Print this page

Course: Science Biology Unit: First Semester Review

Answer the following questions below:

For questions 1-20, answer by typing the correct vocabulary term using the word bank below.

WORD BANK										
Aerobic respiration	Amino acids	Autotroph	Carbohydrates	Cell						
Chromosome	Diffusion	Ethics	Eukaryote	Gamete						
Germ-Cell Mutation	Homologous chromosomes	Hypertonic Solution	Hypothesis	Independent variable						
Messenger RNA (mRNA)	Mutation	Observation	Prokaryote	Transcription						

1) The smallest unit of any living thing capable of all life function
4000 character(s) left
Attachment(s): None Save
2) The process of using any of the five senses to gain information about an environment or about a problem.
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Save
3) A possible explanation of some event or idea that can be tested or experimented.
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You may attach a file, if you choose. Attach File
Save

4) The manipulated variable or testing variable in an experiment. It is the one item that is changed between the two groups.

3/19/2019	Questions
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Save	
5) Moral principles and values he	eld by mankind, or what is viewed as right and wrong.
20000 character(s) left	
Attachment(s): None	
You may attach a file, if you choo	ose. SAttach File
Save	
6) The monomers of a protein.	
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Attachment(s): None	
Save	
7) Molecules made of sugar.	
4000 character(s) left	
Attachment(s): None	
Save	
8) A cell which has a nucleus an	d membrane-bound organelles.
4000 character(s) left	
Attachment(s): None	
Save	
9) A cell which does not have a	nucleus or membrane-bound organelles.

4000 character(s) left
Attachment(s): None Save
10) A solution where the solute concentration outside the cell is higher than the solute concentration inside the cell.
4000 character(s) left
Attachment(s): None Save
11) The movement of particles from regions or areas of high concentration (where there is more) to regions or areas of low concentration (where there is less).
20000 character(s) left
Attachment(s): None
You may attach a file, if you choose. Attach File Save
12) Organisms that generate or produce their own energy, or food.
4000 character(s) left
Attachment(s): None
Save
13) Any cellular process that requires oxygen.
20000 character(s) left
Attachment(s): None
You may attach a file, if you choose. Attach File Save
14) The state of DNA when it is tightly coiled into a rod-shaped structure.

4000 character(s) left
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Save
15) A pair of chromosomes that are similar in size and shape.
20000 character(s) left
Attachment(s): None
You may attach a file, if you choose. Attach File Save
16) The reproductive cells that meiosis produces.
4000 character(s) left
Attachment(s): None Save
17) Any change in the structure or amount of genetic material. Any change in the DNA.
4000 character(s) left
Attachment(s): None
Save
18) The RNA that is responsible for relaying the instructions for making a protein from the DNA to the site of where the protein will be made.
4000 character(s) left
Attachment(s): None Save
19) The first stage of gene expression that involves making RNA from the instructions in DNA.
4000 character(s) left
Attachment(s): None

20) A mutation that affects the gametes (sperm and egg).
4000 character(s) left
Attachment(s): None Save
21) What does Biology study?
 A.) the structure and function of living organisms. B.) the classification of living organisms. C.) the interactions of living organisms. D.) all of the above Attachment(s): None
22) Who was the first person to associate the term "cell" to the small fundamental units of all living things?
A.) Anton van Leeuwenhoek B.) Gregor Mendel C.) Robert Hooke Attachment(s): None
23) What area of biology involves the study of plants and plant life in general?
A.) zoology B.) botany C.) ecology Attachment(s): None
24) Which of the following is a characteristic of life?
A.) growth and heredity B.) metabolism C.) homeostasis D.) all of the above Attachment(s): None
25) Phytoplankton carry out photosynthesis to make its own food/energy. What type of organism is phytoplankton? A.) autotroph B.) heterotroph C.) unicellular

Attachment(s): None

Save

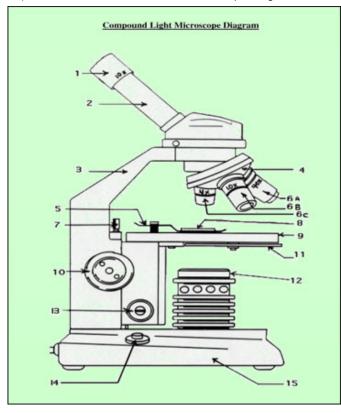
26) What are the four steps of the scientific method in order?

- A.) observation, hypothesis, experiment, conclusion
- B.) experiment, conclusion, observation, hypothesis
- C.) observation, experiment, conclusion, hypothesis

Attachment(s): None

Save

27) What number labeled on the microscope diagram identifies the fine adjustment knob?



A.) 13

○B.) 10

C.) 4

Attachment(s): None

Save

28) Lactose is a carbohydrate made up of glucose and galactose molecules chemically combined. What type of carbohydrate is lactose?

A.) disaccharide

B.) monosaccharide

C.) glycoprotein

Attachment(s): None

Save

29) What nucleic acid is used for energy by a cell?

\bigcirc A.) ATP		A .)) A	TΡ
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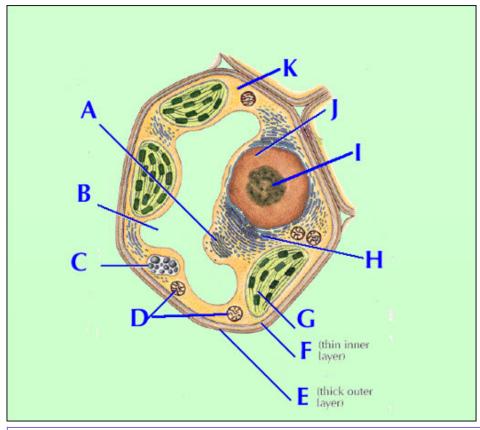
B.) DNA

C.) RNA

Attachment(s): None

Save

30) Name the "letter G" structure from the above figure with the help of the following clue: Organelle responsible for converting sun's energy into sugar.



4000 character(s) left

Attachment(s): None

Save

31) What consists of DNA wrapped around proteins and is only observed when the cell is dividing or preparing to divide?

- A.) chromatin
- B.) chromosome
- C.) amino acid

Attachment(s): None

Save

32) List the three structures a plant cell has that an animal cell does not have.

- A.) Central vacuole, Chloroplasts, Cell wall
- B.) Nucleus, Mitochondria, ER
- C.) Lysosome, Golgi Body, Ribosome

Attachment(s): None Save
33) What type of passive transport involves the diffusion of water through a selectively permeable membrane?
A.) sodium-potassium pump
○B.) endocytosis
C.) osmosis
Attachment(s): None Save
34) Which of the following involves the use of energy to move substances against the concentration gradient?
A.) Diffusion
○B.) Osmosis
C.) Sodium-Potassium Pump
Attachment(s): None
Save
35) Using Figure 43 and understanding which water will flow to either cause the cell to swell or shrink through the action of diffusion, identify what type of solution is outside the cell.
FIGURE 43
Solution outside the cell Solution inside the cell
0% Salt 10% Salt 100% Water 90% Water
A.) hypertonic solution
B.) hypotonic solution
C.) isotonic solution
Attachment(s): None
Save
36) What molecule provides a usable form of energy for the cell and all of the cell's energy-required processes?
A.) adenosine triphosphate
○B.) carbohydrate
C.) glucose
Attachment(s): None
Save
37) What is missing in the following photosynthesis reaction?
Carbon dioxide + water yields + oxygen
A.) sugar (glucose)
○B.) ATP
○C.) RNA
Attachment(s): None
Save

38) What organelle is responsible for carrying out photosynthesis?

C.) Nondisjunction

Attachment(s): None

Save

51) Using the chart below, what amino acid sequence is produced by the following mRNA sequence: GUU-GCG-CCA?

First Base	Second Base								Third Base
	U		С		A G				
10	UUU	Phenylalanine	UCU	Serine	UAU	Tyrosine	UGU	Cysteine	U
U	UUC	Phenylalanine	UCC	Serine	UAC	Tyrosine	UGC	Cysteine	С
	UUA	Leucine	UCA	Serine	UAA	Stop	UGA	Stop	Α
	UUG	Leucine	UCG	Serine	UAG	Stop	UGG	Tryptophan	G
	CUU	Leucine	CCU	Proline	CAU	Histidine	CGU	Arginine	U
С	CUC	Leucine	CCC	Proline	CAC	Histidine	CGC	Arginine	С
	CUA	Leucine	CCA	Proline	CAA	Glutamine	CGA	Arginine	Α
	CUG	Leucine	CCG	Proline	CAG	Glutamine	CGG	Arginine	G
9 19	AUU	Isoleucine	ACU	Threonine	AAU	Asparagine	AGU	Serine	U
Α	AUC	Isoleucine	ACC	Threonine	AAC	Asparagine	AGC	Serine	С
	AUA	Isoleucine	ACA	Threonine	AAA	Lysine	AGA	Arginine	Α
93	AUG	Methionine or start	ACG	Threonine	AAG	Lysine	AGG	Arginine	G
	GUU	Valine	GCU	Alanine	GAU	Aspartic Acid	GGU	Glycine	U
G	GUC	Valine	GCC	Alanine	GAC	Aspartic Acid	GGC	Glycine	С
	GUA	Valine	GCA	Alanine	GAA	Glutamic Acid	GGA	Glycine	Α
	GUG	Valine	GCG	Alanine	GAG	Glutamic Acid	GGG	Glycine	G

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Attachment(s): None

Save

52) What type of mutation is not passed on to offspring?

- B.) point mutation
- C.) somatic cell mutation

Attachment(s): None

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53) What type of mutation has occurred in the following example?

Original DNA Sequence	Α	T	С	G	G	С	Т	Α	G	G	С	Α
Mutated DNA Sequence	Α	Т	С	G	G	C	Α	Α	G	G	C	Α

- A.) deletion mutation
- B.) germ-cell mutation
- C.) point mutation

Attachment(s): None

Save

54) What type of mutation has occurred in the following example?

Original DNA sequence	С	Т	С	G	G	С	Т	Α	G	G	С	Α
Original amino acid sequence	Glutamic acid		Proline		Isoleucine		Arginine					
Mutated DNA sequence	С	Т	С	G	С	Т	Α	G	G	С	Α	Х
New mRNA sequence	G	Α	G	С	G	Α	U	C	С	G	U	Х
New amino acid	Glutamic acid		Arginine		Serine			Unknown				

\cap A	.) frameshift	mutation i	(due to	deletion
// //	, , ,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	mutation	laac ii	

B.) frameshift mutation (due to insertion)

3/19/2019 Questions C.) silent mutation Attachment(s): None Save 55) If you were directed by your school to complete Offline Activities for this course, please enter the information on the Log Entry form. If you are NOT required to complete Offline Activities for this course, please check the box below. DATE START TIME END TIME DESCRIPTION ACTIONS 0 Hour(s) & 0 Minute(s) Add a Log Entry ☐ I do not have any Offline Activities for this unit. Attachment(s): None You may attach a file, if you choose. Attach File Save

All Finished! Review My Answers

Print this page

Course: Science Biology Unit: Second Semester Review

Answer the following questions below:

For questions 1-20, answer by typing the correct vocabulary term using the word bank below.

For questions 1-20, answer by typing the correct vocabulary term using the

word bank below.					
		WORD BANK			
Abiotic Factor	Allele	Autosomes	Autotrophs	Biodiversity	
Biotic Factor	Carrying Capacity	Cellular Respiration	Ecology	Ecosystem	
Environmental Science	Genotype	Heterotrophs	Heterozygous	Homozygous	
Natural Selection	Phenotype	Photosynthesis	Species	Taxonomy	
4) 0 51	alla canti				
i) One of two or more	aiternative forms of a	gene, represented by	a single letter.		
4000 character(s) left					
Attachment(s): None					
Save					
2) A condition that des	cribes an individual tl	nat carries two identica	l alleles of a gene.		
4000 character(s) left					
Attachment(s): None					
Save					
3) A condition that desi	cribes an individual tl	nat carries two different	alleles of a gene		
o) / Condition that des	onbes un marviadar a	Tat carries two different	difference of a gene.		
4000 character(s) left					
Attachment(s): None					
Save					
4) A specific combinati	on of alleles in an inc	lividual.			

0) Any living factor or any factor resulting from the activities of a living thing within an ecosystem.
000 character(s) left
save Save
1) The variety of organisms living in a given area.
000 character(s) left
attachment(s): None
Save
2) Any physical nonliving factor within the environment.
000 character(s) left
attachment(s): None
Save
3) Another name for producers which translates into self-nourishing or self-feeding.
000 character(s) left
attachment(s): None
Save
4) Another name for consumers which translates into different-nourishing or different-feeding.
000 character(s) left
attachment(s): None
Save
5) The part of the carbon cycle that takes in oxygen and a carbon-containing sugar and releases carbon dioxide.
000 character(s) left

Attachment(s): None
Save
16) The part of the carbon cycle that takes in carbon dioxide and releases oxygen and a carbon-containing sugar.
To) The part of the carbon cycle that takes in carbon dioxide and releases oxygen and a carbon containing sagar.
4000 character(s) left
Attachment(s): None
Save
17) The maximum number of individuals the environment can support.
4000 character(s) left
Attachment(s): None Save
Save
18) The process whereby organisms with the best adaptations to a particular environment have the ability to survive longer and reproduce more often thus producing more offspring with the same favorable traits.
4000 ab acceptor(a) laft
4000 character(s) left
Attachment(s): None
Save
19) The science of naming and classifying organisms.
4000 character/o) left
4000 character(s) left
Attachment(s): None
Save
20) A group of organisms of a single type that are capable of producing fertile offspring.
4000 character(s) left
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Save

21) According to the DNA fingerprint above, which suspect matches the crime scene DNA?

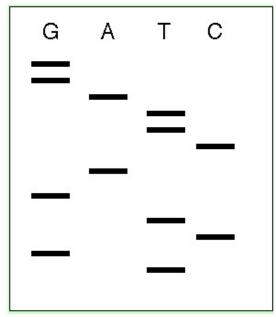


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Attachment(s): None

Save

22) According to the DNA sequence above, what is the correct DNA sequence represented?



4000 character(s) left

Attachment(s): None

Save

23) What is the purpose of gel electrophoresis?

- A.) Separate DNA fragments
- B.) Quickly make copies of DNA
- C.) Differentiate into a specialized cell

Attachment(s): None

24) What phenotype best describes Rr?

	Pea Plant Characters						
	Flower Color (P)	Plant Height (T)	Seed Color (Y)	Seed Shape (R)	Pod Color (G)	Pod Appearance (I)	Flower Position (A)
Dominant	Purple	Tall	Yellow	Round	Green	Inflated	Axial
Recessive	White	Short	Green	Wrinkled	Yellow	Constricted	Terminal

∩A.) H	leterozygous	round
--------	--------------	-------

B.) Heterozygous wrinkled

C.) Homozygous round

Attachment(s): None

Save

25) Using the information below, complete a Punnett square for the following parents and state the genotypic probability: Parents: Homozygous Round seed x Wrinkled seed.

	Pea Plant Characters						
	Flower Color (P)	Plant Height (T)	Seed Color (Y)	Seed Shape (R)	Pod Color (G)	Pod Appearance (I)	Flower Position (A)
Dominant	Purple	Tall	Yellow	Round	Green	Inflated	Axial
Recessive	White	Short	Green	Wrinkled	Yellow	Constricted	Terminal

A.) 2/4 RR, 2/4 rr

B.) 4/4 Rr

C.) 4/4 RR d. 4/4 rr

Attachment(s): None

Save

26) Using the information below, complete a Punnett square for the following parents and answer the question that follows: Parents: Heterozygous Purple flower x Heterozygous Purple flower. If 100 seeds are collected from these two parents how many seeds can we expect to develop into white flowers?

		Pea Plant Characters						
	Flower Color (P)	Plant Height (T)	Seed Color (Y)	Seed Shape (R)	Pod Color (G)	Pod Appearance (I)	Flower Position (A)	
Dominant	Purple	Tall	Yellow	Round	Green	Inflated	Axial	
Recessive	White	Short	Green	Wrinkled	Yellow	Constricted	Terminal	

(A.) 0

B.) 25

C.) 50

Attachment(s): None

Save

27) Using the information above, complete a Punnett square for the following parents and state the phenotypic probabilities: Parents: Homozygous Green Pod, Homozygous Tall x Homozygous Green Pod, Short.

	Pea Plant Characters						
	Flower Color (P)	Plant Height (T)	Seed Color (Y)	Seed Shape (R)	Pod Color (G)	Pod Appearance (I)	Flower Position (A)
Dominant	Purple	Tall	Yellow	Round	Green	Inflated	Axial
Recessive	White	Short	Green	Wrinkled	Yellow	Constricted	Terminal

STATE OF THE PROPERTY OF THE P	TOTAL STATE OF THE
A.) 16/16 Yellow and Short	
B.) 8/16 Yellow and Short, 8/16 Yellow and Tall	
C.) 16/16 Green and Tall	
Attachment(s): None	
Save	
28) What person's gametes determine the gender of a child (offspring)?	
A.) Female (mother)	
B.) Male (father)	
C.) Offspring	
Attachment(s): None	
Save	
29) Fruit Fly Eye Color (sex-linked) – Red Eye (Dominant – R), White Eye (Re	cassive – r). How many female fruit fly offenring would be
expected to have white eyes from the following cross? Parents: White Eye Fer	nale x Red Eye Male
A.) 0%	
○B.) 25%	
C.) 50%	
Attachment(s): None	
Save	
30) Hemophilia (sex-linked) – Normal Blood Clotting (Dominant – H), Hemophil expected to have hemophilia from the following cross? Parents: Hemophilia C	
A.) 2/2 B.) 0/2	
C.) 1/2	
D.) 2/4	
Attachment(s): None	
Save	
Save	
31) Regarding incomplete dominance, what is the genotype of a pink snapdrag crossed?	gon flower, if a red flower (RR) and white (WW) are
○A.) Rr	
○B.) PP	
○C.) RW	
Attachment(s): None	
Save	

32) Incomplete Dominance - Snapdragon flower colors: Red (RR), White (R1R1), Pink (RR1). Cross the following snapdragon flower colors: Pink flower x Pink flower. How many of the offspring would be expected to be Red flower?

- A.) 0%
- ○B.) 25%
- C.) 50%

Attachment(s): None

Save
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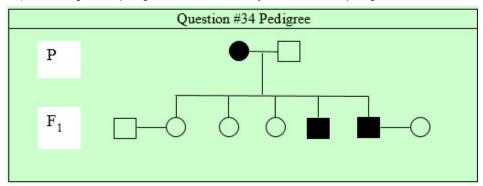
33) What two alleles, regarding human blood types, demonstrate codominance when joined together?

- 1) I^A, I^A
- 2) I^B. I^B
- 3) i, i
- 4) IA, IB
- ○A.) 1
- ○B.) 2
- C.) 3
- D.) 4

Attachment(s): None

Save

34) According to the pedigree below, how many females in the pedigree have the trait?



- (A.) 0
- ○B.) 1
- C.) 3

Attachment(s): None

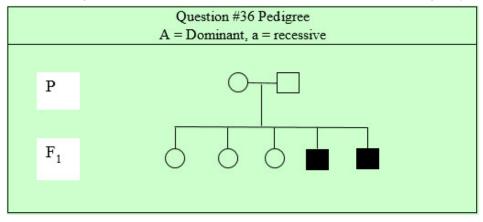
Save

35) If, in a pedigree, the father's genotype is AA and the mother's genotype is aa, what must be the child's genotype?

- A.) AA
- ○B.) aa
- C.) Aa

Attachment(s): None

36) If the pedigree below is for an autosomal recessive trait, what must be the genotypes of the parents in the P generation?

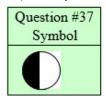


- A.) Aa x Aa
- ○B.) Aa x aa
- C.) Aa x AA

Attachment(s): None

Save

37) If the symbol below appeared in a recessive sex-linked pedigree, what would be the correct genotype for that symbol?



- A.) XAY
- B.) XaY
- C.) XAXa

Attachment(s): None

Save

- 38) What is the term for all of the members of a single type that live in one place at one time?
- A.) Community
- B.) Ecosystem
- C.) Population

Attachment(s): None

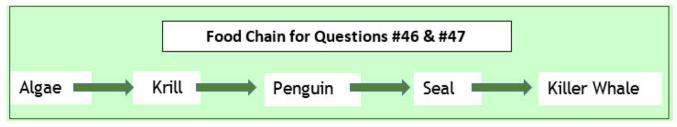
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- 39) What is the study of the interactions of living organisms with one another and with their environment?
- A.) Biodiversity
- B.) Ecology
- C.) Environmental science

Attachment(s): None

- 40) Which ecosystem profile below has the greatest biodiversity?
- A.) An area with 250 birds of 6 different species, 300 trees of 10 different species, and 100 mushrooms of 8 different species.

B.) An area with 500 birds of 3 different species, 400 trees of 6 different species, and 200 mushrooms of 4 different species.C.) An area with 250 birds of 5 different species, 300 trees of 9 different species, and 100 mushrooms of 7 different species.
Attachment(s): None
Save
41) What type of succession would occur after a forest fire?
A.) Primary succession
B.) Secondary succession
C.) Pioneer species
Attachment(s): None
Save
42) In what biome can deciduous and evergreen trees be found?
A.) Savannas
B.) Temperate Deserts
C.) Temperate Forests
Attachment(s): None
Save
43) In an energy pyramid, how much energy is available from one trophic level to the next, and how much energy is lost from one trophic level to the next?
A.) Available = 5%, Lost = 95%
B.) Available = 10%, Lost = 90%
C.) Available = 95%, Lost = 5%
Attachment(s): None
Save
44) What are the two types of producers possible in an ecosystem?
A.) Consumers and decomposers
B.) Photosynthetic and chemosynthetic
C.) Primary and secondary
Attachment(s): None
Save
45) What trophic level is responsible for replacing nutrients back into the ground for plants to utilize?
A.) Consumer
B.) Decomposer
C.) Producer
Attachment(s): None
Save
40) According to the food about heless what we like a society of the society of
46) According to the food chain below, what would be considered the primary consumer?

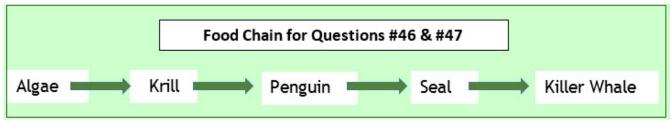


- A.) Algae
- ○B.) Krill
- C.) Penguin

Attachment(s): None

Save

47) According to the food chain below, what would be considered the producer?

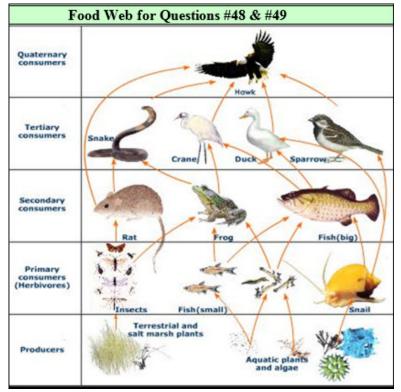


- A.) Algae
- ○B.) Krill
- C.) Penguin

Attachment(s): None

Save

48) According to the food web below, how many organisms directly consume the big fish?



- (A.) 0
- ○B.) 1

Attachment(s): None

Questions

3/19/2019 Save 55) What type of growth involves slow steady growth that eventually reaches a maximum number of individuals that the environment can support? A.) Exponential growth B.) Logistic growth C.) Population growth Attachment(s): None Save 56) What type of interaction between two organisms results in both organisms gaining a benefit? A.) Commensalism B.) Mutualism C.) Parasitism Attachment(s): None Save 57) Which abiotic factor could influence population size? A.) Availability of food for consumers. B.) Presence of predators. C.) Availability of water. Attachment(s): None Save 58) What term describes an attempt to clean and fix a damaged ecosystem back to its original state? A.) Conservation B.) Deforestation C.) Restoration Attachment(s): None Save 59) Which item below contributes to the greenhouse effect? A.) Acid rain B.) Carbon dioxide (CO2) C.) Chlorofluorocarbon (CFC) Attachment(s): None Save

60) Which of the following is a nonrenewable resource?

A.) Aluminum

B.) Biomass

C.) Geothermal

Attachment(s): None

61) Which of the following has the 4 steps of Natural Selection in correct order?
A.) Adaptation, Overproduction, Selection, VariationB.) Overproduction, Selection, Variation, AdaptationC.) Overproduction, Variation, Selection, Adaptation
Attachment(s): None Save
62) In general, evolution is a process of change.
A.) Fast B.) Nonexistent C.) Slow
Attachment(s): None Save
63) Evolution involves
A.) Communities B.) Ecosystems C.) Populations Attachment(s): None
64) Which of the following would be a correct genotype frequency?
A.) 0.50 A, 0.50 a B.) 0.50 AA, 0.50 Aa C.) 50%, 50% Attachment(s): None Save
65) Which equation below correctly demonstrates the Hardy-Weinberg Principle by way of the formula?
A.) 0.24 (TT) + 0.55 (Tt) + 0.21 (tt) = 2 B.) 0.30 (TT) + 0.50 (Tt) + 0.25 (tt) = 1 C.) 0.32 (TT) + 0.51 (Tt) + 0.17 (tt) = 1 Attachment(s): None Save
66) What are the eight levels of classification, from most broad to most specific, used in the modern system of classification?
 A.) Domain, Kingdom, Phylum, Class, Order, Family, Genus, Species B.) Domain, Kingdom, Phylum, Class, Family, Genus, Species C.) Species, Genus, Family, Order, Class, Phylum, Kingdom, Domain
Attachment(s): None Save

67) Which part of the following scientific name is the genus of the organism, Panthera leo?

3/19/2019			Questions			
A.) Panthe	ra					
○B.) Leo						
C.) Panthe	ra leo					
Attachment(s):	None					
Save						
68) If you were directed by your school to complete Offline Activities for this course, please enter the information on the Log Entry form. If you are NOT required to complete Offline Activities for this course, please check the box below.						
DATE	START TIME	END TIME	DESCRIPTION	ACTIONS		
0 Hour(s) & 0 I	Minute(s)		Add a Log Entry			
☐ I do not have any Offline Activities for this unit.						
Attachment(s):	None					
You may attack	h a file, if you cl	noose. Attach File				
			All Finished! Review My Answers			