictions - experiment - observation - hypothesis.
- B) experiment - observation - predictions - hypothesis.
- C) hypothesis - observation - experiment - predictions.
- D) observation - hypothesis - predictions - experiment.

Question Details

Section : 01.07

Bloom's : 2. Understand

Topic : Scientific Method

Learning Objective : 01.07.02 Describe the six stages of a scientific investigation.

Accessibility : Keyboard Navigation

Chapter : 01

18) The most inclusive group in taxonomy is a

18) _____

- A) population.
- B) domain.
- C) kingdom.
- D) species.

Question Details

Section : 01.09

Topic : Levels of Biological Organization

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

Learning Objective : 01.09.04 Explain how Darwins theory of evolution is related to the gene theory.

19) In any experiment, one must be certain to

19) _____

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- A) include a suitable control group.
- B) wear lab coats and safety glasses.
- C) have the hypothesis at hand.
- D) use clean glassware.

Question Details

Section : 01.07

Bloom's : 2. Understand

Topic : Experimental Design

Learning Objective : 01.07.02 Describe the six stages of a scientific investigation.

Accessibility : Keyboard Navigation

Chapter : 01

20) We have all heard that dietary fats are linked to higher incidences of heart disease and cancer in humans. Choose the proper hypothesis that a scientist can test.

20) _____

- A) Eating more meat causes cancer.
- B) Eating a diet of lard makes you fat.
- C) Dietary fat, heart disease, and cancer are all somehow interrelated.
- D) Fat levels above 30% of calories in the diet are correlated with an increase in heart disease.

Question Details

Section : 01.08

Bloom's : 3. Apply

Topic : Scientific Method

Learning Objective : 01.08.02 Appraise the so-called "scientific method."

Accessibility : Keyboard Navigation

Chapter : 01

21) A biologist wants to test the effectiveness of a new food additive on causing growth in mice. An effective control group is one that

21) _____

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- A) ate a higher concentration of food additive.
- B) was kept in different conditions across the city.
- C) was fed the same ration without the food additive.
- D) ate a lower concentration of the food additive.

Question Details

Section : 01.07

Bloom's : 3. Apply

Topic : Experimental Design

Learning Objective : 01.07.02 Describe the six stages of a scientific investigation.

Accessibility : Keyboard Navigation

Chapter : 01

22) At the end of an experiment, a conclusion is formed based on

22) _____

- A) the statistical analysis of the experiment.
- B) the general observations during the experiment.
- C) the needs of the group funding the experiment.
- D) the feelings or beliefs of the scientist conducting the experiment.

Question Details

Section : 01.07

Bloom's : 2. Understand

Topic : Scientific Method

Topic : Experimental Design

Learning Objective : 01.07.02 Describe the six stages of a scientific investigation.

Accessibility : Keyboard Navigation

Chapter : 01

23) Which kingdom contains photosynthetic multicellular organisms that live on the land?

23) _____

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- A) Fungi
- B) Plantae
- C) Animalia
- D) Protista
- E) Archaea

Question Details

Section : 01.01

Topic : Levels of Biological Organization

Learning Objective : 01.01.01 List the six kingdoms of life.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

24) Which kingdom contains nonphotosynthetic multicellular organisms that digest their food externally?

24) _____

- A) Fungi
- B) Plantae
- C) Animalia
- D) Protista
- E) Archaea

Question Details

Section : 01.01

Topic : Levels of Biological Organization

Learning Objective : 01.01.01 List the six kingdoms of life.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

25) Which kingdom contains nonphotosynthetic multicellular organisms that digest their food internally?

25) _____

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- A) Fungi
- B) Plantae
- C) Animalia
- D) Protista
- E) Archaea

Question Details

Section : 01.01

Topic : Levels of Biological Organization

Learning Objective : 01.01.01 List the six kingdoms of life.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

26) All organisms possess a genetic system that is based on

26) _____

- A) RNA.
- B) protein.
- C) DNA.
- D) cells.
- E) sugars.

Question Details

Section : 01.09

Topic : Characteristics of Life

Learning Objective : 01.09.02 Define gene.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

27) The proper order for the hierarchy of increasing complexity is

27) _____

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- A) organelles - cells - molecules - tissues - organs.
- B) cells - molecules - organs - tissues - organelles.
- C) molecules - organs - cells - tissues - organelles.
- D) molecules - organelles - cells - tissues - organs.
- E) organs - organelles - cells - molecules - tissues.

Question Details

Section : 01.03

Topic : Levels of Biological Organization

Learning Objective : 01.03.01 List the 13 hierarchal levels of the organization of life.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

28) Testing of a hypothesis is called a(n)

28) _____

- A) control.
- B) experiment.
- C) variable.
- D) prediction.
- E) conclusion.

Question Details

Section : 01.07

Topic : Scientific Method

Learning Objective : 01.07.01 Name the key elements shared by all successful experiments.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

29) A scientist wants to study the effect of vitamin C on colds. He recruits 100 people with colds and gives the experimental group 1000 mg of vitamin C per day. What would be an appropriate control?

29) _____

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- A) Give the control group nothing.
- B) Give the control group 2000 mg of vitamin C per day.
- C) Give the control group orange juice every day.
- D) Give the control group a pill similar to vitamin C but containing sugar (a placebo).
- E) Give the control group 1000 mg of another brand of vitamin C per day.

Question Details

Section : 01.07

Bloom's : 3. Apply

Topic : Experimental Design

Learning Objective : 01.07.02 Describe the six stages of a scientific investigation.

Accessibility : Keyboard Navigation

Chapter : 01

30) Who is credited for discovering cells?

30) _____

- A) Charles Darwin
- B) Anton van Leeuwenhoek
- C) Robert Hooke
- D) Francis Crick
- E) Joseph Farman

Question Details

Section : 01.09

Topic : Characteristics of Life

Learning Objective : 01.09.01 Describe the cell theory.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

31) Who are responsible for discovering the structure of DNA?

31) _____

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- A) Francis Crick and James Watson
- B) Charles Darwin and Joseph Farman
- C) Anton van Leeuwenhoek and Theodor Schwann
- D) Matthias Schleiden and Theodor Schwann
- E) Theodor Schwann and Robert Hooke

Question Details

Section : 01.09

Topic : Characteristics of Life

Learning Objective : 01.09.02 Define gene.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

32) In tissues, the gain of new processes and abilities that individual cells do not possess is termed _____.

32) _____

- A) Metabolism
- B) Homeostasis
- C) Emergent properties
- D) Heredity
- E) Growth and reproduction

Question Details

Section : 01.03

Learning Objective : 01.03.02 Describe an emergent property for each of the three general levels of l

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

Topic : Organization of Life

33) You use _____ reasoning when you use general principles to explain scientific observations.

33) _____

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- A) inductive
- B) deductive
- C) reductive
- D) adductive

Question Details

Section : 01.05

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

Learning Objective : 01.05.02 Differentiate between deductive and inductive reasoning.

Topic : How Scientists Think

34) A(n) _____ is a generally accepted scientific principle that is uniformly supported by a broad range of observations.

34) _____

- A) hypothesis
- B) theory
- C) truth
- D) observation

Question Details

Section : 01.08

Learning Objective : 01.08.01 How scientists and the public use the word theory.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

Topic : Theory and Certainty

35) The _____ states that many forms of a gene may exist among members of a population and that those members with a form better suited to their particular habitat will tend to reproduce more successfully, and so their traits become more common in the population.

35) _____

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- A) Chromosomal theory of inheritance
- B) Cell theory
- C) Theory of heredity
- D) Theory of evolution

Question Details

Section : 01.09

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

Learning Objective : 01.09.04 Explain how Darwins theory of evolution is related to the gene theory.

Topic : Four Theories Unify Biology as a Science

36) Which scientific theory states that genes are located on chromosomes?

36) _____

- A) Cell theory
- B) Theory of heredity
- C) Theory of evolution
- D) Chromosomal theory of inheritance

Question Details

Section : 01.09

Learning Objective : 01.09.03 Identify in what ways the chromosomal theory of inheritance extends Men

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

Topic : Four Theories Unify Biology as a Science

FILL IN THE BLANK. Write the word or phrase that best completes each statement or answers the question.

37) The kingdom that includes mushrooms and yeasts is the _____.

37) _____

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Question Details

Section : 01.01

Topic : Levels of Biological Organization

Learning Objective : 01.01.01 List the six kingdoms of life.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

38) All living things use energy, a property known as _____.

38) _____

Question Details

Section : 01.02

Topic : Characteristics of Life

Learning Objective : 01.02.01 List the five basic properties shared by all living things.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

39) As life forms become more advanced, new properties tend to occur. Therefore, we address these properties as being _____.

39) _____

Question Details

Section : 01.03

Topic : Characteristics of Life

Learning Objective : 01.03.02 Describe an emergent property for each of the three general levels of l

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

40) The information that determines what an organism will be like is stored in the _____ molecule.

40) _____

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Question Details

Section : 01.09

Topic : Characteristics of Life

Learning Objective : 01.09.02 Define gene.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

41) Cells with a similar structure and function are organized into _____ in the body.

41) _____

Question Details

Section : 01.03

Topic : Levels of Biological Organization

Learning Objective : 01.03.01 List the 13 hierarchal levels of the organization of life.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

42) The sources of the ozone-destroying contaminants in the upper atmosphere were found to be _____.

42) _____

Question Details

Section : 01.06

Topic : Scientific Method

Learning Objective : 01.06.01 Describe the mechanism producing the ozone "hole" over Anta

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

43) Using general principles to explain specific observations is called _____ reasoning.

43) _____

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Question Details

Section : 01.05

Bloom's : 2. Understand

Topic : Scientific Method

Accessibility : Keyboard Navigation

Chapter : 01

Learning Objective : 01.05.02 Differentiate between deductive and inductive reasoning.

44) The method of uncovering general principles by carefully using the scientific method is called _____ reasoning.

44) _____

Question Details

Section : 01.05

Bloom's : 2. Understand

Topic : Scientific Method

Accessibility : Keyboard Navigation

Chapter : 01

Learning Objective : 01.05.02 Differentiate between deductive and inductive reasoning.

45) A collection of related hypotheses that have been shown to be true after extensive testing can be collectively called a _____.

45) _____

Question Details

Section : 01.08

Topic : Scientific Method

Learning Objective : 01.08.01 How scientists and the public use the word theory.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

46) The process where organisms act to maintain a relatively stable internal environment is _____.

46) _____

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Question Details

Section : 01.02

Topic : Characteristics of Life

Learning Objective : 01.02.01 List the five basic properties shared by all living things.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

47) All organisms on earth encode their genes in strands of _____.

47) _____

Question Details

Section : 01.09

Topic : Characteristics of Life

Learning Objective : 01.09.02 Define gene.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

48) The entire set of DNA instructions that specifies a cell is called its _____.

48) _____

Question Details

Section : 01.09

Topic : Characteristics of Life

Learning Objective : 01.09.02 Define gene.

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

49) Explain why a student of biology needs to study the hierarchy of levels of organization within and among living things.

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Question Details

Section : 01.03

Bloom's : 4. Analyze

Topic : Levels of Biological Organization

Learning Objective : 01.03.01 List the 13 hierarchal levels of the organization of life.

Accessibility : Keyboard Navigation

Chapter : 01

50) Many people think the term "theory" means someone's idea about something. Explain the scientific use of the term "theory," especially as it relates to the biological concept of evolution.

Question Details

Section : 01.09

Bloom's : 2. Understand

Topic : Scientific Method

Accessibility : Keyboard Navigation

Chapter : 01

Learning Objective : 01.09.04 Explain how Darwins theory of evolution is related to the gene theory.

51) Explain the relationship between ozone depletion and rising incidence of skin cancer.

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Question Details

Section : 01.06

Bloom's : 4. Analyze

Topic : Scientific Method

Learning Objective : 01.06.01 Describe the mechanism producing the ozone "hole" over Anta

Accessibility : Keyboard Navigation

Chapter : 01

52) Why is the study of biology central to the understanding and solving of the world's great environmental problems?

Question Details

Section : 01.02

Bloom's : 4. Analyze

Topic : Characteristics of Life

Learning Objective : 01.02.01 List the five basic properties shared by all living things.

Accessibility : Keyboard Navigation

Chapter : 01

53) Why is it impossible for supernatural, religious, and unexplained phenomena to be explained by biology?

Question Details

Section : 01.08

Bloom's : 4. Analyze

Topic : Scientific Method

Learning Objective : 01.08.02 Appraise the so-called "scientific method."

Accessibility : Keyboard Navigation

Chapter : 01

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Answer Key

Test name: CH01

1) TRUE

Evolution is the genetic change in a species over time.

2) FALSE

All living organisms possess DNA as their genetic material.

3) E

Archaea and Bacteria are prokaryotes, the simplest organisms which lack nuclei.

4) B

Biology is the study of the diversity of life.

5) D

Heredity is the process of the transmission of characteristics from parent to offspring.

6) C

Metabolism is the process of using and transforming energy.

7) A

Thought is not one of the 5 properties of life.

8) B

Homeostasis is the ability to maintain stable internal conditions.

9) C

In a multicellular organism, different tissues that function together are grouped into organs.

10) B

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Species is the interbreeding members of all the populations of a particular kind of organism.

11) A

A community is the different populations of all the species in a given area.

12) A

Charles Darwin used artificial selection to illustrate the mechanisms of natural selection.

13) D

Creation is NOT an underlying theme of biology.

14) B

The cooperation of flowering plants and insects is responsible for much of the diversity of these groups.

15) A

Scientists employ inductive reasoning when performing the scientific process.

16) A

A high concentration of chlorine (in the form of CFCs) was linked to the ozone hole was developing over Antarctica.

17) D

The order of the scientific process is: observation - hypothesis - predictions - experiment.

18) B

The most inclusive group in taxonomy is a domain.

19) A

In an experiment, a control group is required for comparison.

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20) D

A testable hypothesis to test if dietary fats are linked to higher incidences of heart disease and cancer in humans is: "Fat levels above 30% of calories in the diet are correlated with an increase in heart disease." In a scientific experiment, percent threshold helps to establish a correlation between the dependent and independent variable.

21) C

In an experiment to test the effectiveness of a new food additive on causing growth in mice, an effective control group is fed the same ration without the food additive.

22) A

At the end of an experiment, a conclusion is formed based on the statistical analysis of the experiment.

23) B

Kingdom Plantae contains photosynthetic multicellular organisms that live on the land.

24) A

Kingdom Fungi contains nonphotosynthetic multicellular organisms that digest their food externally.

25) C

Kingdom Animalia contains nonphotosynthetic multicellular organisms that digest their food internally.

26) C

All organisms possess a genetic system that is based on DNA.

27) D

The proper order for the hierarchy of increasing complexity is: molecules - organelles - cells - tissues - organs.

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28) B

Testing of a hypothesis is an experiment.

29) D

A scientist wants to study the effect of vitamin C on colds. He recruits 100 people with colds and gives the experimental group 1000 mg of vitamin C per day. The control group receives a pill similar to vitamin C but containing sugar (a placebo).

30) C

Robert Hooke is credited for discovering cells.

31) A

Francis Crick and James Watson are responsible for discovering the structure of DNA.

32) C

Emergent properties arise when individual components interact to give novel properties.

33) B

Deductive reasoning moves from general to specific conclusions.

34) B

Used in a scientific sense, a theory is a generally accepted scientific principle.

35) D

Darwin's theory of evolution attributes the diversity of organisms to natural selection.

36) D

The chromosomal theory of inheritance states that genes are physically located on chromosomes.

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37) Fungi

Kingdom Fungi includes mushrooms and yeasts.

38) metabolism

All living things use energy, a property known as metabolism.

39) emergent

As life forms become more advanced, new properties tend to occur.

Therefore, we address these properties as being emergent.

40) DNA

The information that determines what an organism will be like is stored in the DNA molecule.

41) tissues

Cells with a similar structure and function are organized into tissues in the body.

42) chlorofluorocarbons

The sources of the ozone-destroying contaminants in the upper atmosphere were found to be chlorofluorocarbons (CFCs).

43) deductive

Using general principles to explain specific observations is called deductive reasoning.

44) inductive

The method of uncovering general principles by carefully using the scientific method is called inductive reasoning.

45) theory

A collection of related hypotheses that have been shown to be true after extensive testing can be collectively called a theory.

46) homeostasis

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The process where organisms act to maintain a relatively stable internal environment is homeostasis.

47) DNA

All organisms on earth encode their genes in strands of DNA.

48) genome

The entire set of DNA instructions that specifies a cell is called its genome.

49) All living things are made up of chemicals. An understanding of chemistry is the foundation for understanding how living things function. All living things are made up of cells. An understanding of cell function is necessary to understand how tissues work, and how it is possible for tissues to be organized into organs. Understanding the needs of individual organisms helps the student determine the workings of populations and communities.

50) A theory in biology is a collection of related hypotheses that have been repeatedly tested and have stood the test of time. The theory of evolution means that substantial evidence has been found to verify the notion that evolution has and is occurring among living organisms on earth.

51) The layer of ozone surrounding the earth shields us from the sun's harmful ultraviolet rays. The UV rays are mutagenic, triggering changes in the DNA of our skin cells, giving rise to cancer. With less ozone, more UV rays hit the earth. If we continue to sunbathe and expose our skin, cancer rates will continue climbing.

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52) When people do not have knowledge of biology, they do not understand the needs of organisms or the interactions that occur within ecosystems. Without an understanding of the basics of biology, people cannot hope to understand and solve the world's environmental problems.

53) Biology, and all sciences, are based on the scientific process, which cannot be applied to supernatural, religious, and unexplained phenomena. Science examines and tests evidence; these areas have no tangible evidence for testing.