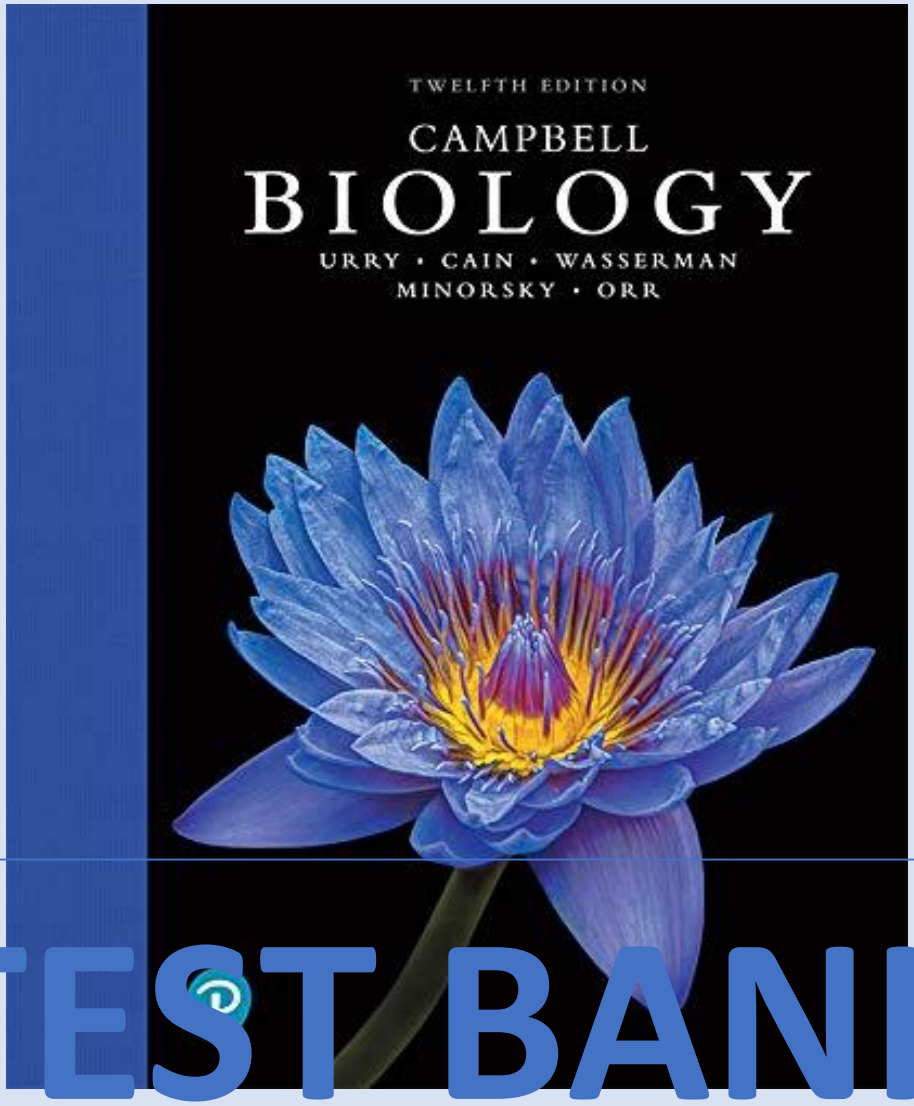
TEST BANK

Campbell Biology, 12th edition by Urry Cain



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Complete Test Bank for Campbell Biology 12th Edition Urry

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***Campbell Biology, 11e* (Urry)**
Chapter 1 Evolution, the Themes of Biology, and Scientific Inquiry

1.1 Multiple-Choice Questions

1) Cells are___.
A) only found in pairs, because single cells cannot exist independently
B) limited in size to 200 and 500 micrometers in diameter
C) characteristic of eukaryotic but not prokaryotic organisms
D) characteristic of prokaryotic and eukaryotic organisms Answer: D
Bloom's Taxonomy: Knowledge/Comprehension Section: 1.1

2) In comparison to eukaryotes, prokaryotes___.
A) are more structurally complex
B) are larger
C) are smaller
D) do not have membranes Answer: C
Bloom's Taxonomy: Knowledge/Comprehension Section: 1.1

3) Which of the following types of cells utilize deoxyribonucleic acid (DNA) as their genetic material but do not have their DNA encased within a nuclear envelope?
A) animal
B) plant
C) archaean
D) fungi Answer: C
Bloom's Taxonomy: Application/Analysis Section: 1.1

4) To understand the chemical basis of inheritance, we must understand the molecular structure of DNA. This is an example of the application of which concept to the study of biology?
A) evolution
B) emergent properties
C) reductionism
D) feedback regulation Answer: C
Bloom's Taxonomy: Application/Analysis Section: 1.1

5) A localized group of organisms that belong to the same species is called a___.
A) community
B) population
C) ecosystem
D) family Answer: B
Bloom's Taxonomy: Knowledge/Comprehension Section: 1.1

6) Which of the following statements is *true* regarding the complexity of biological systems?
A) An understanding of the interactions between different components within a living system is an approach towards understanding reductionism.
B) Knowing the function of a component of a living system can provide insights into the structure and organization of the living system.
C) Understanding the chemical structure of DNA reveals how it directs the functioning of a living cell.
D) An ecosystem displays complex properties of the biotic component only. Answer: B
Bloom's Taxonomy: Application/Analysis Section: 1.1

7) Which of the following order is correct in terms of the hierarchy of the organization?
A) Ecosystem → Biosphere → Population → Community → Organism
B) Biosphere → Ecosystem → Population → Community → Organism
C) Ecosystem → Community → Biosphere → Population → Organism
D) Biosphere → Ecosystem →Community → Population → Organism Answer: D
Bloom's Taxonomy: Application/Analysis Section: 1.1

8) When your body temperature rises on a hot day, the neural and hormonal mechanisms activate sweating. Evaporation of sweat leads to cooling of the body surface. This is an example of _____.
A) positive feedback regulation
B) negative feedback regulation
C) chemical cycling
D) emergent properties Answer: B
Bloom's Taxonomy: Application/Analysis Section: 1.1

9) Characters are transmitted from parents to offspring.are the units of inheritance.
A) Genes
B) Proteins
C) RNA
D) DNA Answer: A
Bloom's Taxonomy: Knowledge/Comprehension Section: 1.1

10) As letters are to English language,_____is/are to genetic information.
A) proteins
B) nucleotides
C) DNA double helix
D) A and B Answer: B
Bloom's Taxonomy: Knowledge/Comprehension Section: 1.1

11) The process by which the information in a gene directs the synthesis of a protein is called _____.
A) gene expression
B) replication
C) post translation modification
D) cloning Answer: A
Bloom's Taxonomy: Application/Analysis Section: 1.2

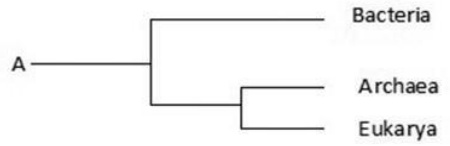
12) Which of the following statements is true?
A) mRNA is the only type of RNA found in the living system
B) All forms of life employ the same genetic code
C) A typical human liver cell has one set of chromosomes
D) Organisms interact but do not affect their environment Answer: B
Bloom's Taxonomy: Knowledge/Comprehension Section: 1.2

13) Plants convert__.
A) chemical energy to mechanical energy.
B) sunlight to mechanical energy.
C) sunlight to chemical energy.
D) mechanical energy to chemical energy. Answer: C
Bloom's Taxonomy: Knowledge/Comprehension Section: 1.2

14) Which of these provides evidence of the common ancestry of all life?
A) near universality of the genetic code
B) structure of the nucleus
C) structure of cilia
D) structure of chloroplasts Answer: A
Bloom's Taxonomy: Application/Analysis Section: 1.2

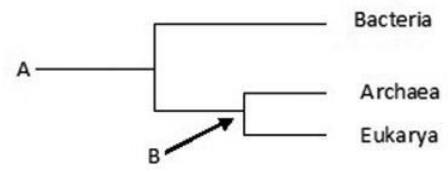
15) Which branch of biology is concerned with the naming and classifying of organisms?
A) informatics
B) taxonomy
C) genomics
D) evolution Answer: B
Bloom's Taxonomy: Knowledge/Comprehension Section: 1.2

16) Use the following figure to answer the question.



The phylogenetic tree__.
A) depicts that Archaea is closer to Bacteria than Eukarya
B) depicts that Eukarya is closer to Bacteria than Archaea
C) includes unicellular and some forms of multicellular life, but not complex animals and plants
D) includes every single life form on this earth Answer: D
Bloom's Taxonomy: Application/Analysis Section: 1.2

17) Use the following figure to answer the question.



"A" is__; "B" is_.

A) the most recent species to evolve on Earth; an ancestor of group "A"
B) the most recent species to evolve on Earth; the last common ancestor of Archaea and Eukarya
C) the common ancestor of all life; the common ancestor of Bacteria and Archaea
D) the common ancestor of all life; the last common ancestor of Archaea and Eukarya Answer: D
Bloom's Taxonomy: Application/Analysis Section: 1.2

18) You are suffering from *Streptococcus* throat infection. You share the following with the bacteria that is responsible for your condition.

A) You both belong to the same domain.
B) You both are made up of cells.
C) You both have genetic material in your nucleus.
D) You and *Streptococcus* have nothing in common. Answer: B
Bloom's Taxonomy: Application/Analysis Section: 1.2

19) Which of the following is true of natural selection?

A) It requires genetic variation.
B) It results in descent with modification.
C) It involves differential reproductive success.
D) It requires genetic variation, results in descent with modification, and involves differential reproductive success.
Answer: D
Bloom's Taxonomy: Knowledge/Comprehension Section: 1.2

20) Which of the following is *not* one of Charles Darwin's observations?

A) Individuals in a population vary in their traits.
B) Many of the traits in an individual are heritable.
C) A population avoids competition by producing only as many offspring as can successfully reproduce on their own.
D) Species generally are adapted to their environments. Answer: C
Bloom's Taxonomy: Knowledge/Comprehension Section: 1.2