



2017

# QUIZ

## ENGLISH & SCIENCE

Online / Handwritten

Science  
Grade IX - X



*Test Your knowledge  
Take A Quiz!*

The quiz is a form of student assessment that measures knowledge, skills, and abilities. A quiz is generally a short assessment that can gauge a student's retention and comprehension. A quiz can function throughout a course as an informative feedback device, allowing both the instructor and the students to see where they are excelling or need more focus. In order to organize quizzes effectively, it is important to establish and understand the learning objectives that are being measured.



- Q. 1 Which of the characteristic can help solids dissolve faster?
- a. Decrease the amount of solvent  
b. Decrease the temperature of the solution  
c. Increase the temperature of the solution  
d. Increase the amount of the solute
- Q. 2 A substance formed by the combination of two or more elements in definite proportions is called \_\_\_\_\_.
- a. compound  
b. isotope  
c. nucleus  
d. enzyme
- Q. 3 Which of the following category, hawks, falcons, and osprey, should fall in?
- a. Birds of prey  
b. Swimming birds  
c. Perching birds  
d. Wading birds
- Q. 4 Which of these organelles would prove to be difficult to eat if cellulose is not digested?
- a. the cell membrane  
b. the cell wall  
c. the endoplasmic reticulum  
d. the Golgi bodies
- Q. 5 Which of the following is the correct sequence of stages in cellular respiration?
- a. citric acid cycle, electron transport, glycolysis  
b. citric acid cycle, glycolysis, electron transport  
c. glycolysis, citric acid cycle, electron transport  
d. electron transport, citric acid cycle, glycolysis
- Q. 6 The phase change represented by the equation  $I_2(s) \rightarrow I_2(g)$  is called
- a. sublimation  
b. condensation  
c. evaporation  
d. melting
- Q. 7 \_\_\_\_\_ organelle is the site of protein synthesis.
- a. the nucleus  
b. the nucleolus  
c. the ribosomes  
d. the endoplasmic reticulum
- Q. 8 Taxon defined as
- a. A new tax law  
b. a category into which related organisms are placed  
c. a hierarchy of groups  
d. the collective group of insects
- Q. 9 Which one factor should not be considered when attempting to identify fish?
- a. General body shape  
b. Scales  
c. Location of body parts  
d. Eye color



- Q. 19 What layer of the uterine wall is important to forcing the offspring out of the uterus during child birth?
- a. endometrium
  - b. peritoneum
  - c. myometrium
  - d. spermatic cords
- Q. 20 Oogenesis is a process that uses meiosis to produce \_\_\_\_\_.
- a. sperm
  - b. semen
  - c. an offspring
  - d. an ovum
- Q. 21 After a vasectomy a male can \_\_\_\_\_ .
- a. no longer produce semen
  - b. no longer produce prostate secretions
  - c. have a side effect of increased fertility
  - d. no longer produce sperm in the semen
- Q. 22 What occurs in the male seminiferous tubules?
- a. conception
  - b. birth
  - c. spermatogenesis
  - d. testosterone secretion
- Q. 23 The \_\_\_\_\_ cheese is not a physical change when....
- a. Shredding
  - b. Melting
  - c. Spoiling
  - d. Cutting
- Q. 24 \_\_\_\_\_ are not related to lipids.
- a. neutral fats
  - b. phospholipids
  - c. steroids
  - d. polysaccharides
- Q. 25 Organisms use \_\_\_\_\_ to store energy.
- a. carbohydrate
  - b. protein
  - c. nucleic acid
  - d. lipid
- Q. 26 What are the reactants of cellular respiration?
- a. Glucose and oxygen
  - b. Oxygen and carbon dioxide
  - c. Water and oxygen
  - d. Glucose and carbon dioxide
- Q. 27 What is the role of NADP+ in photosynthesis?
- a. It helps produce ATP from the light reactions.
  - b. It is the primary electron acceptor.
  - c. It forms NADPH to be used in the Calvin cycle.
  - d. It forms part of photosystem II.



Q. 36 \_\_\_\_\_ is not a physical properties of a substance in the liquid state .

- a. indefinite volume
- b. definite mass
- c. not easily compressed
- d. indefinite shape

Q. 37 Which of the following statements is TRUE?

- a. energy is not recycled, but it is converted from one
- b. Producers eat other organism to obtain energy
- c. Consumers make sugar through photosynthesis
- d. Some types of bacteria can form carbon dioxide that plant and animals need

Q. 38 Matter is made up of\_\_\_\_\_.

- a. elements
- b. compounds
- c. liquids
- d. gases

Q. 39 Polygenic traits are

- a. controlled by two or more genes
- b. controlled by one gene
- c. controlled by polygons
- d. controlled by at least 3 genes

Q. 40 The plasmodium which causes malaria would be classified as part of the \_\_\_\_\_ .

- a. Kingdom Monera
- b. Kingdom Protista
- c. Kingdom Fungi
- d. Kingdom Plantae

Q. 41 A specie that is introduced to an area to which it is not native is called a(n)\_\_\_\_\_ species.

- a. homeless
- b. intruding
- c. super
- d. invasive

Q. 42 The green pigment in a plant is called\_\_\_\_\_ .

- a. Chlorophyll
- b. Chlorine
- c. Mitochondria
- d. Mesophyll

Q. 43 Ducks, geese, and swans are an example of\_\_\_\_\_ .

- a. Birds of prey
- b. Swimming birds
- c. Perching birds
- d. Wading birds

- Q. 44 Cardinals, sparrows, and crows are example of \_\_\_\_\_ .
- a. Birds of prey  
c. Perching birds
- b. Swimming birds  
d. Wading birds
- Q. 45 Two different kinds of organisms living together for mutual benefit is known as a \_\_\_\_\_ .
- a. symbiosis  
c. parasitosis
- b. heterotroph  
d. saprophyte
- Q. 46 \_\_\_\_\_ is used to identify an element on Periodic Table ?
- a. atomic mass  
c. group
- b. charge  
d. atomic number
- Q. 47 Saprotrophs are \_\_\_\_\_ .
- a. Humans  
c. Toadstools and bracket fungi
- b. Photosynthetic  
d. mainly anaerobic
- Q. 48 Which type of macromolecule is a polysaccharide?
- a. Proteins  
c. Carbohydrates
- b. Nucleic Acids  
d. Steroids
- Q. 49 Which of the following statements is not true regarding a carbon-12 atom?
- a. It has 6 protons and 6 neutrons  
c. It is used as a standard for comparing the masses of atoms
- b. Scientists assigned a mass of 6 atomic mass units to  
d. An atomic mass unit is defined as one-twelfth the mass of a carbon-12 atom
- Q. 50 Using evolutionary innovations known as \_\_\_\_\_ to classify organisms and create cladograms.
- a. taxonomy  
c. mutations
- b. hierarchies  
d. derived characters
- Q. 51 What is the chemical name for HCl?
- a. Hypochloric Acid  
c. Hydrochloric Acid
- b. Hypochlorous Acid  
d. Chloric Acid

- Q. 52 Which of the following classes of molecules are hydrophobic?
- a. Proteins  
b. Lipids  
c. Carbohydrates  
d. Nucleic Acids
- Q. 53 Nuclear envelope re-form in \_\_\_\_\_ .
- a. prophase  
b. metaphase  
c. anaphase  
d. telophase
- Q. 54 Which of the following is the compound formula for dinitrogen trisulfide?
- a. N<sub>2</sub>S<sub>3</sub>  
b. N<sub>2</sub>H<sub>4</sub>  
c. N<sub>2</sub>O<sub>3</sub>  
d. N<sub>2</sub>O<sub>5</sub>
- Q. 55 Nucleic acids are polymers of \_\_\_\_\_ monomers.
- a. DNA  
b. monosaccharide  
c. nucleotide  
d. fatty acid
- Q. 56 \_\_\_\_\_ is a polymer.
- a. nucleic acid  
b. fatty acid  
c. Amino acid  
d. Glycerol
- Q. 57 Proteins of the electron transport chain are located in \_\_\_\_\_ .
- a. cytosol  
b. mitochondrial outer membrane  
c. mitochondrial inner membrane  
d. mitochondrial matrix
- Q. 58 Mammals that raise their young in special abdominal pouches are classified as \_\_\_\_\_.
- a. ungulates  
b. marsupials  
c. lagomorphs  
d. ruminants
- Q. 59 Animals that are active at night are called \_\_\_\_\_.
- a. arboreal  
b. nocturnal  
c. diurnal  
d. biennial
- Q. 60 What is the group number of the alkali metals?
- a. 3  
b. 2  
c. 1  
d. 4

Q. 61 What is the chief factor that determines the physical state of a sample of matter?

- a. mass
- b. intramolecular forces
- c. intermolecular forces
- d. melting point

Q. 62 Which pair of elements would you expect to have similar properties?

- a. At and F
- b. F and O
- c. Ge and As
- d. Li and Fe

Q. 63 Which chemical that causes cancer is called a (an)?

- a. Irritant
- b. Corrosive substance
- c. Carcinogen
- d. Poison

Q. 64 What does the number 84 represent in the name krypton-84?

- a. the atomic number
- b. the mass number
- c. the sum of the protons and electrons
- d. twice the number of protons

Q. 65 What is the term for a collection of cells that come together to perform a specific function?

- a. organ
- b. tissue
- c. organ system
- d. organism

Q. 66 Which variable is the variable that is changed by the scientist in an experiment?

- a. Controlled
- b. Dependent
- c. Independent
- d. Universal

Q. 67 Light energy is transferred by using a \_\_\_\_\_ .

- a. a medium
- b. conduction
- c. convection
- d. radiation

Q. 68 A \_\_\_\_\_ is a single celled organism that lacks a nucleus and other organelles.

- a. Amoeba
- b. Eukaryote
- c. Prokaryote
- d. Bacteria

Q. 69 Which statement is true about compounds and mixtures?

- a. a compound is made by physically combining its elements      b. a compound has a fixed composition; a mixture has
- c. a mixture is made by chemically combining its elements      d. a compound has a variable composition; a mixture has a fixed composition

Q. 70 Which of the following is the monomer, or subunit, of carbohydrates?

- a. Sugar      b. monosaccharides
- c. Oxygen      d. Nitrogen

Q. 71 \_\_\_\_\_ is credited with formulating the modern atomic theory of matter, which has remained essentially intact up to the present time.

- a. Archimedes      b. Lavoisier
- c. Proust      d. Dalton

Q. 72 Seaweed is a type of \_\_\_\_\_ .

- a. fungus      b. algae
- c. parasite      d. monera

Q. 73 How many divisions of the nervous system are there?

- a. 1      b. 2
- c. 3      d. 8

Q. 74 An internal structure within the cytoplasm of a eukaryotic cell is a \_\_\_\_\_ .

- a. glycocalyxes      b. nucleus
- c. fimbriae      d. cilia

Q. 75 A solution in which more solute is dissolved than is typically soluble at a given temperature is

- a. unsaturated      b. saturated
- c. supersaturated      d. diluted

Q. 76 What is the percent composition of carbon in heptane, C<sub>7</sub>H<sub>16</sub>?

- a. 16%      b. 19%
- c. 68%      d. 84%

Q. 77 Which of these animals are vertebrates.

- a. only reptiles
- b. only amphibians
- c. both
- d. neither

Q. 78 Which of the following can be a ecologists study?

- a. earthquakes and mountain building
- b. the remains of organisms that once lived on Earth
- c. the kinds of matter in the universe
- d. how organisms interact with each other and their

Q. 79 Solutions are classified as

- a. solutes or solvents
- b. saturated, unsaturated, or supersaturated
- c. solutes, only
- d. ionic compounds

Q. 80 The \_\_\_\_\_ is an expression of the actual numbers and types of atoms that are present in a single molecule of a substance.

- a. molecular formula
- b. empirical formula
- c. percent yield
- d. percent composition

Q. 81 Salt is made up of \_\_\_\_\_ bond.

- a. Polar Covalent
- b. Ionic
- c. Nonpolar Covalent
- d. Metallic

Q. 82 Carbon fixation during the Calvin Cycle\_\_\_\_\_ .

- a. Glucose is broken down into pyruvate and ATP
- b. Carbon dioxide gas is attached to sugars
- c. NADH is produced from NAD<sup>+</sup>
- d. Water is split and oxygen is released

Q. 83 Which two elements combine to form a covalent bond?

- a. magnesium and aluminum
- b. sodium and chlorine
- c. oxygen and carbon
- d. sulfur and tin

Q. 84 You suggest that the presence of water could accelerate the growth of bread mold. This is a(an)

- a. conclusion
- b. hypothesis
- c. experiment
- d. analysis

Q. 85 What are the two characteristics of photosynthesis?

- a. Light Dependent and Light independent                      b. Chloroplasts and Photosystems  
c. Thylakoids and Stroma    d. ATP synthase and Electron Transport Chain

Q. 86 Which kind of element is located in the middle of the Periodic Table?

- a. nonmetal    b. metalloid  
c. metal    d. noble gas

Q. 87 Which organelle is considered as the "brain" of the cell?

- a. the nucleus    b. the ribosomes  
c. the Golgi bodies    d. the lysosomes

Q. 88 The nucleic acid \_\_\_\_\_ consists of two polynucleotide chains.

- a. RNA    b. DNA  
c. polypeptides    d. nucleotides

Q. 89 A substance is classified as either an element or a \_\_\_\_\_ .

- a. compound    b. solution  
c. heterogeneous mixture    d. homogeneous mixture

Q. 90 Both plants and animals use \_\_\_\_\_ and give off \_\_\_\_\_ during respiration.

- a. nitrogen, oxygen    b. nitrogen, carbon dioxide  
c. oxygen, carbon dioxide    d. oxygen, nitrogen

Q. 91 When cell transformation is successful, the recombinant DNA \_\_\_\_\_ .

- a. undergoes mutation.    b. is treated with antibiotics.  
c. becomes part of the transformed cell's genome.    d. becomes a nucleus.

Q. 92 A cross between dissimilar individuals to bring together their best characteristics is called \_\_\_\_\_ .

- a. genetic engineering.    b. inbreeding.  
c. hybridization.    d. sequencing.

Q. 93 The partial charges on a water molecule occur because of \_\_\_\_\_ .

- a. covalent bonding    b. the high electronegativity of hydrogen  
c. widespread ionization    d. the unequal sharing of electrons between the

Q. 94 Which one is the correct chemical name for the salt  $\text{NH}_4\text{Cl}$ ?

- a. Ammonia Chloride  
b. Ammonium Chloride  
c. Nitrogen Tetrahydrogen Chloride  
d. Ammonium (I) Chloride

Q. 95 Which of the following includes an example of a chemical property of an element?

- a. Aluminum is a solid at room temperature and is a poor thermal insulator.  
b. Sulfur is not shiny and is not malleable.  
c. Sodium is a solid at room temperature and reacts  
d. Silicon is shiny and is a poor conductor of electricity.

Q. 96 Which of the following is a chemical element?

- a. carbon dioxide  
b. sucrose  
c. tungsten  
d. water

Q. 97 The total number of ATP molecules produced at the end of cellular respiration is \_\_\_\_\_.

- a. 18  
b. 20  
c. 36  
d. 41

Q. 98 What type of the following symmetry does a jellyfish exhibit?

- a. asymmetrical  
b. radial  
c. terrestrial  
d. bilateral

Q. 99 Given the equation :  $\text{HCl} + \text{energy} \rightarrow \text{H} + \text{Cl}$  ,How can this equation be described?

- a. This reaction is endothermic, and the heat is released  
b. This reaction is exothermic, and the heat is released  
c. This reaction is exothermic, and the heat is absorbed  
d. The reaction is endothermic, and the heat is

Q. 100 Humans have \_\_\_\_\_ autosomes.

- a. 23  
b. 46  
c. 44  
d. 22

Q. 101 Which anthropoids are most closely related to humans?

- a. orangutans  
b. Old World monkeys  
c. Chimpanzees  
d. gibbons

Q. 102 Humans have \_\_\_\_\_ .

- a. Exoskeleton
- b. Neuroskeleton
- c. Endoskeleton
- d. Monoskeleton

Q. 103 The number of individuals of a single species per unit area is known as a \_\_\_\_\_ .

- a. carry capacity
- b. logistic growth
- c. population density
- d. population growth rate

Q. 104 The range or area occupied by a population is actually its \_\_\_\_\_ .

- a. growth rate
- b. geographic distribution
- c. age structure
- d. population density

Q. 105 What is the formula of the salt produced when  $H_2SO_4$  and  $KOH$  react with each other?

- a.  $KSO_4$
- b.  $K_2S$
- c.  $K_2SO_3$
- d.  $K_2SO_4$

Q. 106 What is the name of the enzyme that unzips the DNA for replication?

- a. DNA ligase
- b. Helicase
- c. DNA polymerase
- d. lactase

Q. 107 A pedigree can be used to

- a. determine whether a trait is inherited
- b. show how a trait is passed through the generations
- c. determine if an allele is dominant or recessive
- d. all of the above

Q. 108 2 of the most important structures of the nervous system are:

- a. legs and arms
- b. spinal cord and brain
- c. ears and hair
- d. skin and eyes

Q. 109 The central nervous system integrates information throughout the \_\_\_\_\_ .

- a. body
- b. hair
- c. skin
- d. brain

Q. 110 Which part of the brain is the section below the back of the cerebrum?

- a. cerebellum
- b. pons
- c. medulla oblongata
- d. midbrain

- Q. 111 What type of reaction is  $Al + HCl \rightarrow H + AlCl$
- a. synthesis  
b. decomposition  
c. single replacement  
d. double replacement
- Q. 112 Which nitrogen base would bond with adenosine?
- a. Guanine  
b. Cytosine  
c. Thymine  
d. Taurine
- Q. 113 DNA can be responsible for which of the following:
- a. Blue eyes  
b. Your height  
c. Your love of Italian food  
d. a and b above
- Q. 114 A testable statement that explains a possible outcome of a set of events.
- a. hypothesis  
b. model  
c. prediction  
d. science
- Q. 115 Three forms of energy are
- a. chemical, exothermic, and temperature  
b. chemical, thermal, and electromagnetic  
c. electrical, nuclear, and temperature  
d. electrical, mechanical, and endothermic
- Q. 116 Which of the following units comprises an element?
- a. homogeneous mixtures  
b. compounds  
c. atoms  
d. heterogeneous mixtures
- Q. 117 The spermatic cords enclose \_\_\_\_\_ .
- a. vas deferens  
b. blood vessels  
c. lymphatics  
d. All of the above
- Q. 118 What type of chemical reaction is  $P + O \rightarrow PO$
- a. synthesis  
b. decomposition  
c. single replacement  
d. double replacement
- Q. 119 An example of \_\_\_\_\_ is lichens and mosses growing on bare rock after a volcanic eruption.
- a. competition  
b. population  
c. primary succession  
d. secondary succession



- Q. 129 Substances with a pH higher than 7 are \_\_\_\_\_ .
- a. acids  
b. bases  
c. neutral  
d. radicals
- Q. 130 Matter is defined as.
- a. As anything with mass, only  
b. As anything that occupies space, only  
c. As anything that contains pure substances, only  
d. As anything with mass that occupies space
- Q. 131 What does the pyramid of numbers show?
- a. the amount of energy available for consumption at each level of the pyramid  
b. the numbers of dead organisms at each level of the pyramid  
c. the amount of resources each organism needs in order to survive  
d. the number of organisms at each level of the
- Q. 132 What is the main purpose of the electron transport chain?
- a. Use high energy electrons from other cycles to  
b. Maintain a stable balance of high energy electrons  
c. Constantly distribute electrons throughout the cell  
d. Tell the cell when glycolysis should stop or start
- Q. 133 The Krebs cycle begins when \_\_\_\_\_ enters \_\_\_\_\_ .
- a. Pyruvic acid, Chloroplast  
b. Pyruvic acid, Mitochondria  
c. NAD+, Mitochondria  
d. NAD+, Chloroplast
- Q. 134 What do carbohydrates do?
- a. provide nutrients to cells  
b. promote chemical reactions in the body  
c. help defend and strengthen your body  
d. give energy to your body
- Q. 135 Why are carbohydrates and fats considered high energy foods?
- a. they have a lot of oxygen atoms  
b. they have no nitrogen in their makeup  
c. they can have very long carbon skeletons  
d. they have a lot of electrons associated with
- Q. 136 The structures that synthesize proteins in cells are the
- a. ribosomes  
b. Golgi apparatus  
c. lysosomes  
d. vacuoles

- Q. 137 Different forms of a gene are called \_\_\_\_\_ .
- a. hybrids. b. dominant factors.  
c. alleles. d. recessive factors.
- Q. 138 A strand of DNA is exposed to intense heat. Which of these BEST describes what will happen to the strand of DNA?
- a. The chemical bonds of the DNA molecule will be broken  
c. The chemical bonds of the DNA molecule will be  
b. More nitrogen base pairs will add on to the DNA molecule  
d. The nitrogen base pairs in the DNA molecule will switch places
- Q. 139 In a group of water molecules, hydrogen bonds form between \_\_\_\_\_ .
- a. the hydrogen atoms in a single water molecule  
c. two hydrogen atoms in different water molecules  
b. the oxygen atom in one water molecule and a  
d. the oxygen atoms in different water molecules
- Q. 140 What is the phase change represented by the following chemical equation?  $I_2(s) \rightarrow I_2(g)$
- a. sublimation  
b. condensation  
c. evaporation  
d. melting
- Q. 141 Which organelle, if punctured, would release digestive enzymes into the cytoplasm?
- a. the nucleus  
c. the centrioles  
b. the lysosomes  
d. the vacuoles
- Q. 142 Identify one difference between eukaryotes and prokaryotes?
- a. prokaryotes are surrounded by a cell membrane and eukaryotes are not  
c. eukaryotes have DNA and prokaryotes don't  
b. prokaryotes have a nucleus and eukaryotes don't  
d. eukaryotes have membrane-bound organelles and
- Q. 143 The DNA codon AGT codes for an amino acid carried by a tRNA with the anticodon \_\_\_\_\_ .
- a. TCA  
c. AGU  
b. UCA  
d. AGT

Q. 144 Which one is not an example of a physical change?

- a. melting a solid
- b. ripping a piece of paper
- c. cutting wood
- d. combining carbon and oxygen to form carbon

Q. 145 The Krebs Cycle begins when pyruvic acid produced by glycolysis enters into \_\_\_\_\_ .

- a. carbon atom
- b. air
- c. mitochondrion
- d. molecule

Q. 146 Photosynthesis requires \_\_\_\_\_ as a source of energy.

- a. ATP
- b. ADP
- c. Energy
- d. Sunlight

Q. 147 What serves as the messenger between the brain and the rest of the body?

- a. spinal cord
- b. back
- c. muscles
- d. brain

Q. 148 Which organelle plays an important role during mitosis, helping to move chromosomes around the cell?

- a. the nucleus
- b. the vacuoles
- c. the Golgi bodies
- d. the centrioles

Q. 149 Which one of these are stable and hard to decompose?

- a. supersaturated compounds
- b. unsaturated fats
- c. saturated fats
- d. solvents

Q. 150 What is the name of the process that most organisms use to access the energy needed for the activities of life?

- a. photosynthesis
- b. active transport
- c. diffusion
- d. cellular respiration

Q. 151 To balance a chemical equation, you may always adjust the

- a. coefficients
- b. subscripts
- c. formulas of the product
- d. either of coefficients or subscripts

Q. 152 Which word means organisms need each other to survive?

- a. Asexual
- b. Organisms
- c. Interdependence
- d. Multicellular

Q. 153 Which of the following correctly describes the shape and volume of gases?

- a. definite shape and volume
- b. indefinite shape and volume
- c. definite shape and indefinite volume
- d. indefinite shape and definite volume

Q. 154 Which of the following is NOT a property of a compound?

- a. It can be decomposed into simpler substances
- b. It can be homogeneous
- c. It can be formed by physically combining two or
- d. It consists of elements

Q. 155 Sharks and scales are referred to as .

- a. Bony shingles
- b. Dermal denticles
- c. Bony denticles
- d. Tooth-like denticles

Q. 156 Aquaculture begin from \_\_\_\_\_.

- a. Japan
- b. China
- c. Russia
- d. Germany

Q. 157 What is the correct name for the formula PbS?

- a. Lead (I) sulfide
- b. Lead (II) sulfide
- c. Lead sulfate
- d. Lead sulfide

Q. 158 The process by which sperm are produced in male animals is \_\_\_\_\_ .

- a. sperm
- b. spermatogenesis
- c. ovum
- d. oogenesis

Q. 159 Shrews, moles, and hedgehogs are all classified as \_\_\_\_\_ .

- a. insectivores
- b. lagomorphs
- c. marsupials
- d. rodents

Q. 160 What is the atomic number of an atom with 20 protons, 20 electrons, and 22 neutrons?

- a. 42
- b. 22
- c. 2
- d. 20

- Q. 161 Which of the following is a description of NAD+?
- a. product of the citric acid cycle
  - b. electron carrier in photosynthesis
  - c. electron carried in cellular respiration
  - d. also called Photosystem II
- Q. 162 Amino acids are composed of \_\_\_\_\_ .
- a. carboxyl group
  - b. side group (R group)
  - c. amino group
  - d. all of these
- Q. 163 The action of disrupting the three-dimensional shape of a protein is termed \_\_\_\_\_ .
- a. dehydration
  - b. denaturation
  - c. deamination
  - d. hydrolysis
- Q. 164 Hydrolysis of a triglyceride produces \_\_\_\_\_ .
- a. many amino acids
  - b. different types of nucleotides
  - c. fatty acids and glycerol
  - d. monosaccharides
- Q. 165 What is the first molecule formed by the Krebs cycle?
- a. Citric Acid
  - b. Pyruvate
  - c. ATP
  - d. Glucose
- Q. 166 Which structure is primarily responsible for directing ALL processes of a plant cell?
- a. chloroplast
  - b. lysosome
  - c. mitochondria
  - d. nucleus
- Q. 167 Which of the following best describes the electron transport chain?
- a. Hydrogen atoms are added to CO<sub>2</sub> to make an energy-rich compound
  - b. Electrons are passed from one carrier to another.
  - c. Electrons are pumped across a membrane by active transport.
  - d. Glucose is broken down to a three-carbon compound in preparation for the citric acid cycle.
- Q. 168 When you rub a balloon on a piece of carpet and the balloon becomes positively charged. Identify the transferring statement?
- a. electrons are transferred from balloon to carpet
  - b. electrons are transferred from carpet to balloon
  - c. protons are transferred from balloon to carpet
  - d. protons are transferred from carpet to balloon

- Q. 169 Which birds have long legs and long sharp beaks?
- a. Birds of prey  
b. Swimming birds  
c. Perching birds  
d. Wading birds
- Q. 170 Which of the following are permanently differentiated cells?
- a. stem cells  
b. newly formed daughter cells  
c. bone marrow cells  
d. most brain cells
- Q. 171 Electron microscopes use \_\_\_\_\_ to focus and magnify an image.
- a. glass lenses  
b. electron beams  
c. X rays  
d. light
- Q. 172 \_\_\_\_\_ invented the microscope which is a basis of today's Microbiology .
- a. William Harvey's  
b. Gabriel Fahrenheit's  
c. Anton von Leeuwenhoek's  
d. William Roentgen's
- Q. 173 What is a pure substance?
- a. a substance that has no charge  
b. an element that can be broken down  
c. an element that cannot be broken down  
d. a substance that has no pollutants
- Q. 174 \_\_\_\_\_ describes the speed of particles.
- a. temperature  
b. calories  
c. heat  
d. energy
- Q. 175 Tarsal bones are found in \_\_\_\_\_ .
- a. Hand  
b. Foot  
c. Spinal cord  
d. Are
- Q. 176 Which statement correctly explains why water is a good solvent of ionic compounds and polar molecules?
- a. Water is a polar molecule  
b. Water is an ionic compound  
c. Water molecules are nonpolar  
d. Water molecules completely separate into ions in solution
- Q. 177 Which enzyme is responsible for copying DNA's nucleic acid molecules?
- a. DNA polymerase  
b. Amino acid  
c. RNA polymerase  
d. Nucleosome

- Q. 178 The DNA resides in \_\_\_\_\_ of the cell.
- a. cytoplasm  
b. ribosomes  
c. mitochondria  
d. nucleus
- Q. 179 Who made the first picture of DNA and it was used to make a 3-D model?
- a. Watson and Crick  
b. Linnaeus  
c. Franklin  
d. Mendel
- Q. 180 In a pedigree, a circle represents a(an)
- a. male  
b. female  
c. child  
d. adult
- Q. 181 A \_\_\_\_\_ representation of the real world.
- a. model  
b. evidence  
c. hypothesis  
d. science
- Q. 182 Which compound directly provides energy for cellular work?
- a. fat  
b. ATP  
c. DNA  
d. sucrose
- Q. 183 Which of the following techniques takes advantage of repeated DNA sequences that do not code for proteins?
- a. DNA fingerprinting.  
b. DNA sequencing.  
c. genetic engineering.  
d. rapid sequencing.
- Q. 184 Solute is defined as.
- a. the substance that dissolves another substance  
b. the solution of 2 or more substances  
c. the substance that is being dissolved
- Q. 185 How many grams of NaCl are necessary to create a saturated solution at 100°C?
- a. 20 g  
b. 30 g  
c. 40 g  
d. 50 g
- Q. 186 What are the Nucleotide Bases are composed of?
- a. Phosphate, Double Helix, and DNA  
b. DNA, Adenine, Thymine, and Replication  
c. Adenine, Thymine, Cytosine, and Guanine



Q. 196 \_\_\_\_\_ is the largest part of the brain.

- a. midbrain
- b. cerebrum
- c. pons
- d. medulla oblongata

Q. 197 Organic molecules consist of mainly \_\_\_\_\_ atoms.

- a. Carbon
- b. Carbon and oxygen
- c. carbon and hydrogen
- d. carbon and nitrogen

Q. 198 What is the MAIN function of a selectively permeable membrane?

- a. storage of water
- b. storage of chemicals
- c. breaks down molecules within the cell
- d. regulates what enters and leaves the cell

Q. 199 Which of the following is not an important function of proteins?

- a. To store genetic information
- b. To provide transport across the cell membrane
- c. To catalyze chemical reactions
- d. To provide defense and structure

Q. 200 Which vitamin is important for healing bones in your diet?

- a. Vitamin C
- b. Vitamin A
- c. Vitamin D

Q. 201 Which one is the basis used by Linnaeus when developing his method of classification?

- a. DNA comparison
- b. Common ancestry
- c. Morphological similarity
- d. Acquired traits

Q. 202 Science is a way of knowing and science is an ongoing \_\_\_\_\_ .

- a. adventure
- b. experiment
- c. process
- d. hypothesis

Q. 203 Which cell is responsible for opening and closing the stomata?

- a. Mesophyll cells
- b. Epidermal Cells
- c. Embryo Cells
- d. Guard Cells

Q. 204 The number of valence electrons \_\_\_\_\_ in Period 2 in order of increasing atomic number.

- a. Increases and decreases across the period.
- b. Increases.
- c. Decreases.
- d. Remains the same.

Q. 205 \_\_\_\_\_ is a viral infection.

a. Common Cold

c. Plague

b. Anthrax

d. MRSA

Q. 206 \_\_\_\_\_ muscles are the strongest in your body.

a. Back muscles

c. Arm muscles

b. Leg muscles

d. Stomach muscles

Q. 207 Food should be sanitized to \_\_\_\_\_ .

a. Provide a place for bacteria to grow

c. Clean up moisture that harbors bacteria

b. Destroy microorganisms

d. Remove food particles

Q. 208 The burning of methane is an example of a(n) \_\_\_\_\_ reaction.

a. Catabolic

c. Anabolic

b. Biochemical

d. Exothermic

Q. 209 Density- dependent limiting factors include all except \_\_\_\_\_ .

a. competition

c. parasitism/disease

b. predation

d. Human disturbances

Q. 210 \_\_\_\_\_ refers to movement smoothly over a surface with a twisting or oscillating motion.

a. Crawl

c. Slide

b. Twist

d. Slither

Q. 211 Anacondas, Boas, and Pythons are considered as \_\_\_\_\_ .

a. Toxic

c. Nicki Minaj Backup Dancers

b. Constrictors

d. Monsters

Q. 212 Calculate the total number of neutrons in an atom with a mass number of 3 and an atomic number of 1?

a. 3

c. 2

b. 1

d. 4

Q. 213 According to this balanced chemical equation given below, calculate the volume of C<sub>2</sub>H<sub>2</sub> is required to form 40.0 L of CO<sub>2</sub>?  $2C_2H_2(g) + 5O_2 \rightarrow 2H_2O(g) + 4CO_2(g)$

a. 20.0 L

c. 80.0 L

b. 44.8 L

d. 100 L

Q. 214 Identify a nonliving thing characteristic?

- a. growth and development
- b. the ability to eat
- c. adapting to their surroundings
- d. ability to reproduce

Q. 215 Identify nonelemental property from the following ?

- a. It is pure
- b. It can be decomposed into simpler substances
- c. It is homogeneous
- d. They can be combined to form compounds

Q. 216 The collision of tectonic plates creates what geologic feature?

- a. mountains
- b. faults
- c. earthquakes
- d. volcanoes

Q. 217 Which kind of genetic material is found in different types of viruses?

- a. DNA only
- b. RNA only
- c. Both DNA and RNA
- d. Nucleosomes

Q. 218 Which term will be use for a heritable change in genetic information?

- a. mutation
- b. mitosis
- c. meiosis
- d. apoptosis

Q. 219 As temperature increases, kinetic energy \_\_\_\_\_ .

- a. Increases.
- b. Decreases.
- c. There is no change .
- d. All of the above can be correct.

Q. 220 Which of the following compound will react with HCl to produce water and a salt with the chemical formula KCl?

- a. K<sub>2</sub>SO<sub>4</sub>
- b. KOH
- c. KCl
- d. K<sub>2</sub>SO<sub>3</sub>

Q. 221 The last stage of aerobic respiration is\_\_\_\_\_ .

- a. the light reaction
- b. the Krebs cycle
- c. the Calvin cycle
- d. electron transport

Q. 222 Identify two products of photosynthesis from the following?

- a. carbon dioxide
- b. oxygen
- c. energy
- d. water



Q. 231 Which of the following components comprise an atom?

- a. Elements and nucleons
- b. Nucleons and electrons
- c. Compounds and nucleons
- d. Substances and electrons

Q. 232 \_\_\_\_\_ is the heart of the scientific process.

- a. A Scientist
- b. Exploration and Discovery
- c. Communicating Results
- d. Scientific Method

Q. 233 Which of the following is a neutralization reaction?

- a.  $\text{NH}_3 + \text{HCl} \rightarrow \text{NH}_4\text{Cl}$
- b.  $2\text{NO} \rightarrow \text{N}_2 + \text{O}_2$
- c.  $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
- d.  $\text{Pb}(\text{NO}_3)_2 + 2\text{KCl} \rightarrow \text{PbCl}_2 + 2\text{KNO}_3$

Q. 234 Temperature vary to \_\_\_\_\_ .

- a. geographic location
- b. time of day
- c. time of year
- d. all of the above

Q. 235 Identify a false statement from the following.

- a. cloud cover at night acts as a blanket
- b. thin clouds reflect more sunlight
- c. high albedo = greater reflectivity
- d. low albedo = less reflectivity

Q. 236 Which of the following features do protists, fungi, plant, and animals share but bacteria lack?

- a. DNA
- b. a nucleus
- c. reproduction
- d. a cell membrane

Q. 237 \_\_\_\_\_ has a negative charge.

- a. cation
- b. anion
- c. onion
- d. negion

Q. 238 Neutron has \_\_\_\_\_ charge.

- a. positive
- b. negative
- c. neutral
- d. electric

Q. 239 How many valence electrons are needed to fulfill the octet rule?

- a. 5
- b. 6
- c. 7
- d. 8

- Q. 240 Which cold-blooded vertebrates live on land as well as in water.
- a. mammals  
c. reptiles
- b. amphibians  
d. birds
- Q. 241 A bias is defined as
- a. personal point of view  
c. proven facts
- b. judgment based on evidence  
d. opinion of numerous scientists
- Q. 242 Scientists replicate the work of other scientists to:
- a. To prove them wrong  
c. To take advantage of new technology
- b. To begin new and different projects  
d. To make sure experiments were carried out
- Q. 243 The failure of chromosomes to separate during the process of meiosis is called
- a. nondisjunction  
c. Down syndrome
- b. Turner's syndrome  
d. X chromosome inactivation
- Q. 244 Which process do bacteria generally use for reproduction?
- a. meiosis  
c. binary fission
- b. mitosis  
d. conjugation
- Q. 245 A phospholipid has a \_\_\_\_\_ head and \_\_\_\_\_ tail.
- a. Polar, non-polar  
c. Hydrophilic, hydrophobic
- b. Polar, polar  
d. Both a and c
- Q. 246 What is the total number of protons in an ion with 10 electrons, a charge of +2, and an atomic number of 12?
- a. 10  
c. 12
- b. 9  
d. 2
- Q. 247 What is the total number of protons in an atom with two electrons in the first shell, eight electrons in the second shell, and seven electrons in the third shell?
- a. 7  
c. 10
- b. 8  
d. 17

Q. 248 Identify why polluted groundwater is difficult to clean up ?

- a. groundwater is deep in the ground and dispersed through large areas of rock.
- b. pollutants cling to the materials that make up the aquifer and contaminate the clean water.
- c. the recycling process of groundwater can take hundreds or thousands of years.
- d. All of the above

Q. 249 What process is responsible for the development of the zygote into the embryo?

- a. Meiosis
- b. Pollination
- c. Irritability
- d. Mitosis

Q. 250 \_\_\_\_\_ is a protein that regulates the timing of cell division.

- a. Hormones
- b. Other cells
- c. Cyclin
- d. DNA

Q. 251 The random distribution of homologous chromosomes during meiosis is called

- a. independent assortment
- b. random fertilization
- c. telophase
- d. a random mutation

Q. 252 Animals with hooves are referred to as \_\_\_\_\_ .

- a. monotremes
- b. lagomorphs
- c. ungulates
- d. marsupials

Q. 253 \_\_\_\_\_ is NOT a function of lipids?

- a. Cell Membrane
- b. Long Term Energy
- c. Steroids
- d. Muscular Support

Q. 254 At what age, the brain is 90-95% developed?

- a. 4
- b. 6
- c. 12
- d. At birth

Q. 255 The radiation that the earth receives from the sun...

- a. is affected by the earth's motions
- b. heats the earth
- c. is affected by variations in the earth's surface
- d. all of the above

- Q. 256 A \_\_\_\_\_ contains two or more substances that are not chemically combined.
- a. solution  
c. mixture
- b. proton  
d. compound
- Q. 257 What is the chemical name for  $\text{Sr}(\text{OH})_2$ ?
- a. Strontium Hydroxide  
c. Strontium Oxide
- b. Strontium Hydride  
d. Strontium (II) Hydroxide
- Q. 258 Nucleic Acids are composed of repeating \_\_\_\_\_ units.
- a. neurons  
c. nucleotides
- b. nitrogen  
d. nucleus
- Q. 259 In order to survive, bacteria need moisture, oxygen, and what?
- a. Surface dirt  
c. Warm temperature
- b. Fire  
d. Cool temperature
- Q. 260 A graph that shows the relationship between temperature and grams of solute dissolved is called ?
- a. solubility curve  
c. solute curve
- b. solution curve
- Q. 261 Fermentation has two main types \_\_\_\_\_ and \_\_\_\_\_ .
- a. alcoholic; yeast  
c. yeast; glycolysis
- b. alcoholic; lactic  
d. lactic; yeast
- Q. 262 Glycolysis occur in \_\_\_\_\_ .
- a. inner membrane of mitochondria  
c. stroma of chloroplast
- b. matrix of mitochondria  
d. cytoplasm
- Q. 263 Which of the following is used for chemical symbols today?
- a. drawings  
c. letters
- b. icons  
d. numbers
- Q. 264 Which of the following is not one of the 5 senses?
- a. sight  
c. taste
- b. smell  
d. walk



- Q. 273 The waste products of cellular respiration are \_\_\_\_\_ .
- a. water and glucose  
b. water only  
c. carbon dioxide only  
d. water and carbon dioxide
- Q. 274 Galactose + Glucose = \_\_\_\_\_ .
- a. Maltose  
b. Starch  
c. Sucrose  
d. Lactose
- Q. 275 \_\_\_\_\_ is a body of techniques for investigating natural phenomenon.
- a. scientific method  
b. prediction  
c. experiment  
d. hypothesis
- Q. 276 What is the volume of 2.00 moles of nitrogen gas (N<sub>2</sub>) at STP?
- a. 11.2 L  
b. 28.0 L  
c. 44.8 L  
d. 56.0 L
- Q. 277 How do you wavelengths are measured?
- a. trough to crest  
b. waves in a given time  
c. crest to crest  
d. the time of one cycle
- Q. 278 If a large number of waves pass by a certain point in a given time, the waves have \_\_\_\_\_ .
- a. a high frequency  
b. a low frequency  
c. No frequency  
d. none of the above
- Q. 279 Which of following human characteristics were evolved first?
- a. upright posture  
b. language  
c. enlarged brain  
d. development of culture
- Q. 280 \_\_\_\_\_ conducts water in a plant.
- a. xylem vessel  
b. phloem vessel  
c. leaves  
d. all of the above

Q. 281 The wavelength of radiation is related to the energy of the photons of the radiation because?

- a. The energy of a photon is directly proportional to the wavelength.
- b. The energy of a photon is proportional to the exponent of the wavelength.
- c. The energy of a photon is inversely proportional to

Q. 282 What is the correct chemical name for  $\text{HNO}_3$ ?

- a. Nitric Acid
- b. Nitrous Acid
- c. Nitric Acid
- d. Hydronitric Acid

Q. 283 What is a microorganism?

- a. Toxins that harm body cells
- b. Living bodies that are not visible to the naked eye
- c. Foreign objects that injure the body
- d. A practice that prevents disease

Q. 284 How much ATP is produced in the aerobic cycle of cellular respiration?

- a. 13
- b. 34
- c. 2
- d. 38

Q. 285 Where does the first stage of photosynthesis take place?

- a. Thylakoids
- b. Mitochondria
- c. Stroma
- d. Cytoplasm

Q. 286 Chromatids are connected and later separated by \_\_\_\_\_ of the chromosome?

- a. histone
- b. centrosome
- c. centriole
- d. centromere

Q. 287 Protons have a charge of \_\_\_\_\_ .

- a. -1
- b. 0
- c. +1
- d. +2

Q. 288 Electrons have a mass of \_\_\_\_\_ .

- a. 0 u
- b. 1 u
- c. 2 u
- d. 3 u

- Q. 289 The function of plant roots is to \_\_\_\_\_ .
- a. to collect sunlight  
b. to absorb nutrients from the soil  
c. to produce flowers for reproduction  
d. to eliminate wastes from the leaves
- Q. 290 Elements that consist of unbonded atoms are called
- a. polyatomic  
b. monatomic  
c. allotropes
- Q. 291 How many electrons do the elements in the oxygen family have in the outermost electron shell?
- a. 3  
b. 6  
c. 1  
d. 15
- Q. 292 \_\_\_\_\_ are the molecules that carry electrons to and from different parts of the chloroplast.
- a. Electron carriers  
b. Protons  
c. Atp's
- Q. 293 Identify a statement which is NOT always true about salts?
- a. They are always very soluble in water  
b. They consist of cations and anions  
c. They conduct electricity in the liquid phase  
d. They are ionic in nature
- Q. 294 Electrons in the outermost shell of an atom are called
- a. electrons  
b. molecules  
c. valence electrons  
d. atoms
- Q. 295 Genotype is termed as
- a. when two alleles of a particular gene are the same  
b. the set of alleles that an organism has  
c. different versions of a gene  
d. none of the above
- Q. 296 Protista are classified as a \_\_\_\_\_ .
- a. family  
b. phylum  
c. species  
d. kingdom
- Q. 297 Which feature of the electron configuration determine the chemical properties of an element?
- a. Its total number of electrons  
b. The number of electrons in the first shell  
c. The number of valence electrons  
d. The number of electrons in the second shell



Q. 307 Identify a distinguishing feature of a mammal?

- a. has scales
- b. gives live birth
- c. produces milk
- d. lays eggs

Q. 308 Cell membranes are mainly constructed of ?

- a. lipid bilayers.
- b. protein pumps.
- c. carbohydrate gates.
- d. free-moving proteins.

Q. 309 Carbon can bond with one or more carbon atoms, producing a variety of

- a. hydrocarbons
- b. amino groups
- c. carbon skeletons
- d. inorganic molecules

Q. 310 What does the word amphibian mean \_\_\_\_\_ .

- a. slimy skin
- b. near water
- c. webbed feet
- d. double life

Q. 311 Which of the following conclusions is consistent with the Bohr model of the atom?

- a. Electrons exist in fixed circular paths known as orbits
- b. Electrons are most likely to be located in a space known as an orbital
- c. Electrons are randomly spaced out around a positive mass
- d. Electrons are directly adjacent to the nucleus

Q. 312 What mineral is most important to store in our bones?

- a. Calcium
- b. Iron
- c. Phosphorus

Q. 313 Which of the following is NOT a characteristics of the cell theory?

- a. All living things are made of one or more cells.
- b. Cells are the basic units of structure and function in organisms.
- c. All cells contain a nucleus.
- d. All cells arise from existing cells.

Q. 314 Which of the following characteristics of living things best explains why some North American birds fly south for the winter?

- a. Living things maintain an internal balance
- b. Living things are made up of cells
- c. Living things respond to their environment
- d. Living things need and use energy

- Q. 315 Which variable changed by the scientist, "I" control, always on x-axis, affects dependent variable?
- a. prediction  
b. independent variable  
c. dependent variable  
d. model
- Q. 316 A broad explanation for the events that is widely accepted as true is called \_\_\_\_\_.
- a. scientific investigation  
b. scientific law  
c. scientific theory  
d. independent variable
- Q. 317 Most earthquakes occur near the \_\_\_\_\_ of tectonic plates.
- a. Circum-Pacific Belt  
b. boundaries  
c. center  
d. ocean ridges
- Q. 318 Which hormone that is secreted when Glucose in blood falls?
- a. Leptin  
b. Gherlin  
c. Insulin  
d. Dopermine
- Q. 319 The measure of the amount of matter than an object contains is actually its \_\_\_\_\_.
- a. shape  
b. volume  
c. weight  
d. mass
- Q. 320 The charge on an ion formed from an atom is called the \_\_\_\_\_ of the atom.
- a. reaction capacity  
b. atomic radius  
c. oxidation number  
d. charge
- Q. 321 Which of the following statements correctly characterizes salts?
- a. They conduct electricity in the solid phase  
b. They conduct electricity in all phases  
c. They conduct electricity in the liquid phase  
d. They do not conduct electricity at all
- Q. 322 The charge of the nucleus of an atom is \_\_\_\_\_.
- a. It is neutral.  
b. It is positively-charged.  
c. It is negative and neutral.  
d. It is negatively-charged.
- Q. 323 Which type of bond occurs between the bases in DNA?
- a. ionic bond  
b. hydrogen bond  
c. covalent bond

Q. 324 If there is an open circuit which of the following could be used to complete the circuit?

- a. a piece of paper
- b. a piece of yarn
- c. a paper cup
- d. a nickel

Q. 325 \_\_\_\_\_ is a diseased and decaying area of a tree.

- a. canker
- b. rust
- c. bacteria
- d. wilt

Q. 326 Which statement is false about nonmetals?

- a. Nonmetals are poor conductors of heat and electric current
- b. Many nonmetals are gases at room temperature
- c. Some nonmetals are extremely reactive and others hardly react at all
- d. Nonmetals that are solids tend to be malleable

Q. 327 \_\_\_\_\_ is the process during cell division in which the nucleus of a cell is divided into two nuclei.

- a. Interphase
- b. Cell Phase
- c. Fission
- d. Mitosis

Q. 328 Identify the difference between a carbohydrate and a lipid?

- a. the carbohydrate has oxygen in it
- b. the lipid has hydrogen in it
- c. only one of them has a ring structure
- d. the lipid has long chains of carbon

Q. 329 \_\_\_\_\_ is the orderly reduction and distribution of chromosomes to make sperm and eggs?

- a. urethra
- b. uterus
- c. meiosis

Q. 330 If a solution were to turn litmus blue, which of the following substances would most likely be present in this solution?

- a. NaOH
- b. H<sub>2</sub>O
- c. HNO<sub>3</sub>
- d. HCl

Q. 331 \_\_\_\_\_ is the largest atom.

- a. bromine
- b. nitrogen
- c. lithium
- d. potassium

- Q. 332 Which of the following would be considered a living organism?
- a. the virus that causes ebola  
b. a rock found in the driveway  
c. the mold that appears on old bread  
d. a fatty acid found in a lipid
- Q. 333 The atom has the following parts
- a. ions, protons, electrons  
b. protons, electrons, molecules  
c. protons, electrons, neutrons  
d. elements, neutron protons
- Q. 334 \_\_\_\_\_ is the protein coat that covers the genetic material of a virus.
- a. a cell wall  
b. a cell membrane  
c. a capsid  
d. a dermal layer
- Q. 335 Frequency is measured in \_\_\_\_\_ .
- a. meters  
b. hertz  
c. ohms  
d. seconds
- Q. 336 How many valence electrons are contained in an atom of Ca?
- a. 2  
b. 1  
c. 20  
d. 40
- Q. 337 What is the name of section of DNA/RNA that contains info that codes for proteins?
- a. Exons  
b. Introns  
c. Codons  
d. rRNA
- Q. 338 Which of the following descriptions is incorrect?
- a. proton: positive charge, in nucleus, mass of = 1 amu  
b. electron: negative charge, mass of = 0 amu, in  
c. neutron: mass of = 1 amu, no charge
- Q. 339 Identify the number of hydrogen atoms in butane?
- a. 4  
b. 6  
c. 8  
d. 10
- Q. 340 A multicellular organisms are made of \_\_\_\_\_ cells.
- a. One  
b. Two or more  
c. Three or more  
d. Five

- Q. 341 Gametes are actually \_\_\_\_\_ .
- a. Chromosomes  
b. Prophases  
c. Haploid cells  
d. Cross over cells
- Q. 342 What are the seven colours associated with visible light?
- a. red, orange, yellow, green, blue, purple pink  
b. red, orange, yellow, green, blue, white, black  
c. red, orange, yellow, green, light blue, dark blue, violet  
d. red, orange, yellow, green, blue, indigo, violet
- Q. 343 What are the end products for the Krebs cycle?
- a. 4 NADH, 1 FADH<sub>2</sub>, 3 CO<sub>2</sub> and 1 ATP (x2)  
b. 8 FADH<sub>2</sub>, 1 NADH, 1 CO<sub>2</sub> and 3 ATP (x2)  
c. 4 NADH, 1 FADH<sub>2</sub>, 3 CO<sub>2</sub> and 1 ATP  
d. 8 NADH, 2 FADH<sub>2</sub>, 6CO<sub>2</sub> and 2 ATP (x2)
- Q. 344 The overall purpose of cellular respiration is to \_\_\_\_\_ .
- a. breakdown sugars to produce ATP for cell activities  
b. give our cells oxygen  
c. breakdown food in animal cells.  
d. produce NADH and FADH<sub>2</sub>
- Q. 345 Which two reactants would form the salt Na<sub>3</sub>PO<sub>4</sub>?
- a. H<sub>2</sub>O and NaOH  
b. H<sub>3</sub>PO<sub>3</sub> and NaOH  
c. H<sub>2</sub>PO<sub>4</sub> and KOH  
d. H<sub>3</sub>PO<sub>4</sub> and NaOH
- Q. 346 Which structures are found in every living cell?
- a. A cell wall and nucleus  
b. Centrioles and chromosomes  
c. A plasma membrane and cytoplasm  
d. Chloroplasts and mitochondria
- Q. 347 Removing a(n) \_\_\_\_\_ species from the an ecosystem can reduce biodiversity.
- a. endangered  
b. keystone  
c. parasitic  
d. touchstone
- Q. 348 Small trees and shrubs below the rainforest canopy is called the \_\_\_\_\_ .
- a. buttress  
b. emergents  
c. forest floor  
d. understory
- Q. 349 Which of the following reaction does NOT result in the formation of a salt?
- a. A reaction between a weak acid and a weak base  
b. Neutralization Reaction  
c. Decomposition  
d. None of the Above

Q. 350 Which scientists are credited with discovering the physical structure of DNA?

- a. Watson and Crick
- b. Einstein and Crick
- c. Mendel and Watson
- d. Holmes and Watson

Q. 351 Joint inflammation is also termed as \_\_\_\_\_ .

- a. bursitis
- b. osteoporosis
- c. kyphosis
- d. arthritis

Q. 352 Fish growing gills is an example of living things doing what?

- a. Reacting to change
- b. Using energy
- c. Adapting to their surroundings
- d. Growing and developing

Q. 353 All of the following are characteristics of all living things except:

- a. they grow and develop
- b. they maintain an unstable internal environment
- c. they are made up of cells
- d. they reproduce

Q. 354 How many nucleotides make up a codon?

- a. five
- b. one
- c. three
- d. two

Q. 355 Which element is present in every organic compound?

- a. nitrogen
- b. oxygen
- c. carbon
- d. sulfur

Q. 356 Which subatomic particle is correctly matched with its charge?

- a. proton - charge of 0
- b. neutron - charge of -1
- c. electron - charge of +1
- d. electron - charge of -1

Q. 357 Which one is example of negative feedback?

- a. Childbirth
- b. Global warming
- c. Stress
- d. Temperature regulation

Q. 358 Which of following is an example of a plant with a taproot system?

- a. carrot
- b. grass
- c. peas
- d. lettuce

- Q. 359 The energy from moving water is called \_\_\_\_\_ .
- a. solar power  
b. hydropower  
c. wind power  
d. fossil fuels
- Q. 360 The cell membrane is made of \_\_\_\_\_ and \_\_\_\_\_ .
- a. Phospholipids and carbohydrates  
b. Phospholipids and proteins  
c. Phospholipids and nucleic acids  
d. Phospholipids and electrolytes
- Q. 361 How many different amino acids are there?
- a. 10  
b. 15  
c. 20  
d. 25
- Q. 362 How many senses we have?
- a. 5  
b. 4  
c. 9  
d. 6
- Q. 363 What is the correct chemical name for HClO?
- a. Hydrochloric Acid  
b. Hydrochlorous Acid  
c. Chlorous Acid  
d. Hypochlorous Acid
- Q. 364 What is the correct chemical name for NH<sub>4</sub>OH?
- a. Ammonia Hydroxide  
b. Ammonium Hydride  
c. Ammonium Hydroxide  
d. Ammonium Oxide
- Q. 365 The atomic number of an element is same as the number of
- a. protons.  
b. neutrons.  
c. protons + electrons.  
d. protons + neutrons.
- Q. 366 Which of the following are produced during cellular respiration?
- a. oxygen and glucose  
b. carbon dioxide, water, and ATP  
c. oxygen  
d. carbon dioxide and ATP
- Q. 367 Which subatomic particles are located outside of the nucleus of an atom?
- a. Positively-charged protons.  
b. Negatively-charged positrons.  
c. Negatively-charged electrons.  
d. Neutrons.





- Q. 385 Identify a reason one might have for touching plants?
- a. Touch is part of the identification process                      b. To feel the texture  
c. Smell the fragrance left by oils on your fingers                d. All of the above
- Q. 386 Information gathered from observing a plant grow 3 cm over a two week period is called \_\_\_\_\_ .
- a. inferences    b. variables  
c. hypothesis    d. data
- Q. 387 Phyte/phyto= means \_\_\_\_\_ .
- a. vessel    b. plant  
c. animal    d. light
- Q. 388 Which mechanism does the plant root use to bring water into the plant?
- a. osmosis    b. active transport  
c. binary fission    d. accumulation
- Q. 389 If two oxygen atoms combine to make a molecule, what type of bond will they form?
- a. an ionic bond    b. a hydrogen bond  
c. a double covalent bond    d. a metallic bond
- Q. 390 Which one is doing the most work?
- a. pulling a box 10 m with a force of 100 N                              b. pushing a box 100 m with a force of 200N  
c. pulling a sled 1000 m with a force of 10N                              d. pushing a car with a force of 100000 N and it doesn't move
- Q. 391 Water enter into plants through \_\_\_\_\_ .
- a. leaves    b. stem  
c. flower    d. roots
- Q. 392 Which of the following are polymers?
- a. carbohydrates    b. nucleic acids  
c. proteins    d. all of these
- Q. 393 The dark organic matter in the soil of deciduous forests is called \_\_\_\_\_ .
- a. the understory    b. humus  
c. minerals    d. compost





Q. 410 How many Hydrogen Atoms are there in Amino Acids?

- a. 12  
c. 7
- b. 4  
d. 2

Q. 411 How many grams are there in 4 moles of Oxygen?

- a. 16 g/mole  
c.  $6.02 \times 10^{23}$  g/ mole
- b. 64 g/mole  
d.  $24.08 \times 10^{23}$  g/ mole

Q. 412 What is a mutagen?

- a. A random change in the genetic sequence.  
c. A method of manipulating DNA to make a change in the genetic sequence.
- b. A chemical or physical agent that causes a change in  
d. A heritable factor that causes a large change in the genetic sequence.

Q. 413 The earth's range of radiation includes which of the following

- a. ultraviolet waves  
c. Gamma Rays
- b. X-Rays  
d. Radio Rays

Q. 414 Which of the following represents the approximation of volume for gases, according to the Kinetic Molecular Theory?

- a. 1 L  
c. 10 mL
- b. Essentially zero  
d. 100 mL

Q. 415 Identify an element which is liquid and a strong conductor of heat and electricity at room temperature?

- a. mercury  
c. nickel
- b. sodium  
d. lithium

Q. 416 Which element has an atom with the electron configuration 2-8-1?

- a. magnesium  
c. calcium
- b. sodium  
d. beryllium

Q. 417 \_\_\_\_\_ is exothermic change.

- a. condensation  
c. melting
- b. evaporation  
d. sublimation



- Q. 426 Power is termed as
- a. the amount of work done.
  - b. rate at which work is done
  - c. the force x distance
  - d. the force x distance (if F and d are in the same direction)
- Q. 427 Two or more elements chemically bound in a fixed proportion:
- a. mixture
  - b. mass
  - c. matter
  - d. compound
- Q. 428 Given the reaction:  $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$ , What amount of oxygen is needed to completely react with 2.5 moles of  $\text{CH}_4$ ?
- a. 2 moles
  - b. 3.5 moles
  - c. 5 moles
  - d. 6.5 moles
- Q. 429 Which of the following is not a property of typical solids?
- a. definite melting point
  - b. high density
  - c. easily compressible
  - d. low rate of diffusion
- Q. 430 Which of the following elements forms bonds easily with sodium?
- a. potassium
  - b. chlorine
  - c. neon
  - d. calcium
- Q. 431 Dry grasslands in coastal areas are called \_\_\_\_\_ .
- a. savannas
  - b. prairies
  - c. chaparral
  - d. hot deserts
- Q. 432 Identify the structure which increases the root's surface area to allow for more water and mineral absorption?
- a. the apical meristem
  - b. the root hairs
  - c. the epidermal tissue
  - d. the cortex
- Q. 433 Experiments can be replicated if:
- a. They are not shared with others
  - b. The steps are written clearly
  - c. They are posted on the Internet
  - d. They use technology

Q. 434 Which vertebrates are insulated from hot and cold by hair?

- a. mammals
- b. amphibians
- c. reptiles
- d. birds

Q. 435 The formation of frost is an example of

- a. condensation
- b. evaporation
- c. deposition
- d. melting point

Q. 436 Nucleotides of DNA are composed of three substances, namely:

- a. calcium, sugar, nitrogen
- b. sugar, phosphate, nitrogenous base
- c. sugar, hydrogen, nitrogen base
- d. phosphate, calcium, nitrogenous base

Q. 437 A hypothesis is an educated guess that must be

- a. testable
- b. proven true.
- c. made into a theory.
- d. made into a law.

Q. 438 What is the molar mass of calcium chloride,  $\text{CaCl}_2$ ?

- a. 75.53 g/mol
- b. 110.98 g/mol
- c. 88.14 g/mol
- d. 71.08 g/mol

Q. 439 What are the end products for glycolysis?

- a. 2 3-carbon molecules, 2 ATP and 1 NADH
- b. 2 pyruvate, 3 ATP, and 2 NADH
- c. 2 3-carbon molecule, 1 ATP and 2 NADH
- d. 2 Pyruvate, 2 ATP and 2 NADH

Q. 440 What are the three classifications of joints?

- a. hinge, cartilaginous, synovial
- b. fibrous, cartilaginous, synovial
- c. moveable, fibrous, synovial
- d. gliding, ball & socket, synovial

Q. 441 Vertebrates typically have \_\_\_\_\_ symmetry.

- a. radial
- b. asymmetry
- c. bilateral
- d. biradial

Q. 442 Starts with a question and tries to answer questions about the natural world.

- a. scientific investigation
- b. hypothesis
- c. science
- d. dependent variable

Q. 443 Something that is measured; it is expected to change.

- a. dependent variable
- b. hypothesis
- c. model
- d. observation

Q. 444 Which element is malleable and ductile?

- a. fluorine
- b. gallium
- c. silicon
- d. phosphorus

Q. 445 If the alleles for one trait are different (Pp) the person is said to be \_\_\_\_\_ for that trait.

- a. homozygous
- b. heterozygous
- c. oozygous
- d. non-fertile

Q. 446 The coronal plane or \_\_\_\_\_ plane, divides the body into front and back parts.

- a. anterior
- b. frontal plane
- c. posterior
- d. transverse

Q. 447 Which statement correctly identifies the subatomic particles located in the nucleus of a sulfur atom?

- a. Neutrons and Protons
- b. Electrons and Protons
- c. Protons, only
- d. Electrons, only

Q. 448 Which of the following metals is the most active?

- a. Ca
- b. Cu
- c. Mg
- d. K

Q. 449 A \_\_\_\_\_ is an instrument that records earthquake waves.

- a. mass
- b. seismometer
- c. seismogram
- d. frame

Q. 450 Atoms form ions to \_\_\_\_\_ .

- a. to fulfill the octet rule
- b. to become stable
- c. to have a complete outer shell
- d. all of the above

Q. 451 What is the name of the bone of the inner forearm?

- a. ulna
- b. olecranon bursitis
- c. lateral epicondyle
- d. ischemia

Q. 452 What are metacarpals?

- a. Finger bones
- b. The bones that form the structure of the hand
- c. An injury to the lower arm bone just above the wrist
- d. The abnormal movement of one of the bones that constitute a joint

Q. 453 What is the name of the bone of the upper arm?

- a. ulna
- b. humerus
- c. radius
- d. tennis elbow

Q. 454 What of the following pairs shows the empirical formula and the molecular formula of hydrogen peroxide?

- a. H<sub>4</sub>O<sub>4</sub>; HO
- b. HO;H<sub>2</sub>O<sub>2</sub>
- c. H<sub>2</sub>O<sub>2</sub>; H<sub>2</sub>O<sub>2</sub>
- d. none of the above

Q. 455 In humans, the inheritance of \_\_\_\_\_ is best explained as being polygenic.

- a. sickle-cell disease
- b. blood type
- c. cystic fibrosis
- d. Huntington's disease

Q. 456 The major plant life in a tundra includes \_\_\_\_\_.

- a. trees
- b. vegetables
- c. seaweeds
- d. grasses

Q. 457 A major erosional agent in many areas with limited precipitation and high temperatures is \_\_\_\_\_.

- a. wind
- b. rivers
- c. humans
- d. glaciers

Q. 458 Which of the following has nothing to do with the nervous system?

- a. peripheral
- b. autonomic
- c. symphatic
- d. standard

Q. 459 DNA is made of repeating units of

- a. amino acids
- b. nucleotides
- c. messengers
- d. phosphates

Q. 460 \_\_\_\_\_ is not a part of the brain.

- a. Cerebrum
- b. Cerebellum
- c. Aorta
- d. Pons

Q. 461 The nervous system is divided into how many parts?

- a. 5
- b. 4
- c. 3
- d. 2

Q. 462 \_\_\_\_\_ is the alternate form of a gene.

- a. Phenotype
- b. Genotype
- c. Allele
- d. Pedigree

Q. 463 If a wave has a frequency of 10Hz and a wavelength of 100m, what is the velocity?

- a. 10 m/s
- b. 20 m/s
- c. 100 m/s
- d. 1000 m/s

Q. 464 Groups of tissues that work together to perform a specific function are called a(an)\_\_\_\_\_.

- a. Organ system
- b. Cells
- c. Organ
- d. All of the above

Q. 465 Phyll is a reference to:

- a. too much
- b. leaf
- c. green
- d. gold

Q. 466 Which set of values represents standard pressure and standard temperature?

- a. 1 atm and 101.3 K
- b. 1 kPa and 273 K
- c. 101.3 kPa and 0°C
- d. 101.3 atm and 273°C

Q. 467 \_\_\_\_\_ is considered the smallest unit of life.

- a. matter
- b. cell
- c. compound
- d. atom

Q. 468 What is the largest and highest section of the brain?

- a. Cerebellum
- b. Cerebrum
- c. Diencephalon
- d. Midbrain

Q. 469 How many structures does the eye have ?

- a. 9
- b. 5
- c. 4
- d. 11

- Q. 470 The force that tends to pull all materials downhill is\_\_\_\_\_ .
- a. slope  
b. wind  
c. gravity  
d. friction
- Q. 471 Geologic eras are largely determined by
- a. earth's orbital position  
b. shifts in the fossil record  
c. average global temperatures  
d. distribution of rock sequences
- Q. 472 The two halves of photosynthesis are\_\_\_\_\_ .
- a. light dependent and independent  
b. productive and non productive  
c. carbon dependent and independent
- Q. 473 Which of the following does NOT support Darwin's theory of evolution?
- a. fossil record  
b. homologous structures  
c. similarities in embryos  
d. differences in plants
- Q. 474 A wave has a velocity of 300 m/s and a wavelength of 3m, what is the frequency of wave?
- a. 100 Hz  
b. 300 Hz  
c. 50 HZ  
d. 78 Hz
- Q. 475 Bacteriophages are
- a. tiny bacteria.  
b. enzymes.  
c. coils of RNA.  
d. viruses.
- Q. 476 Identify is the function of mitochondria?
- a. photosynthesis  
b. cellular respiration  
c. protein synthesis  
d. DNA replication
- Q. 477 Element X combines with oxygen to form a compound with the formula XO. Element X is in the same group as which element?
- a. Al  
b. B  
c. Ca  
d. Zn

- Q. 478 Which of the following tissue types of the human body has the function of holding body parts together and storing energy?
- a. muscle tissue  
b. nervous tissue  
c. epithelial tissue  
d. connective tissue
- Q. 479 What is the charge of the nucleus of a magnesium-24 atom?
- a. +2  
b. +24  
c. +12  
d. +36
- Q. 480 Which element exists as a gas at room temperature, is a poor conductor of heat, and is poisonous?
- a. carbon  
b. mercury  
c. sulfur  
d. chlorine
- Q. 481 In what phase and what is it called when the cytoplasm splits?
- a. Anaphase/cytosol  
b. telophase/cytosol  
c. anaphase/cytokinesis  
d. telophase/cytokinesis
- Q. 482 Which of the following increases going down Group 17 on the Periodic Table?
- a. the number of valence electrons  
b. the number of electron shells  
c. the electronegativity  
d. the first ionization energy
- Q. 483 Which of the following units is associated with solubility?
- a. g solvent  
b. g solute  
c. g solute/100 g of water  
d. mol/L
- Q. 484 Vertebrates belong to a phylum
- a. chordata  
b. animalia  
c. fungi  
d. protista
- Q. 485 Which of the following is NOT a vascular plant?
- a. fern  
b. cycad  
c. avocado tree  
d. liverwort
- Q. 486 In humans, the number of chromosomes that each parent contributes to the fertilized egg is:
- a. 15  
b. 23  
c. 46  
d. 52

- Q. 487 Which of the following are NOT white blood cells?
- a. Monocytes  
b. Eosinophils  
c. Neutrophils  
d. Rhesus
- Q. 488 Which of the following is the fastest-growing source of energy in the world?
- a. passive solar heating  
b. photovoltaic cells  
c. fuel cells  
d. wind power
- Q. 489 \_\_\_\_\_ is the only bone that does not articulate with any others.
- a. hyoid  
b. hyaline  
c. stapes  
d. xiphoid process
- Q. 490 What is the layer of tissue called that can be found just underneath the epidermal layer of a plant root?
- a. the cortex  
b. the endodermis  
c. the root cap  
d. the root hairs
- Q. 491 Two or more different atoms are combined in specific proportions in any \_\_\_\_\_ .
- a. symbol  
b. isotope  
c. element  
d. compound
- Q. 492 \_\_\_\_\_ is an example of a mammal.
- a. a great white shark  
b. a praying mantis  
c. a spiny lobster  
d. a duck-billed platypus
- Q. 493 What turns mRNA into amino acids?
- a. RNA  
b. mRNA  
c. rRNA  
d. tRNA
- Q. 494 Which statement describe cellular respiration?
- a. Uses food for energy  
b. Stores energy  
c. All of the above  
d. Uses carbon dioxide
- Q. 495 How many protons and electrons are there in a Cu<sup>+2</sup> ion?
- a. 27 protons, 29 electrons  
b. 27 protons, 31 electrons  
c. 29 protons, 27 electrons  
d. 29 protons, 31 electrons



Q. 505 Earth's surface water is found in

- a. lakes
- b. rivers
- c. streams
- d. all of the above

Q. 506 Write the formula for the compound made from the elements gold(III) and cyanide

- a. AuCN
- b. Au(CN)<sub>3</sub>
- c. AuCN<sub>3</sub>
- d. Au(CN)<sub>2</sub>

Q. 507 Which process in eukaryotic cells will proceed normally whether oxygen (O<sub>2</sub>) is present or absent?

- a. electron transport
- b. glycolysis
- c. the citric acid cycle
- d. oxidative phosphorylation

Q. 508 Which enzyme that attaches to a 2-carbon molecule and helps it bind to a 4-carbon molecule?

- a. Amylase
- b. Coenzyme C
- c. Coenzyme A
- d. Synthase

Q. 509 Halogens are placed in which group of elements on the Modern Periodic Table?

- a. 17
- b. 2
- c. 4
- d. 6

Q. 510 The \_\_\_\_\_ describes the steps you use during an experiment

- a. observation
- b. data
- c. procedure
- d. conclusion

Q. 511 What is the chemical name for HF?

- a. Hydrofluorous Acid
- b. Hydrofluoric Acid
- c. Perfluoric Acid
- d. Hypofluorous Acid

Q. 512 When sulfur becomes an ion, which noble gas' electron configuration does it match up with?

- a. argon
- b. helium
- c. neon
- d. xenon

Q. 513 Which of the following statements describes what all of the elements in Group 18 have in common?

- a. They are all gases
- b. They all consist of one atom, only
- c. They all have 8 valence electrons
- d. (a) and (b)

Q. 514 What is the correct chemical name for  $C_6H_8O_7$ ?

- a. Phosphoric Acid
- b. Citric Acid
- c. Stannic Acid
- d. Carbonic Acid

Q. 515 Rosalind Franklin die at \_\_\_\_\_ age.

- a. 61
- b. 21
- c. 57
- d. 37

Q. 516 What is the main source of fuel for cells?

- a. monosaccharides
- b. lipids
- c. protiens
- d. nucleic acids

Q. 517 Natural gas is also called \_\_\_\_\_ .

- a. crude oil
- b. coal
- c. methane
- d. petroleum

Q. 518 How many atoms of iodine are needed to react with one atom of magnesium?

- a. 2
- b. 3
- c. 4
- d. 1

Q. 519 Wind power converts the movement of air into \_\_\_\_\_ .

- a. turbines
- b. kinetic energy
- c. electrical energy
- d. potential energy

Q. 520 If you halve the distance that a given force acts on an object, the work done will be \_\_\_\_\_ .

- a. twice as much
- b. half as much
- c. the same
- d. none of these

Q. 521 The transverse plane separates \_\_\_\_\_ and \_\_\_\_\_ .

- a. Left and Right
- b. Top and Bottom
- c. Front and Back
- d. Deep and superficial

Q. 522 Which of the following solution is NOT heterogeneous?

- a. ranch dressing
- b. vegetable soup
- c. orange juice with pulp
- d. vinegar



Q. 531 DNA stand for \_\_\_\_\_ .

- a. deoxyase acid
- b. deoxyribonucleic acid
- c. ribonucleic acid

Q. 532 The structure made of a phosphate group, a sugar, and a nitrogenous base is called a?

- a. nucleotide
- b. nitrogen base
- c. ribose

Q. 533 If glassware breaks, you should

- a. Throw it in the sink
- b. Notify the teacher
- c. Dispose of it in the broken glass container
- d. Both b & c

Q. 534 You should know the location of safety equipment in the laboratory and

- a. Use it once a week
- b. Use it twice a week
- c. Where it is produced
- d. How to use it properly

Q. 535 \_\_\_\_\_ produces high energy sugars.

- a. Granum and stroma
- b. NADPH and ATP
- c. NADP+ and electron carriers

Q. 536 mRNA will help to produce a(n)

- a. cell
- b. genes
- c. translation
- d. amino acid

Q. 537 Temperature, precipitation, sunlight, and wind are the major components of \_\_\_\_\_ .

- a. dispersal
- b. biomes
- c. biotic factors
- d. climate

Q. 538 Which process was largely responsible for today's atmospheric concentration of free oxygen?

- a. volcanism
- b. convection
- c. weathering
- d. photosynthesis

Q. 539 What happened when the temperature increases?

- a. The pressure decreases
- b. The pressure remains the same
- c. The pressure increases
- d. The pressure remains the same, but volume increases

Q. 540 Which of the following elements does not react with others?

- a. radium  
b. lithium  
c. xenon  
d. calcium

Q. 541 As the \_\_\_\_\_ increases, the temperature gets colder.

- a. density  
b. altitude  
c. precipitation  
d. salinity

Q. 542 Which of the following elements has the highest electronegativity?

- a. oxygen  
b. hydrogen  
c. fluorine  
d. carbon

Q. 543 Which of the following elements exists as a liquid, but is a strong conductor of heat and is relatively shiny?

- a. titanium  
b. silver  
c. mercury  
d. lithium

Q. 544 Which of the following halogens has the weakest attraction for electrons?

- a. Cl  
b. Br  
c. F  
d. I

Q. 545 Which of the following distinguishes an alkaline earth metal from an alkali metal?

- a. The atomic number  
b. The mass number  
c. The number of protons  
d. The number of valence electrons

Q. 546 How many atoms of sodium would be needed to react with one atom of oxygen to form a stable ionic compound?

- a. 1  
b. 2  
c. 3  
d. 4

Q. 547 Which structure do spiders use to breathe?

- a. Spiders have typical mammalian lungs.  
b. Spiders use gills much like fish.  
c. Spiders have book lungs.  
d. Spiders use blood vessels in their skin to exchange gasses.

- Q. 548 The phenotype displays \_\_\_\_\_ characteristics.
- a. chemical
  - b. dominant
  - c. recessive
  - d. physical
- Q. 549 Elements in the same family on the periodic table contain the same number of
- a. total electrons
  - b. valence electrons
  - c. innermost electrons
  - d. energy levels
- Q. 550 What is the structure called the promotes growth and elongation of the plant root?
- a. the root hairs
  - b. the vascular cylinder
  - c. the apical meristem
  - d. the Casparian strip