Campbell Biology Canadian 2nd Edition Reece Test Bank
Full Download: https://alibabadownload.com/product/campbell-biology-canadian-2nd-edition-reece-test-bank/

Campbell Biology, Cdn. Ed., 2e **(Reece et al.)**
Chapter 1 Introduction: Evolution and Themes of Biology

1) What is a localized group of organisms that belong to the same species called?
A) biosystem
B) community
C) population
D) ecosystem
E) family
Answer: C
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

2) Organisms interact with their environments, exchanging matter and energy. For example, what do plant chloroplasts convert the energy of sunlight into?
A) the energy of motion
B) carbon dioxide and water
C) the potential energy of chemical bonds
D) oxygen
E) kinetic energy
Answer: C
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

3) What does the main source of energy for producers in an ecosystem come from?
A) solar energy
B) other animals as a food source
C) the atmosphere
D) plants
E) water
Answer: A
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

This sample only, Download all chapters at: AlibabaDownload.com

4) Which of the following types of cells utilize deoxyribonucleic acid (DNA) as their genetic material but do *not* have their DNA encased within a nucleus?
A) animal
B) plant
C) archaea
D) fungi
E) protists
Answer: C
Type: MC
Topic: Concept 1.1
Skill: Application/Analysis

5) 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) the cell theory
E) feedback regulation
Answer: C
Type: MC
Topic: Concept 1.1
Skill: Application/Analysis

6) Once labour begins in childbirth, contractions increase in intensity and frequency until delivery. The increasing labour contractions of childbirth are an example of which type of regulation?
A) a bioinformatic system
B) positive feedback
C) negative feedback
D) feedback inhibition
E) enzymatic catalysis
Answer: B
Type: MC
Topic: Concept 1.1
Skill: Application/Analysis

Copyright © 2018 Pearson Canada Inc.

7) When the body's blood glucose level rises, the pancreas secretes insulin and, as a result, the blood glucose level declines. When the blood glucose level is low, the pancreas secretes glucagon and, as a result, the blood glucose level rises. What is this regulation of the blood glucose level the result of?
A) catalytic feedback
B) positive feedback
C) negative feedback
D) bioinformatic regulation
E) protein-protein interactions
Answer: C
Type: MC
Topic: Concept 1.1
Skill: Application/Analysis

8) Which branch of biology is concerned with the naming and classifying of organisms?
A) informatics
B) schematic biology
C) taxonomy
D) genomics
E) evolution
Answer: C
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

9) Prokaryotes are classified as belonging to two different domains. What are the domains?
A) Bacteria and Eukarya
B) Archaea and Monera
C) Eukarya and Monera
D) Bacteria and Protista
E) Bacteria and Archaea
Answer: E
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

10) Global warming, as demonstrated by observations such as melting of glaciers, increasing CO_2 levels, and increasing average ambient temperatures, has already had many effects on living organisms. Which of the following might best offer a solution to this problem?
A) Continue to measure these and other parameters of the problem.
B) Increase the abilities of animals to migrate to more suitable habitats.
C) Do nothing; nature will attain its own balance.
D) Limit the burning of fossil fuels and regulate our loss of forested areas.
E) Recycle as much as possible.
Answer: D
Type: MC
Topic: Concept 1.1
Skill: Synthesis/Evaluation

11) A water sample from a hot thermal vent contained a single-celled organism that had a cell wall but lacked a nucleus. What is its most likely classification?
A) Eukarya
B) Archaea
C) Animalia
D) Protista
E) Fungi
Answer: B
Type: MC
Topic: Concept 1.2
Skill: Application/Analysis

12) A filamentous organism has been isolated from decomposing organic matter. This organism has organelles and a cell wall but no chloroplasts. How would you classify this organism?
A) domain Bacteria, kingdom Prokaryota
B) domain Archaea, kingdom Bacteria
C) domain Eukarya, kingdom Plantae
D) domain Eukarya, kingdom Protista
E) domain Eukarya, kingdom Fungi
Answer: E
Type: MC
Topic: Concept 1.2
Skill: Application/Analysis

13) Which of these provides evidence of the common ancestry of all life?
A) ubiquitous use of catalysts by living systems
B) near universality of the genetic code
C) structure of the nucleus
D) structure of cilia
E) structure of chloroplasts
Answer: B
Type: MC
Topic: Concept 1.2
Skill: Application/Analysis

Copyright © 2018 Pearson Canada Inc.

14) Which of the following is (are) *true* of natural selection?
A) It requires genetic variation.
B) It results in descent with modification.
C) It involves differential reproductive success.
D) It results in descent with modification and involves differential reproductive success.
E) It requires genetic variation, results in descent with modification, and involves differential reproductive success.
Answer: E
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

15) Charles Darwin proposed a mechanism for descent with modification that stated that organisms of a particular species are adapted to their environment when they possess which of the following?
A) non-inheritable traits that enhance their survival in the local environment
B) non-inheritable traits that enhance their reproductive success in the local environment
C) non-inheritable traits that enhance their survival and reproductive success in the local environment
D) inheritable traits that enhance their survival and reproductive success in the local environment
E) inheritable traits that decrease their survival and reproductive success in the local environment
Answer: D
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

16) Which of these individuals is likely to be most successful in an evolutionary sense?
A) a reproductively sterile individual who never falls ill
B) an organism that dies after five days of life but leaves 10 offspring, all of whom survive to reproduce
C) a male who mates with 20 females and fathers one offspring
D) an organism that lives 100 years and leaves two offspring, both of whom survive to reproduce
E) a female who mates with 20 males and produces one offspring that lives to reproduce
Answer: B
Type: MC
Topic: Concept 1.2
Skill: Application/Analysis

Copyright © 2018 Pearson Canada Inc.

17) In a hypothetical world, every 50 years people over 6 feet tall are eliminated from the population before they reproduce. Based on your knowledge of natural selection, what would you would predict about how the average height of the human population will change over time?
A) Average height will remain unchanged.
B) Average height will gradually decline.
C) Average height will rapidly decline.
D) Average height will gradually increase.
E) Average height will rapidly increase.
Answer: B
Type: MC
Topic: Concept 1.2
Skill: Application/Analysis

18) Through time, the lineage that led to modern whales shows a change from four-limbed land animals to aquatic animals with two limbs that function as flippers. Which of the following explains this change?
A) natural philosophy
B) creationism
C) the hierarchy of the biological organization of life
D) natural selection
E) feedback inhibition
Answer: D
Type: MC
Topic: Concept 1.2
Skill: Application/Analysis

19) Which of the following statements is *true*?
A) A kingdom can include several subgroups known as domains.
B) All eukarya belong to one domain.
C) All prokaryotes belong to one domain.
D) The importance of fungi has led scientists to make them the whole of one domain.
E) Only organisms that produce their own food belong to one of the domains.
Answer: B
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

20) Which of the following best describes what occurred after the publication of Charles Darwin's *On the Origin of Species?*
A) The book received little attention except from a small scientific community.
B) The book was banned from schools.
C) The book was widely discussed and disseminated.
D) The book's authorship was disputed.
E) The book was discredited by most scientists.
Answer: C
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

21) Why is Darwin considered original in his thinking?
A) He provided examples of organisms that had evolved over time.
B) He demonstrated that evolution is continuing to occur now.
C) He described the relationship between genes and evolution.
D) He proposed the mechanism that explained how evolution takes place.
E) He observed that organisms produce large numbers of offspring.
Answer: D
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

22) Darwin's finches, collected from the Galápagos Islands, illustrate which of the following?
A) mutation frequency
B) ancestors from different regions
C) adaptive radiation
D) vestigial anatomic structures
E) the accuracy of the fossil record
Answer: C
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

23) Which of the following categories of organisms is least likely to be revised?
A) kingdom
B) class
C) order
D) phylum
E) species
Answer: E
Type: MC
Topic: Concept 1.2
Skill: Synthesis/Evaluation

Copyright © 2018 Pearson Canada Inc.

24) According to Darwinian theory, which of the following exhibits the greatest fitness for evolutionary success?
A) the species with the longest life
B) the individuals within a population that have the greatest reproductive success
C) the phylum with members that occupy the greatest number of habitats
D) the community of organisms that is capable of living in the most nutrient-poor biome
E) the organism that produces its own nutrients most efficiently
Answer: B
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

25) Which of the following do humans and roses have in common?
A) Both are multicellular.
B) Both lack a membrane-bound nucleus inside their cells.
C) Both are prokaryotic.
D) Humans and roses have nothing in common.
Answer: A
Type: MC
Topic: Concept 1.2
Skill: Application/Analysis

26) Why is the theme of evolution considered to be the core theme of biology by biologists?
A) It provides a framework within which all biological investigation makes sense.
B) It is recognized as the core theme of biology by organizations such as the National Science Foundation.
C) Controversy about this theory provides a basis for a great deal of experimental research.
D) Since it cannot be proven, biologists will be able to study evolutionary possibilities for many years.
E) Biologists do not subscribe to alternative models.
Answer: A
Type: MC
Topic: Concept 1.2
Skill: Synthesis/Evaluation

27) The method of scientific inquiry that draws conclusions from careful observation and the analysis of data is known as which of the following?
A) hypothesis-based science
B) deductive reasoning
C) inductive reasoning
D) quantitative science
E) qualitative science
Answer: C
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

28) When applying the process of science, which of these is specifically tested?
A) a question
B) a result
C) an observation
D) a prediction
E) a hypothesis
Answer: D
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

29) Which of the following describes a controlled experiment?
A) The experiment is repeated many times to ensure that the results are accurate.
B) The experiment proceeds at a slow pace to guarantee that the scientist can carefully observe all reactions and process all experimental data.
C) There are at least two groups, one of which does not receive the experimental treatment.
D) There are at least two groups, one differing from the other by two or more variables.
E) There is one group for which the scientist controls all variables.
Answer: C
Type: MC
Topic: Concept 1.3
Skill: Application/Analysis

30) Why is it important that an experiment include a control group?
A) The control group is the group that the researcher is in control of, the group in which the researcher predetermines the results.
B) The control group provides a reserve of experimental subjects.
C) A control group is required for the development of an "If…then" statement.
D) A control group assures that an experiment will be repeatable.
E) Without a control group, there is no basis for knowing if a particular result is due to the variable being tested.
Answer: E
Type: MC
Topic: Concept 1.3
Skill: Application/Analysis

31) Which of the following describes the application of scientific knowledge for some specific purpose?
A) technology
B) deductive science
C) inductive science
D) anthropologic science
E) pure science
Answer: A
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

32) Which of the following are qualities of any good scientific hypothesis?
I. It is testable.
II. It is falsifiable.
III. It produces quantitative data.
IV. It produces results that can be replicated.
A) I only
B) II only
C) III only
D) I and II
E) III and IV
Answer: D
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

33) When a hypothesis cannot be written in an "If…then" format, what does this mean?
A) It does not represent deductive reasoning.
B) It cannot be a scientific hypothesis.
C) The subject cannot be explored scientifically.
D) The hypothesizer does not have sufficient information.
E) It cannot be testable.
Answer: A
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

34) Which of the following is the best description of a control for an experiment?
A) The control group is kept in an unchanging environment.
B) The control is left alone by the experimenters.
C) The control group is matched with the experimental group except for the one experimental variable.
D) The control group is exposed to only one variable rather than several.
E) Only the experimental group is tested or measured.
Answer: C
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

35) Given the cooperativity of science, which of the following is most likely to result in an investigator being intellectually looked down upon by other scientists?
A) Making money as the result of studies in which a new medication is discovered.
B) Doing meticulous experiments that show data that contradict what has been previously reported by the scientific community.
C) Spending most of a lifetime investigating a small and seemingly unimportant organism.
D) Getting negative results from the same set of experiments.
E) Being found to have falsified or created data to better fit a hypothesis.
Answer: E
Type: MC
Topic: Concept 1.3
Skill: Synthesis/Evaluation

36) Which of these is an example of inductive reasoning?
A) Hundreds of individuals of a species have been observed and all are photosynthetic; therefore, the species is photosynthetic.
B) These organisms live in sunny parts of this area so they are able to photosynthesize.
C) If horses are always found grazing on grass, they can be only herbivores and not omnivores.
D) If protists are all single-celled, then they are incapable of aggregating.
E) If two species are members of the same genus, they are more alike than each of them could be to a different genus.
Answer: A
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

37) In a high school laboratory, which of the following constitutes an experiment?
I. learning to use a microscope by examining fixed specimens on slides
II. being able to examine swimming protists under a microscope
III. extracting pigments from plant leaves and separating the types of pigments for identification
IV. preparing root tips for examination by staining them
A) I only
B) II only
C) III only
D) II and III only
E) II, III, and IV
Answer: C
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

38) Which of the following best describes a model organism?
A) It is often pictured in textbooks and easy for students to imagine.
B) It lends itself to many studies that are useful to beginning students.
C) It is well studied, easy to grow, and results are widely applicable.
D) It is small, inexpensive to grow, and lives a long time.
E) It has been chosen for study by the earliest biologists.
Answer: C
Type: MC
Topic: Concept 1.4
Skill: Knowledge/Comprehension

39) Why is a scientific topic best discussed by people of varying points of view, a variety of subdisciplines, and diverse cultures?
A) They can rectify each other's approach to make it truly scientific.
B) Robust and critical discussion between diverse groups improves scientific thinking.
C) Scientists can explain to others that they need to work in isolation to utilize the scientific method more productively.
D) This is another way of making science more reproducible.
E) Scientists need to exchange their ideas with other disciplines and cultures so that all groups are in consensus with the course of future research.
Answer: B
Type: MC
Topic: Concept 1.4
Skill: Synthesis/Evaluation

40) What does the observation that a whale's front flippers have the same bone structure as all mammalian forelimbs suggest?
A) All mammals descended from a common ancestor.
B) Whales once walked on land.
C) Whales show remarkable diversity.
D) Land mammals originally came from the sea.
E) There must have been land and aquatic ancestors that coevolved.
Answer: A
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

41) Which of the following best describes the search for information and explanations of natural phenomena?
A) hypothesis formation
B) scientific inquiry
C) curiosity
D) non-scientific interest
E) deduction
Answer: B
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

42) When you conduct research at a community level, you are generally interested in which major biological theme?
A) Life requires energy transfer and transformation.
B) Structure and function are correlated at all levels of biological organization.
C) Organisms interact with other organisms and the physical environment.
D) New properties emerge at each level in the biological hierarchy.
E) Evolution accounts for the unity of diversity of life.
Answer: C
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

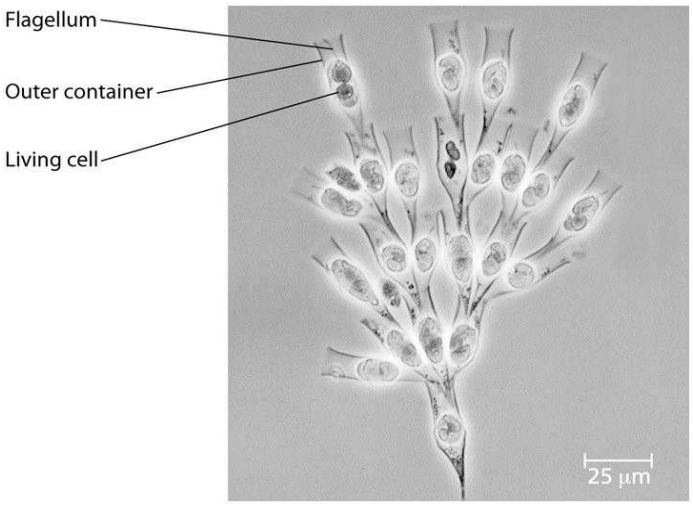
43) Which of the following theme(s) does research into evolutionary adaptation consider?
A) Organisms interact with other organisms and the physical environment.
B) Structure and function are correlated at all levels of biological organization.
C) The continuity of life is based on heritable information in the form of DNA.
D) All of the above are considered in this form of research.
E) None of the above apply to evolution.
Answer: D
Type: MC
Topic: Concepts 1.1, 1.2
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

44) In what sense does the comment "the whole is greater than the sum of its parts" apply to biology?
A) The basic unit in biological systems is cells and they must be combined to make more complex organisms.
B) Cooperation and interdisciplinary research allows us to understand systems rather than just parts of the system.
C) As we move up through biological levels, the systems become more complex.
D) As we move up through biological levels, novel properties emerge that could not be identified at lower levels.
E) This statement has nothing to do with biology.
Answer: D
Type: MC
Topic: Concept 1.1
Skill: Application/Analysis

Use the following information to answer the questions below.

Golden algae are a group of photosynthetic protists whose colour is due to carotenoid pigments: yellow and brown. A group of students was given a significant sample of golden algae (*Dinobryon*); this algae is colonial and has flagella. Their instructions for the project were to design two or more experiments that could be done with these organisms.



45) Since these organisms are protists, which of these characteristics could the students assume to be *true*?
A) The organisms are photosynthetic.
B) All of them are marine.
C) They are single-celled.
D) They have membrane-bound organelles.
E) Each has a single circular molecule of DNA.
Answer: D
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

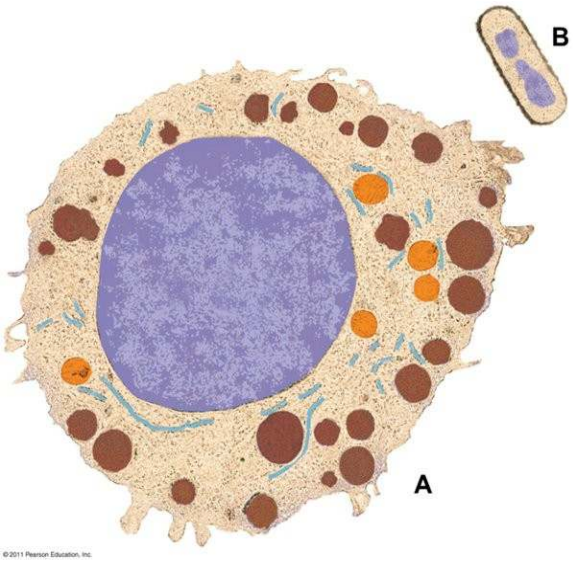
46) The students decide that for one of their experiments, they want to see whether the organisms can photosynthesize. Which of the following is the best hypothesis?
A) If the *Dinobryon* can live > 5 days without added food, they must be able to photosynthesize.
B) If the *Dinobryon* can live without exposure to light for > 5 days, they must be able to photosynthesize.
C) If the *Dinobryon* photosynthesize, they must need no other minerals or nutrients and will be able to live in distilled water and light alone.
D) If the *Dinobryon* are kept in the dark, one-half will be expected to die in 5 days.
E) If the *Dinobryon* are able to photosynthesize, the students should be able to extract photosynthetic pigments.
Answer: E
Type: MC
Topic: Concept 1.3
Skill: Application/Analysis

47) For their second experiment, the students want to know whether the *Dinobryon* have to live in colonies or can be free living. How might they proceed?
A) Observe each day to see whether new organisms are ever reproduced as single cells.
B) Observe whether only specialized cells are able to divide to produce new colonies.
C) Divide a sample into single cells and measure the length of time they remain this way.
D) Divide a sample into single cells and observe them.
E) Divide a sample into single cells and see whether they come back together.
Answer: C
Type: MC
Topic: Concept 1.3
Skill: Application/Analysis

48) The students plan to gather data from the project. Which of the following would be the best way to present what they gather from experimental groups as opposed to controls?
A) qualitatively, noting colour, size, and so on
B) measuring the number of new colonies formed during every 12-hour period
C) counting the number of new colonies after a week
D) measuring the size of each new colony in millimetres (mm) of length
E) measuring the dry weight of all new colonies in grams
Answer: B
Type: MC
Topic: Concept 1.3
Skill: Synthesis/Evaluation

Copyright © 2018 Pearson Canada Inc.

Use the following information to answer the questions below.



49) What do the two cells pictured above have in common?
A) organelles used in photosynthesis
B) The two cells are the smallest unit of a complex organism.
C) membranes surrounding their DNA
D) membranes separating them from their surroundings
E) cell walls
Answer: D
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

50) Figure B is which of the following?
A) prokaryote
B) eukaryote
C) protist
D) mitochondrion
E) chloroplast
Answer: A
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

51) How do we know that Figure A is an eukaryote?
A) It has no defined nucleus.
B) A membrane surrounds it completely.
C) Internal membrane-bound structures are visible.
D) It is larger than B.
E) It is not perfectly smooth.
Answer: C
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

52) Which of the following best describes all the living things in a particular area?
A) population
B) community
C) biosphere
D) ecosystem
E) organisms
Answer: D
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

The following is a list of biology themes discussed in Chapter 1. Use them to answer the questions below.

I. New properties emerge at each level in the biological hierarchy.
II. Organisms interact with other organisms and the physical environment.
III. Life requires energy transfer and transformation.
IV. Structure and function are correlated at all levels of biological organization.
V. Cells are an organism's basic units of structure and function.
VI. The continuity of life is based on heritable information in the form of DNA.
VII. Feedback mechanisms regulate biological systems.
VIII. Evolution accounts for the unity and diversity of life.

53) Which theme(s) is/are best illustrated by an experiment in which a biologist seeks a medication that will inhibit pain responses in a cancer patient?
A) II
B) VII
C) III and V
D) V and VIII
E) VI and VII
Answer: B
Type: MC
Topic: Concept 1.1
Skill: Application/Analysis

Copyright © 2018 Pearson Canada Inc.

54) Which theme(s) is/are best illustrated by a group of investigators who are trying to classify and explain the ecology of the community living within a specific region of prairie grassland?
A) I only
B) II only
C) VIII only
D) IV and VI
E) I and II
Answer: E
Type: MC
Topic: Concept 1.1
Skill: Application/Analysis

55) Which theme(s) is/are illustrated when a group of students is trying to establish which phase of cell division in root tips happens most quickly?
A) IV only
B) V only
C) VII only
D) IV, V, and VI
E) V, VI, and VII
Answer: D
Type: MC
Topic: Concept 1.1
Skill: Application/Analysis

56) Which theme(s) is/are illustrated when a biology class is comparing the rates of photosynthesis between leaves of a flowering plant species (*Gerbera jamesonii*) and a species of fern (*Polypodium polypodioides*)?
A) I only
B) II only
C) I and III
D) I and VII
E) I, III, and V
Answer: E
Type: MC
Topic: Concept 1.1
Skill: Application/Analysis

Copyright © 2018 Pearson Canada Inc.

Use the following information to answer the questions below.

You are studying photosynthesis and its overall function and purpose. You choose to use several aquatic plants of the same species and divide them into two tanks. One tank is under a low light regime and the other a high light regime. You grow them in these conditions for several weeks and make observations.

57) After several weeks you notice that the plants in high light are larger (grew more) and there are more air bubbles in the tank than in the low light tank. Which of the following is the most logical conclusion?
A) More air in the tank has helped the plants to grow.
B) The difference in light must have an influence on growth.
C) You didn't do the study properly and put larger plants in one tank.
D) Something in the low light tank must be stopping growth.
E) You need to do more research to fully understand what could be happening.
Answer: B
Type: MC
Topic: Concept 1.3
Skill: Application/Analysis

58) What is the logic above an example of?
A) inductive reasoning
B) deductive reasoning
C) making a prediction
D) collecting data
E) poor science
Answer: A
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

59) This conclusion from above can be considered which of the following?
A) mistake
B) prediction
C) natural selection
D) hypothesis
E) theory
Answer: D
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

60) The plant you chose has never been studied before. Perhaps you could have chosen a plant that many researchers are working on so that you could use and add to the body of knowledge about that organism. What is this type of species known as?
A) common research organism
B) model organism
C) logical organism; competition
D) shared species
E) modified organism
Answer: B
Type: MC
Topic: Concept 1.4
Skill: Knowledge/Comprehension

61) All the organisms on your campus make up which of the following?
A) an ecosystem
B) a community
C) a population
D) an experimental group
E) a taxonomic domain
Answer: B
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

62) Which of the following is a *correct* sequence of levels in life's hierarchy, proceeding downward from an individual animal?
A) brain, organ system, nerve cell, nervous tissue
B) organ system, nervous tissue, brain
C) organism, organ system, tissue, cell, organ
D) nervous system, brain, nervous tissue, nerve cell
E) organ system, tissue, molecule, cell
Answer: D
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

63) Which of the following is *not* an observation or inference on which Darwin's theory of natural selection is based?
A) Poorly adapted individuals never produce offspring.
B) There is heritable variation among individuals.
C) Because of overproduction of offspring, there is competition for limited resources.
D) Individuals whose inherited characteristics best fit them to the environment will generally produce more offspring.
E) A population can become adapted to its environment over time.
Answer: A
Type: MC
Topic: End-of-Chapter Questions
Skill: Knowledge/Comprehension

64) Which of the following is the main goal of systems biology?
A) Analyze genomes from different species.
B) Simplify complex problems by reducing the system into smaller, less complex units.
C) Understand the behaviour of entire biological systems.
D) Build high-throughput machines for the rapid acquisition of biological data.
E) Speed up the technological application of scientific knowledge.
Answer: C
Type: MC
Topic: End-of-Chapter Questions
Skill: Knowledge/Comprehension

65) Why are protists and bacteria grouped into different domains?
A) Because protists eat bacteria.
B) Because bacteria are not made of cells.
C) Because protists have a membrane-bounded nucleus, which bacterial cells lack.
D) Because bacteria decompose protists.
E) Because protists are photosynthetic.
Answer: C
Type: MC
Topic: End-of-Chapter Questions
Skill: Knowledge/Comprehension

66) Which of the following correctly describes a cell?
A) A cell is not able to perform all the functions of life.
B) Cells may group together to form tissues but are not able to perform a specialized function until higher levels of structure.
C) One example of a specialized tissue is a chloroplast.
D) The cell is the fundamental unit of living organisms.
E) There are 5 different types of molecules within a cell.
Answer: D
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

67) Which of the following is *true* for a controlled experiment?
A) It proceeds slowly enough that a scientist can make careful records of the results.
B) It tests experimental and control groups in parallel.
C) It is repeated many times to make sure the results are accurate.
D) It keeps all variables constant.
E) It is supervised by an experienced scientist.
Answer: B
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

68) Which of the following statements best distinguishes hypotheses from theories in science?
A) Theories are hypotheses that have been proved.
B) Hypotheses are guesses; theories are correct answers.
C) Hypotheses usually are relatively narrow in scope; theories have broad explanatory power.
D) Hypotheses and theories are essentially the same thing.
E) Theories are proved true; hypotheses are often falsified.
Answer: C
Type: MC
Topic: Concept 1.3
Skill: Knowledge/Comprehension

69) Which of the following is an example of qualitative data?
A) The temperature decreased from 20°C to 15°C.
B) The plant's height is 25 centimetres (cm).
C) The fish swam in a zigzag motion.
D) The six pairs of robins hatched an average of three chicks.
E) The contents of the stomach are mixed every 20 seconds.
Answer: C
Type: MC
Topic: Concept 1.3
Skill: Application/Analysis

70) Which of the following best describes the logic of scientific inquiry?
A) If I generate a testable hypothesis, tests and observations will support it.
B) If my prediction is correct, it will lead to a testable hypothesis.
C) If my observations are accurate, they will support my hypothesis.
D) If my hypothesis is correct, I can expect certain test results.
E) If my experiments are set up correctly, they will lead to a testable hypothesis.
Answer: D
Type: MC
Topic: Concept 1.3
Skill: Application/Analysis

Copyright © 2018 Pearson Canada Inc.

71) In comparison to eukaryotes, prokaryotes are considered which of the following?
A) more structurally complex
B) larger
C) do not have membranes
D) have more organelles
E) are smaller
Answer: E
Type: MC
Topic: Concept 1.1
Skill: Knowledge/Comprehension

72) Which of the following is *true* about the diversity of life?
A) Biologists have identified and named about 5 million species of organisms.
B) At least 500,000 fungi have been identified.
C) Researchers identify thousands of additional species each year.
D) Estimates of the total number of species on Earth range from 8-10 million.
E) More vertebrate species have been identified than plant species.
Answer: C
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

73) Why are protists now placed is several groups rather than in one kingdom?
A) Because it was discovered that there were both single and multi-cellular protists.
B) Because protists are the most abundant organisms on earth.
C) Because protists were discovered to be both eukaryotic and prokaryotic.
D) Because some protists use DNA as their genetic molecule and other protists use RNA.
E) Because it was determined that some protists were more closely related to plants, animals and fungi than other protists.
Answer: B
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

74) An organism was discovered that is 50 uM in length and eukaryotic. Which of the following categories is the organism most likely to fall into?
A) Protist
B) Archaea
C) Bacteria
D) Plantae
E) Animalia
Answer: A
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

75) Why are cilia described as an example of unity underlying the diversity of life?
A) Cilia are cells that function in locomotion.
B) Humans and *Paramecium* both share the same architecture of their cilia.
C) Cilia have an elaborate system of tubules.
D) Cilia provide motility to all the cells on which they reside.
E) Imprints of cilia have been found in the fossilized remains of prokaryotes.
Answer: B
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

76) What does Darwin's proposed mechanism of natural selection require?
A) The environments must vary for natural selection to occur.
B) The species' environments selects for certain traits.
C) The environment increases the variation in a species.
D) Natural selection requires equal reproductive success of individuals with different traits.
E) Individuals with new traits always survive for a shorter period of time.
Answer: B
Type: MC
Topic: Concept 1.2
Skill: Knowledge/Comprehension

77) Which of the following correctly describes the properties and processes of life?
A) Life is disordered.
B) An organism's adaptations evolve over 2 or 3 generations.
C) Organisms are not able to regulate their internal environment.
D) Organisms process energy during the course of their lives.
E) Inherited information controls the pattern of growth but not the development of an organism.
Answer: D
Type: MC
Topic: Introduction to Chapter 1
Skill: Knowledge/Comprehension

Copyright © 2018 Pearson Canada Inc.

This sample only, Download all chapters at: AlibabaDownload.com