2017

QUIZ

ENGLISH & SCIENCE

Online / Handwritten

Science
Grade XI - XII

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.

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HRCA

Q. 1 Stem cells help to treat _____.

a. Neurological Diseases
b. Heart Disease
c. Diabetes
d. b and c

Q. 2 When the endometrial lining is shed, it is called _____.

a. menstruation
b. ovulation
c. reproduction
d. binary fission

Q. 3 _____ is an example of a non-renewable resource.

a. trees
b. water
c. coal
d. grass

Q. 4 _____ is the main pigment involved with the absorption of light.

a. chlorophyll a
b. carotenoids
c. phytochrome c
d. chlorophyll D

Q. 5 What is the function of the concentric lamellae found within the osteon of bone tissue?

a. They produce the red bone marrow.
b. They produce yellow bone marrow.
c. They connect the lacunae to the central canal.
d. They provide support for the bones.

Q. 6 An ionic bond is formed between atoms in a compound when

a. they share electrons
b. they gain or lose electrons
c. the atoms become ions of the same charge
d. a and c

Q. 7 _____ is needed prior to DNA polymerase synthesis of a new DNA strand?

a. Primase synthesizes RNA primers
b. Polymerase synthesizes RNA primers
c. Primase synthesizes DNA primers
d. Primase synthesizes RNA monomers

Q. 8 A good way to observe seeds is _____.

a. by seeing which seeds come out of which season
b. going on trail walks and collecting seeds
c. A & B

Q. 9 _____ is the branch of chemistry concerned with living things.

a. chemistry
b. physical chemistry
c. biochemistry
d. analytical chemistry

Q. 10 _____ is the total energy radiated per unit surface area of a black body across all wavelengths per unit time .

a. irradiance
b. radiant exitance
c. flux intensity
d. black body spectrum

Q. 11 Based on the nuclear equation shown : 21084Po→X+42He ,Which of the following is represented by X?

a. Tl-204
b. Hg-206
c. Pb-206
d. None of the above

Q. 12 _____ is another name for urinary system.

a. Excretory System
b. Renal System
c. Exit system
d. Glomerular System

Q. 13 _____ is the factor in an experiment that can be manipulated by he experimenter.

a. the independent variable
b. the constant
c. hypothesis
d. the dependent variable

Q. 14 _____ is the molarity of 6 moles of sodium chloride dissolved in 450 mL of solution.

a. 75 mol/L
b. 13.3 mol/L
c. 0.013 mol/L
d. 133.3 mol/L

Q. 15 The percent composition of lithium in lithium chloride is _____.

a. 33.0%
b. 49.5%
c. 16.5%
d. None of the above

Q. 16 When the specific gravity of the object is greater than that of the fluid, the object is in a state of_____.

a. postitive buoyancy
b. negative buoyancy
c. neutral buoyancy
d. immersion

Q. 17 When the specific gravity of the object is equal to that of the fluid, the object is in a state of _____.

a. postitive buoyancy
b. negative buoyancy
c. neutral buoyancy
d. immersion

Q. 18 Total number of sigma bonds involved in ethylene molecule are _____.

a. 3
b. 5
c. 2
d. 1

Q. 19 _____ describe the measure of the space an object takes up.

a. mass
b. gas
c. volume
d. matter

Q. 20 _____ is reduced in the general equation for photosynthesis.

a. the water
b. the glucose
c. the carbon dioxide
d. the oxgen

Q. 21 _____ is the thick fluid called that can be found inside of a chloroplast.

a. thylakoid
b. stroma
c. stomata
d. mesophyll

Q. 22 A positively charged body exerts an electric field that causes a positively charged particle to move away from it. If work is done to push this particle towards the body, what form of energy will the particle have?

a. mechanical energy
b. electric potential energy
c. heat energy
d. kinetic energy

Q. 23 _____ descriptions describes an increase in kinetic energy.

a. evaporation
b. condensation
c. freezing
d. the heating of a solid

Q. 24 Which of the following chemical equations represents precipitation reaction?

a. NaCl+AgNO3→AgCl↓+NaNO3
b. NaOH+HCl→NaCl+H2O
c. Fe2++Ce4+⇔Fe3++Ce3+
d. CH3COOH+NaOH→CH3COONa+H2O

Q. 25 Hair is made up mostly of complex cross-linked protein called _____ .

a. polymers
b. monomers
c. bi-monomers
d. di-polymers

Q. 26 1 parsec is about equal to_____ light-year(s).

a. 0.326
b. 3.26
c. 32.6
d. 360

Q. 27 _____ is the measure of the quantity of matter

a. weight
b. mass
c. density
d. chemistry

Q. 28 In skelatal system, _____ is made up of connective tissue and it is very flexible.

a. Tendons
b. Bone
c. Ligaments
d. Cartilage

Q. 29 _____ property depends on the amount of matter in a sample.

a. intensive
b. extensive
c. physical
d. gas

Q. 30 Planck's law describes the electromagnetic radiation emitted by a(n) _____ in thermal equilibrium at a definite temperature.

a. ideal gas
b. infinite light source
c. black body

Q. 31 How is a molecule formed?

a. When 2 elements are combined
b. When 2 or more atoms bond covalently
c. When atoms disappear

Q. 32 Chemical compounds consisting of 3 elements are called

a. Binary Compounds
b. Ternary Compounds
c. Molecular Compounds
d. Hydrocarbons

Q. 33 _____ is the SI unit of torque.

a. Kg·m2
b. Ns
c. m2s2
d. Nm

Q. 34 is the collection of compatible related units that measure, mass, weight, length and volume

a. mass
b. weight
c. density
d. system of measurement

Q. 35 Which of the following researchers was not a scientist?

a. Bohr
b. Chadwick
c. Heisenberg
d. Democritus

Q. 36 _____ is involved in separating an ink mixture.

a. Distillation
b. Evaporation
c. Chromatography
d. None of the above

Q. 37 When the specific gravity of the object is less than that of the fluid, the object is in a state of _____ .

a. postitive buoyancy
b. negative buoyancy
c. neutral buoyancy
d. immersion

Q. 38 _____ cleans the blood and sends liquid waste to bladder.

a. kidneys
b. lungs
c. small intestine
d. pancreas

Q. 39 Using the rules for adding/subtracting significant figures, complete the following question: 7.44 + 69.6521 + 9.85372

a. 86.95
b. 87
c. 86.9458
d. 52.3884

Q. 40 _____ can be classified as being heterogeneous.

a. Suspensions
b. Solutions
c. Compounds
d. Elements

Q. 41 The layer of the earth that contains most of the earth's mass is the _____ .

a. crust
b. mantle
c. core
d. asthenosphere

Q. 42 What are the complementary basis of a DNA double helix?

a. AT-CG
b. AC-TG
c. AU-GC
d. AG-TC

Q. 43 The prefix mega as used in chemistry is equal to _____ .

a. millionth
b. 10 billion
c. billion
d. 10 to the 6th power

Q. 44 _____ links short DNA chains.

a. SSB
b. Ligase
c. Polymerase
d. Primase

Q. 45 _____ extends DNA chain.

a. Sliding Clamp
b. Polymerase
c. Helicase
d. RNAse H

Q. 46 The product of a force and the length of time the force is applied to an object is called_____ , and causes a change in its momentum.

a. velocity
b. interval
c. impulse
d. work

Q. 47 _____ works to regulate the acid-base balance in the human body.

a. calcium
b. potassium
c. magnesium
d. sodium

Q. 48 Either of the two strands formed when a chromosome duplicates itself during cell division

a. gene
b. DNA
c. chromosome
d. chromatid

Q. 49 Consider the chemical reaction $2NO+Cl2 \rightarrow 2NOCl$,What is the order of the chemical reaction?

a. First order
b. Second order
c. Third order
d. Fourth order

Q. 50 If a solution is below strength in solute then the solution is said to be_____.

a. Hypertonic
b. Hypotonic
c. Isotonic
d. None of the above

Q. 51 The process by which a nucleus spontaneously undergoes a change from a state with less binding energy to a state with more binding energy is called _____ .

a. nuclear fusion.
b. nuclear fission.
c. radioactivity.
d. radioactive decay.

Q. 52 The difference in the _____ between the two different isotopic nuclei during _____ is the energy associated with the released particle.

a. nuclear force; alpha decay
b. binding energy: beta decay
c. binding energy; alpha decay
d. nuclear force; beta decay

Q. 53 _____ contain their own genetic information in the form of small DNA.

a. Centrioles
b. Chloroplast
c. Mitochondria
d. b and c

Q. 54 In eukaryotic cells, significant stages of respiration occur in _____ .

a. chloroplasts
b. ribosomes
c. mitochondria
d. endoplasmic reticulum

Q. 55 The dimensions of the Boltzmann constant are the same as that of_____ .

a. entropy
b. energy
c. gas constant
d. temperature

Q. 56 h2π is the reduced Planck constant, which is the quantum of_____ in quantum mechanics.

a. angular frequency
b. torque
c. angular momentum
d. angular displacement

Q. 57 According to Archimedes' principle, the _____ exerted on a body immersed in a fluid, is equal to the weight of the fluid that the body displaces.

a. vapour pressure
b. dynamic pressure
c. surface tension
d. buoyant force

Q. 58 If F is the force applied on a lever arm at a distance, r, from the axis of rotation at an angle, θ, how can we calculate torque τ?

a. $\tau=r\cdot F$
b. $\tau=rF$
c. $\tau=rF\sin\theta$
d. $\tau=rF\cos\theta$

Q. 59 The Kinetic Molecular Theory of gases describes a gas as a large number of small particles (atoms or molecules), all of which are

a. at rest.
b. in constant random motion.
c. in thermodynamic equilibrium.
d. in static equilibrium.

Q. 60 _____ can be separated by physical means.

a. carbon dioxide
b. seawater
c. ammonia
d. gold

Q. 61 The percent composition of calcium in calcium oxide is _____ .

a. 57.8%
b. 28.6%
c. 71.4%
d. 35.7%

Q. 62 The percent composition of chlorine in barium chloride is _____ .

a. 65.8%
b. 32.9%
c. 17.05%
d. 34.1%

Q. 63 The force exerted by an electric field on a particle entering it is equal to the product of the magnitude of the field and _____ .

a. the mass of the particle.
b. the size of the particle.
c. the charge of the particle.
d. the speed of the particle.

Q. 64 _____deals with substances that are chemical combinations of elements other than carbon.

a. organic chemistry
b. physical chemistry
c. inorganic chemistry
d. analytical chemistry

Q. 65 The name of chemical compounds is known as _____ .

a. Hydrocarbons
b. Molecular Compounds
c. Diatomic Elements
d. Chemical Nomenclature

Q. 66 Over time, scientists have noticed that babies that are born at an intermediate weight are more likely to survive than babies born either much smaller or much larger than average. This phenomena can be shown in a graph depicting _____ .

a. Stabilizing selection
b. Directional selection
c. Disruptive selection
d. Cannot be determined with the information provided

Q. 67 _____ developed the plum pudding model of the atom.

a. Rutherford
b. Thomson
c. Bohr

Q. 68 As Stephanie approaches a traffic jam, she applies a braking force of 11,000 N. Her car has a mass of 2,000 kg and is moving with a velocity of +18 m/s. What is the impulse imparted to bring the car to a stop?

a. 9000N
b. 36000N
c. 198000N
d. 5500N

Q. 69 _____ holds the atmosphere to the Earth.

a. centrifugal force
b. gravity
c. radioactive decay
d. atmospheric pressure

Q. 70 A layer of dead cells at the base of the nail is called the_____ .

a. cuticle
b. hypodermis
c. pulse

Q. 71 _____ is not easily compressed, but easily changes shape to fill its container.

a. solid
b. liquid
c. gas
d. plasma

Q. 72 Displacement is distance combined with

a. direction
b. speed
c. velocity
d. magnitude

Q. 73 DNA replication is _____.

a. the copying of double stranded DNA
b. the copying of single stranded DNA
c. the deletion of two DNA strands
d. the copying of DNA

Q. 74 A tool used to make quantitative observations of the volume of liquids is called a/an _____ .

a. graduated cylinder
b. beaker
c. balance
d. microscope

Q. 75 Animal cells typically contain _____ .

a. plastids
b. large vacuoles
c. cell walls
d. enzymes

Q. 76 The energy that must be supplied to separate a nucleus into its component protons and neutrons is called _____ . It provides the energy to cause a _____ .

a. nuclear energy; fission reaction
b. binding energy; nuclear reaction
c. binding energy; fission reaction
d. nuclear fission; strong force

Q. 77 A(n) _____ is any form of life.

a. Organism
b. Organelle
c. Cell
d. Population

Q. 78 A shadow that one object casts on another space object (blocks the light), is called _____ .

a. Eclipse
b. Solar eclipse
c. Lunar eclipse
d. Umbra

Q. 79 How many moles are found in 20 grams of Al2O3?

a. .2
b. 2
c. 20
d. .02

Q. 80 Which of the following carbon-based molecules hold genetic information?

a. Nucleic Acids
b. Carbohydrates
c. Lipids
d. Proteins

Q. 81 Large round pits, some hundreds of miles across, made by meteorite impacts.

a. Craters
b. Highlands
c. Maria
d. Volcanoes

Q. 82 Bone forming cells are called _____ .

a. fossa
b. cartilage
c. osteoblasts
d. embryo

Q. 83 The rate at which a rotating object spins, its angular velocity, can be expressed in all of the following ways except _____ .

a. degrees/sec.
b. rotations/sec.
c. revolutions/sec.
d. rpm.

Q. 84 Sunspots seem to move across the surface of the Sun. This proves _____ .

a. the sun is hot
b. the sun rotates
c. there are solar eclipses
d. the Earth revolves around the sun

Q. 85 The Boltzmann constant relates temperature with the _____ of individual particles.

a. velocity
b. mass
c. entropy
d. energy

Q. 86 Which of the following properties is involved in the separation of a mixture using a filter?

a. size
b. boiling point
c. conductivity
d. first ionization energy

Q. 87 _____ figures are there in 6.3640×105?

a. 4
b. 10
c. 5
d. 2

Q. 88 Lymph nodes are located in _____ .

a. Cervical region
b. Axillary region
c. Inguinal region
d. All of the above

Q. 89 _____is the central core of the forebrain that is composed primarily of gray matter.

a. Basal nuclei
b. Diencephalon
c. Cerebellum
d. Midbrain

Q. 90 _____ is stored in the posterior pituitary gland.

a. Growth Hormone
b. Prolactin
c. Thyroid-stimulating hormone
d. Oxytocin

Q. 91 Which gland derives from ependymal glial cells and secretes the hormone melatonin?

a. Pituitary gland
b. Pineal gland
c. Thyroid
d. Sebaceous gland

Q. 92 The trapezius is located in _____ .

a. knee
b. shoulder
c. leg
d. head

Q. 93 What is the function of the quadriceps femurs?

a. hyper extend leg
b. bend arm
c. extend, straighten leg
d. extend, straighten arm

Q. 94 Exocrine glands include all of the following divers glands except _____ .

a. sweat and oil glands
b. salivary glands
c. liver and pancreas
d. prostate gland

Q. 95 The genioglossus is in _____ .

a. head
b. leg
c. abdomine
d. tongue

Q. 96 _____ lever is the most common lever found in the body.

a. first class
b. second class
c. third class
d. fourth class

Q. 97 The life span of a neuron is _____ .

a. 10 years
b. until age 50
c. 10 days
d. length of host

Q. 98 Which ion regulates release of neurotransmitters at the NMJ?

a. ACH
b. calcium
c. glands
d. synapse

Q. 99 A measure of how much the source deviates from equilibrium during its vibrations, is the _____ of an oscillation and indicates how much energy is involved in the vibration.

a. wavelength
b. frequency
c. maximum oscillation
d. amplitude

Q. 100 Which branch of chemistry identifies the composition and amount of matter present in a material?

a. chemistry
b. analytical chemistry
c. inorganic chemistry
d. physical chemistry

Q. 101 Which of the following situations describes an instance in which kinetic energy is constant, while potential energy increases?

a. melting
b. the heating of a liquid
c. the cooling of a gas
d. the cooling of a solid

Q. 102 Which of the following chemical equations represents a redox reaction?

a. $CH3COOH+NaOH \rightarrow CH3COONa+H2O$
b. $Cl^{-}+Ag^{+} \rightarrow AgCl\downarrow$
c. $5Fe2^{++}+MnO1^{-}4+8H3O^{+} \Rightarrow 6Fe3^{++}+Mn2^{++}+12H2O$
d. $HCl+NaOH \rightarrow NaCl+H2O$

Q. 103 A car horn has a frequency of 400 Hz. The car is moving away from an intersection at 20 m/s. The frequency heard by a woman standing at the intersection could be:

a. 390 Hz
b. 400 Hz
c. 410 Hz
d. 420 Hz

Q. 104 _____ is the main function of the rods found in the eye.

a. Depth perception
b. Dim light vision
c. Color vision
d. Accommodation for near vision

Q. 105 The _____ model has electrons which orbits around a nucleus.

a. Bohr
b. thomson
c. Dalton

Q. 106 The transparent, front portion of the eye is called the_____ .

a. cornea
b. pupil
c. retina
d. sclera

Q. 107 _____ removes RNA primers.

a. Ligase
b. Sliding Clamp
c. RNAse H
d. Polymerase

Q. 108 When individuals with the extreme allele expression are favored in an environment, it is said that this type of selection is taking place:

a. Stabilizing
b. Disruptive
c. Directional
d. Reproductive

Q. 109 The solar system coalesced is due to rotational forces and _____ .

a. gravity
b. heat
c. radioactivity
d. solar wind

Q. 110 _____ is secreted by tissue in the gonads (testes in men, ovaries in women) and also by the adrenal glands.

a. Melatonin
b. Serotonin
c. Oxytocin
d. Sex Hormones

Q. 111 Swimming toward or away a chemical stimuli is a behavior known as _____ .

a. photosynthesis
b. chemotaxis
c. motility
d. evolution

Q. 112 Dark spots on the surface of the sun is known as _____ .

a. Corona
b. Sunspots
c. Convection Zone
d. Core

Q. 113 _____ provides strength and comprises most of the hair mass.

a. cuticle
b. medulla
c. cortex
d. keratin

Q. 114 Which of these is a source of iron in the diet?

a. potato skins
b. leafy green vegetables
c. red meat
d. citrus fruit

Q. 115 Zinc deficiency cause _____ .

a. poor wound healing
b. goiter
c. muscle spasms
d. osteoporosis

Q. 116 Parallax is useful for measuring the distance of stars up to about _____ light-year(s) from Earth.

a. 1
b. 10
c. 100
d. 1,000

Q. 117 _____ separates mixture based on the size of particles.

a. distillation
b. chemical reactions
c. filtration

Q. 118 Each row of the periodic table is known as _____.

a. period
b. group
c. product
d. reactant

Q. 119 Two types of _____ are renewable and non-renewable.

a. sustainable uses
b. smog
c. environmental resources
d. aquaculture

Q. 120 Which gland secretes glucagon and insulin to regulate the level of glucose in the blood?

a. thyroid gland
b. hypothalamus
c. thymus
d. pancreas

Q. 121 A feature distinguishing plant cells from animal cells is the presence of _____ .

a. a plasma membrane
b. a cell wall
c. cytosol
d. mitochondria

Q. 122 The standard value for acceleration due to gravity at sea level is _____ .

a. 6.67ms2
b. 6.67kms2
c. 9.8ms2
d. 9.8kms2

Q. 123 Which of these derived units is equivalent to the watt, the unit of electric power?

a. A·Ω
b. V·Ω
c. V2·Ω
d. V2Ω

Q. 124 What is the unit for the magnetic field which is denoted by the letter B?

a. hertz
b. ohm
c. lorentz
d. tesla

Q. 125 Which of these waves are not a part of the EM spectrum?

a. sound waves
b. light waves
c. X-rays
d. Gamma rays

Q. 126 In an adiabatic process, there is no transfer of energy in the form of_____ .

a. motion
b. work
c. heat
d. change in volume

Q. 127 The state of thermodynamic equilibrium has _____ entropy.

a. maximum
b. minimum
c. zero
d. undefined

Q. 128 What is a term used for the net number of magnetic field lines passing through a surface?

a. EMF
b. induction lines
c. magnetic flux
d. lorentz lines

Q. 129 The full form of EMF is _____ .

a. electrical magnetic force
b. electromotive force
c. electro motion faraday
d. electric magneto faraday

Q. 130 What is the scalar product of torque τ and angular velocity ω?

a. angular momentum
b. moment if inertia
c. linear momentum
d. power

Q. 131 Which of these devices can convert electrical energy to mechanical energy?

a. generator
b. motor
c. transformer
d. transistor

Q. 132 What is the Planck relation for a photon?

a. E=hcλ
b. E=hcλ
c. E=hc2
d. E=ch

Q. 133 The hybrid orbitals give stronger covalent bond due to _____ .

a. their orientation
b. larger extent of overlap
c. their similar shapes
d. the presence of unpaired electrons

Q. 134 Which of the following groups contains the largest number of species?

a. rotifers
b. annelids
c. arthropods
d. polychaetes

Q. 135 In bright light the pupil_____ , as controlled by the_____ .

a. enlarges, iris
b. constricts, iris
c. enlarges, lens
d. constricts, lens

Q. 136 Which of the following factors plays an important role in the identification of specific intermolecular forces in a molecule?

a. bond type
b. density
c. solubility
d. molecular polarity

Q. 137 In which of the following solutions does HCl dissociate almost completely?

a. Water
b. Glacial acetic acid
c. Ethylene diamine
d. Aniline

Q. 138 Which of the following can be decomposed by means of electrolysis?

a. Air
b. Ammonia
c. Saltwater
d. Helium Gas

Q. 139 What is the mass in grams of 3.0x1023 molecules of CO2?

a. 22 g
b. 44 g
c. 55 g
d. 82 g

Q. 140 _____ is the darkest, smallest part of an eclipse.

a. Eclipse
b. Solar eclipse
c. Lunar eclipse
d. Umbra

Q. 141 _____ is the largest part of an eclipse, less dark and, outer part of the shadow.

a. Eclipse
b. Solar eclipse
c. Lunar eclipse
d. Penumbra

Q. 142 If a solution is above strength in solute then the solution is _____ .

a. Hypertonic
b. Hypotonic
c. Isotonic
d. None of the above

Q. 143 Organic matter that settles to the bottom of a liquid is referred to _____ .

a. decomposers
b. sedimentation
c. nutrients
d. fossil fuels

Q. 144 What Kelvin temperature is equal to 25°C?

a. 248K
b. 298K
c. 100K
d. 200K

Q. 145 _____ is a resource that is particularly valuable for the food they contain.

a. Land
b. Oceans
c. Forests
d. Air

Q. 146 _____ moves urine from the kidneys to the bladder.

a. urethra
b. ureters
c. veins
d. arteries

Q. 147 If we put gas in a smaller container, the pressure will _____ .

a. increase
b. decrease
c. stay the same

Q. 148 Which of these are the specific structures that cnidarians use for paralyzing their prey?

a. cnidocils
b. cnidocytes
c. nematocysts
d. ocelli

Q. 149 How many grams of NaOH are present in 1 mole of NaOH?

a. 40 grams
b. 50 grams
c. 60 grams
d. 70 grams

Q. 150 _____ is the jelly-like material which is found inside the bell of a jellyfish and gives it its structure.

a. mesoglea
b. cytoplasm
c. ocelli
d. cnidocil

Q. 151 Which organ stores a greenish yellow liquid called bile and is shaped like a pear?

a. stomach
b. gall bladder
c. liver
d. nose

Q. 152 _____ is responsible for the destruction of worn out red blood cells and also stores red blood cells.

a. brain
b. liver
c. skeleton
d. spleen

Q. 153 _____ is the fuel for the nuclear fusion in the sun's core.

a. Methane
b. Oxygen
c. Hydrogen
d. Helium

Q. 154 The solar system coalesced due to rotational forces and

a. gravity
b. heat
c. radioactivity
d. solar wind

Q. 155 The DNA get unwind and stay unwind due to _____.

a. Primase
b. Helicase
c. Ligase
d. SSB

Q. 156 Power is defined as _____ .

a. the something that enables an object to do work
b. how much force an object has
c. the rate at which work is done
d. energy due to the position of something

Q. 157 A dog which comes to you when you whistle demonstrates which type of behavior?

a. hibernate
b. instinct
c. mimicry
d. learned behavior

Q. 158 If a sequence of DNA has 30% guanine bases in it what percentage of thymine would there be?

a. 60%
b. 15%
c. 20%
d. 30%

Q. 159 _____ is known as all the genes of an organism.

a. genome
b. chromatid
c. gene
d. chromatin

Q. 160 What is the percent composition of carbon in potassium acetate, KCH3COO?

a. 24.5%
b. 3.49%
c. 34.9%
d. 2.86%

Q. 161 How many grams are found in 4.5 moles of Al2O3?

a. 45.9 grams
b. 459 grams
c. 4.59 grams
d. 4590 grams

Q. 162 If we walk 1 mile to the store then 1 mile home, what is our displacement?

a. 1 mile
b. 2 miles
c. 0 miles

Q. 163 Heterolytic fission of C−Br bond results in the formation of

a. free radicals
b. carbanion
c. carbocation
d. carbanion and carbocation

Q. 164 Which of the following has smallest bond length?

a. O2
b. N2
c. Cl2
d. HCl

Q. 165 Which of the following molecule involves electrovalent bond?

a. H2
b. CH4
c. CaCl2
d. HCl

Q. 166 Which of the following separates DNA strands?

a. Sliding Clamp
b. Polymerase
c. SSB
d. Helicase

Q. 167 Consider the following redox reaction: $CH4(g)+O2(g)\rightarrow CO2(g)+2H2O(l)$,What is the change in the oxidation number of carbon in this reaction?

a. It increases from -4 to +4
b. It decreases from +4 to 0
c. It increases from +4 to -3
d. It decreases from +4 to -2

Q. 168 What is the empirical formula of the compound whose molecular formula is P4O10?

a. PO
b. PO2
c. P2O5
d. P8O20

Q. 169 Identify the oxidant in the following reaction: $C4H4O2-6(aq)+ClO-3(aq)\rightarrow CO2-3(aq)+Cl-(aq)$

a. $(ClO3)-$
b. $(C6H4O6)2-$
c. $(CO3)2-$
d. Cl_

Q. 170 Identify the oxidant in the following reaction: $3H3AsO3(aq)+BrO-3(aq)\rightarrow Br-(aq)+3H3AsO4(aq)$

a. $BrO-3(aq)$
b. H3AsO3
c. Br_(aq)
d. H3AsO4

Q. 171 _____ is carried by the medial surface of the kidney.

a. tissues
b. renal nerves and blood vessels
c. veins and arteries
d. veins

Q. 172 Which of these glands regulate the development of the immune system?

a. thyroid
b. thymus
c. pancreas
d. pineal

Q. 173 _____ gland, the thermostat of the body, regulates the rate and intensity of the body's chemical reactions?

a. thyroid gland
b. pituitary gland
c. sweat gland
d. adrenal gland

Q. 174 Which mineral is a cofactor for hemoglobin synthesis?

a. calcium
b. copper
c. iron
d. magnesium

Q. 175 In humans, how long is the gestational period?

a. about 40 weeks
b. about 36 weeks
c. about 24 weeks
d. about 50 weeks

Q. 176 _____ describes a decrease in kinetic energy.

a. deposition
b. the cooling of a solid
c. condensation
d. evaporation

Q. 177 Which of the following forms of energy is most closely related to temperature?

a. average thermal energy
b. average potential energy
c. total electrical energy
d. average kinetic energy

Q. 178 Which of the following molecules has hydrogen bonding?

a. HCl
b. HI
c. HF
d. HBr

Q. 179 Within bones there are cavities that contain a soft tissue called _____.

a. bone marrow
b. periosteum
c. osteocyte
d. spongy bone

Q. 180 One of the causes of capillarity is the _____ force of surface tension.

a. adhesive
b. angular
c. repulsive
d. cohesive

Q. 181 The suffix added to the second element in a binary compound is _____ .

a. -ine
b. -ide
c. -ate
d. -ite

Q. 182 What do adenosine triphosphate (ATP) and diphosphate (ADP) store in muscle cells?

a. chemical potential energy
b. enzymes
c. oxygen
d. blood

Q. 183 The shortest muscles in the body are named as _____ .

a. latissimus
b. longus
c. brevis
d. minimus

Q. 184 An ion with 5 protons, 6 neutrons, and a charge of 3+ has an atomic number of _____ .

a. 5
b. 11
c. 6
d. 4.5

Q. 185 According to the Kinetic Molecular Theory of gases, collisions between molecules are perfectly _____ .

a. regular
b. linear
c. plastic
d. elastic

Q. 186 Quantum physics is the study of the behavior of matter and energy at_____ .

a. absolute zero temperature
b. dynamic equilibrium
c. a macroscopic level
d. a microscopic level

Q. 187 Heisenberg's uncertainty principle states that both the position and the _____ of a particle cannot simultaneously be measured with complete precision.

a. wavelength
b. quantum state
c. radiation
d. momentum

Q. 188 The old quantum theory was based on_____.

a. Bohr's atomic model
b. Schrodinger's model
c. Wien's hypothesis
d. Planck's law

Q. 189 Protons and neutrons are made of fundamental particles of matter called_____.

a. atoms
b. nuclei
c. ions
d. quarks

Q. 190 The larger, less dark part of the shadow of an eclipse is known as _____ .

a. Maria
b. Crater
c. Penumbra
d. Umbra

Q. 191 Which of the following kinds of radioactive decay involves emissions with the greatest mass?

a. beta
b. alpha
c. gamma
d. electrons

Q. 192 Which of the following atomic numbers is the threshold for stability?

a. 26
b. 53
c. 77
d. 83

Q. 193 Vessels that carry blood away from the heart are know as_____.

a. arteries
b. veins
c. capillaries
d. proximillaries

Q. 194 Enzymes are _____ .

a. homogenous catalysts
b. heterogenous catalysts
c. acid catalysts
d. base catalysts

Q. 195 Adsorption is _____ .

a. exothermic
b. endothermic
c. irreversible
d. homogenous

Q. 196 What is the glomerulus?

a. an organ that carries renal nerves and blood nerves
b. a network of capillaries that performs the first step
c. a toxin that build up in your body
d. none of these

Q. 197 The average human body has _____ hair.

a. 5 billion
b. 5 trillion
c. 5 million
d. 50 billion

Q. 198 In multicellular organisms, groupings of similar cells are referred to as _____ .

a. tissues
b. organs
c. systems
d. organisms

Q. 199 Which of these minerals is responsible for the synthesis of thyroid hormones?

a. iron
b. iodine
c. copper
d. calcium chloride

Q. 200 The state of matter that results from super-cooling and loss of energy is called the_____ .

a. solid
b. plasma
c. Bose-Einstein condensate

Q. 201 What produces insulin and glucagon, which regulates the level of glucose in the blood?

a. Thyroid Gland
b. Adrenal Gland
c. Pancreas
d. Ovary

Q. 202 _____ are huge, reddish loops of gas, which often link or connect sunspots.

a. Core
b. Photosphere
c. Solar winds
d. Prominences

Q. 203 What is the name given to the plasma membrane of a muscle fiber?

a. sarcoplasm
b. sarcolemma
c. sarcomere
d. sarcoplasmic reticulum

Q. 204 What are muscles called that may be close to parallel in the center of the muscle but converge to a tendon at one or both ends?

a. circular muscles
b. fusiform muscles
c. convergent muscles
d. pennate muscles

Q. 205 How do we refer to organic materials which can store sunlight in the form of chemical energy?

a. biosynthetics
b. biomass
c. bioresources
d. biologics

Q. 206 What structure encloses, protects, and supports the testicles?

a. balls
b. scrotum
c. testes
d. round things in pants

Q. 207 Which of these is considered the "storehouse" for liquid waste?

a. heart
b. bladder
c. kidneys
d. liver

Q. 208 _____ is the correct nomenclature for the following compound? ClO2

a. Chlorine Oxide
b. Chlorine Trioxide
c. Chlorine Dioxide
d. Dichlorine Oxide

Q. 209 A passage way through the canal that extends to the mandibular foramen to the anterior of the mandible below teeth is known as _____ .

a. nasal Septum
b. Median Palate Suture
c. Incisive Foramen
d. mandibular Canal

Q. 210 A horse has a diploid number of 62. What is the haploid number for this species?

a. 124
b. 62
c. 93
d. 31

Q. 211 _____ is made up of one or two letters and is used to represent the elements.

a. Chemical name
b. Chemical symbol
c. Chemical change
d. Precipitate

Q. 212 _____ is the place where the sperm and egg meet and fertilization takes place.

a. The oviduct
b. The vagina
c. The ovary
d. The outside

Q. 213 The _____ is the outermost layer of skin that is made up of approximately 20-30 layers of dead skin cells that are constantly being shed.

a. subcutaneous layer
b. epidermis
c. dermis
d. connective layer

Q. 214 Which of the following is NOT a characteristic of imprinting?

a. It occurs during a critical period.
b. Its effects can be easily reversed.
c. It is a form of learning.
d. Its effects last for long periods of time.

Q. 215 B.F. Skinner was one of the first researchers to use a training technique that involved presenting an animal with a reward at the same time a lever was pushed. Over time, the animal learned that the two things were connected. What kind of learning is this

a. habituation
b. operant conditioning
c. classical conditioning
d. insight learning

Q. 216 Which grouping of cnidarians contains animals that are considered some of the most deadly in the ocean?

a. class Hydrozoa
b. class Cubozoa
c. class Anthozoa
d. class Scyphozoa

Q. 217 Which of the following groups of cnidarians has a polyp stage that is most prominent?

a. class Hydrozoa
b. class Scyphozoa
c. class Anthozoa
d. class Cubozoa

Q. 218 Which of these can be used to supply power to a generator?

a. diesel engine
b. wind turbine
c. water wheel
d. all of the above

Q. 219 What is the name given to a generator that produces DC with the help of a commutator?

a. DC motor
b. direct generator
c. dynamo
d. rotor

Q. 220 Which of the following is a binary compound?

a. potassium chloride
b. ammonium chloride
c. potassium chlorate
d. ammonium chlorate

Q. 221 What is the correct formula for potassium oxide?

a. K2O
b. K2O2
c. KO
d. KO2

Q. 222 Which of the following situations describes an instance in which kinetic energy is constant, while potential energy decreases?

a. Cooling of a gas
b. Evaporation of a liquid
c. Condensation of a gas
d. Cooling of a solid

Q. 223 Which of the following molecules predominantly consists of dipole-dipole forces?

a. HF
b. Ne
c. O2
d. ICl

Q. 224 Who proposed the aromatic, cyclic structure of benzene?

a. Fredrich Kekule
b. Michael Faraday
c. Friedel Charles
d. Friedel Craft

Q. 225 In which of the following solvents is the acidic property of the solute enhanced?

a. Ammonia
b. Water
c. Methanol
d. Formic acid

Q. 226 To be a part of the oxide mineral group, the mineral must contain _____ .

a. Oxygen
b. Osmium
c. Carbon
d. Silicon

Q. 227 The left atria pumps blood to the _____ .

a. left ventricle
b. right ventricle
c. lungs
d. body

Q. 228 Approximately how many genes are there on one human chromosome?

a. 40,000
b. 100s-1,000s
c. 100s
d. 25,000

Q. 229 DNA is a polymer, which means that it is made up of many repeating _____ units (monomers) called?

a. double, nucleotides
b. double, phospahtes
c. single, thymine
d. single, nucleotides

Q. 230 Approximately how many genes are there in the human genome?

a. 100s-1,000s
b. 20,000
c. 800,000
d. 40,000

Q. 231 The internal energy of a system which plus its pressure and times its volume is its _____ .

a. entropy
b. enthalpy
c. heat of vaporization
d. specific heat

Q. 232 The white crescent part of the nail found towards the finger is called _____ .

a. Nail bed
b. Nail
c. Cuticle
d. Lunula

Q. 233 An electron has a principal quantum number of 2. The number of sub shells and orbitals would be, respectively, _____ .

a. 2 and 3
b. 2 and 5
c. 2 and 7
d. 2 and 4

Q. 234 Angular momentum of the electron is defined by the quantum number that is denoted as _____ .

a. n
b. l
c. s
d. m

Q. 235 Which of the following electrons have highest energy?

a. 2s
b. 2p
c. 1s
d. 4p

Q. 236 What are the units of the force constant k of a spring?

a. kgs2
b. kg/s
c. Nm2
d. Nm

Q. 237 _____ is the curve in the upper surface of a liquid close to the surface of the container or another object, caused by surface tension.

a. adhesive curvature
b. cohesive curvature
c. meniscus
d. surface mirror

Q. 238 What are the standard SI units of the Boltzmann constant?

a. Moles per Joule
b. Joules per Kelvin
c. Joules Kelvin
d. Newtons per Kelvin

Q. 239 Which is the correct formula for nitrous oxide?

a. NO
b. N2O
c. NO2
d. N2O3

Q. 240 Planck's constant can be seen as a(n) _____ scale constant.

a. macroscopic
b. statistical
c. atomic
d. subatomic

Q. 241 Faraday constant, F, can be given by the elementary charge multiplied by the _____.

a. Boltzmann constant
b. Stefan-Boltzmann constant
c. Gas constant
d. Avogadro constant

Q. 242 Rydberg's constant is expressed in the formula:_____ .

a. h2(me)(e2)(ke)
b. (2π5)(k4B)(15h3)(c2)
c. (e2)(ke)2α0
d. (me)(e4)(8)(ε0)2(h3)(c)

Q. 243 At what value of the angle between lever arm and applied force, θ, is torque at its maximum?

a. 0°
b. 30°
c. 60°
d. 90°

Q. 244 A body in free-fall motion may be in _____ .

a. mechanical equilibrium
b. static equilibrium
c. neither

Q. 245 According to Kinetic Molecular Theory, what is the average kinetic energy of a molecule? (Given: T is absolute temperature, and k is a constant.)

a. 32(kT)
b. 23(kT)
c. 3kT
d. kT2

Q. 246 In the equation for average kinetic energy, KEavg=32(kT), what does k stand for?

a. Ideal Gas constant
b. Boltzmann constant
c. Planck's constant
d. Gay-Lussac constant

Q. 247 The Boltzmann constant is equivalent to the ratio of the gas constant, R, to the_____constant.

a. Avogadro
b. Poisson
c. Boyle's
d. Charles law

Q. 248 A spring with a spring constant of 65 N/m is displaced −94cm. What is the magnitude of the force exerted by the spring?

a. 287180 N
b. 30.66 N
c. 28.72 N
d. 57.24 N

Q. 249 _____ is the oxidation number of chlorine in KClO4.

a. +5
b. +7
c. -8
d. +1

Q. 250 _____ is the oxidation state of the ammonium ion present in NH4Cl.

a. +5
b. +1
c. -1
d. -4

Q. 251 What is the oxidation number of chromium in CaCrO4?

a. +2
b. -2
c. -8
d. +6

Q. 252 A 1240-g sample of gas contains 400 g of helium. What is the percent composition of helium in this sample?

a. 25%
b. 32.3%
c. 3.1%
d. 31%

Q. 253 What is the oxidation number of iron in FeO?

a. +2
b. +3
c. -2
d. -3

Q. 254 Which of the following can be separated, based on the property of boiling point?

a. saltwater
b. an ink mixture
c. sand and salt
d. natural gas

Q. 255 Which of the following can be separated from water by physical means?

a. barium chloride
b. ammonium chloride
c. lead (II) chloride
d. sodium nitrate

Q. 256 The passageway between the vagina and uterus is known as _____ .

a. Vulva
b. Lumen
c. Tunnel
d. Cervix

Q. 257 _____ helps hold polymerase on DNA.

a. Helicase
b. Primase
c. SSB
d. Sliding Clamp

Q. 258 What is the mass of the particle released by radium-226 when it undergoes alpha decay?

a. 0
b. 1
c. 3
d. 4

Q. 259 How much energy does an incandescent light bulb rated at 100 W use in one hour?

a. 36,000 J
b. 3600 J
c. 360,000 J
d. 360 J

Q. 260 The simplest form of matter that has a unique set of properties is known as _____ .

a. compound
b. element
c. period
d. group

Q. 261 The parallax of a star is inversely related to its _____ .

a. temperature.
b. distance.
c. luminosity.
d. diameter.

Q. 262 What is one characteristic feature of an oxidizing agent?

a. It undergoes reduction
b. Causes reduction
c. Donates electron
d. It itself undergoes oxidation

Q. 263 An arrangement of elements in which the elements are in groups based on their properties is called _____ .

a. Chemical symbol
b. Periodic table
c. Law of conservation of mass
d. Period

Q. 264 Which gland links the endocrine system and the nervous system?

a. thymus
b. pancreas
c. thyroid
d. hypothalamus

Q. 265 In the estrous cycle which hormone is produced to stimulate the maturation of the ovum?

a. LH
b. FSH
c. estrogen
d. testosterone

Q. 266 Which of the following device is an example of an electrolytic cell?

a. Voltmeter
b. Daniell Cell
c. Dry Cell
d. Galvanic cell

Q. 267 What gases do scientists speculate were lost from the Earth's primordial atmosphere, shortly after it is formed?

a. nitrogen and oxygen
b. hydrogen and helium
c. oxygen and hydrogen
d. carbon dioxide and oxygen

Q. 268 The darkest part of the moon's shadow during an eclipse is known as _____ .

a. Maria
b. Crater
c. Highlands
d. Umbra

Q. 269 To group or organize objects or events into categories based on similar criteria is to _____ .

a. classify
b. balance
c. conclude
d. separate

Q. 270 What is filtrate?

a. urine
b. water
c. unneeded substances like salts and metabolic wastes
d. everything found in blood plasma except for

Q. 271 Scientists usually state the problem as a _____ .

a. solution
b. question
c. hypothesis
d. graph

Q. 272 What is the name given to a generator that produces AC?

a. AC motor
b. alternator
c. oscillator
d. indirect generator

Q. 273 The left ventricle pumps blood to _____ .

a. the body
b. the lungs
c. the left atria
d. the right ventricle

Q. 274 In an electric motor, what is the name for the moving part that turns the shaft?

a. stator
b. commutator
c. rotor
d. rotator

Q. 275 Which of the following would NOT be found in a protostome animal with an incomplete digestive tract?

a. a nervous system
b. an endoderm
c. an ectoderm
d. an anus

Q. 276 Besides the echinoderms and chordates, which other clade comprises the deuterostomes?

a. vertebrates
b. cephalochordates
c. hemichordates
d. urochordates

Q. 277 Which of the following is NOT a characteristic of deuterostome animals?

a. radial cleavage
b. three germ layers
c. more species than protostomes
d. a bastopore that becomes an anus

Q. 278 What is the SI unit of magnetic flux?

a. tesla
b. volt
c. amperes/second
d. weber

Q. 279 Which of the following are chemical barriers to protect against infection?

a. skin, mucus, saliva
b. mucus, tears, saliva
c. tears, skin, urine
d. skin, hair, mucus

Q. 280 The hormone responsible for bending plants towards light is called _____ .

a. auxin
b. cytokine
c. ethylene
d. gibberellin

Q. 281 Which of the following species has the maximum energy content in a progressing chemical reaction?

a. Transition complex
b. Carbonium ion
c. Carbocation
d. Enantiomers

Q. 282 Among the following, the molecule with linear geometry is _____ .

a. C2H4
b. BeF2
c. NH3
d. H2O

Q. 283 In an electrolytic cell, electrical energy is converted into _____ .

a. chemical energy
b. heat energy
c. kinetic energy
d. potential energy

Q. 284 Which of the following can form hydrogen bonds with water?

a. s orbital
b. p orbital
c. d orbital
d. f orbital

Q. 285 The maximum number of electrons in a subshell is given by the following expression.

a. n2
b. 2n2
c. 2(2l + 1)
d. n - 1

Q. 286 For the azimuthal quantum number l=2, the maximum number of electrons will be _____ .

a. 4
b. 10
c. 14
d. 11

Q. 287 The thyroid is located in the _____ .

a. neck
b. stomach
c. back
d. brain

Q. 288 Which of the following equations correctly represents Faraday's first law of electrolysis?

a. $w \propto Q$
b. w/Q
c. $w \cong Q$
d. $w \leq Q$

Q. 289 Chemical equivalent = _____ × Electro-chemical equivalent

a. 96500
b. 91200
c. 98500
d. 90400

Q. 290 Human hairs generally do not have a medulla except for _____ .

a. Native Americans
b. African Americans
c. Polynesians
d. Eastern Mediterranean

Q. 291 What hair color has the most strands of hair?

a. Brunette
b. Blond
c. Black
d. Red

Q. 292 A _____ is a substance used to reduce the surface tension of water.

a. surfactant
b. toner
c. coolant
d. effervescent

Q. 293 What kind of meniscus is observed in a mercury-in-glass thermometer?

a. concave
b. convex
c. flat
d. serrated

Q. 294 Surface tension has the dimension of force per unit _____ .

a. area
b. length
c. temperature
d. time

Q. 295 For a liquid inside a capillary, when the particles in the liquid have a stronger attraction to each other (cohesion) than to the material of the container (adhesion), the liquid forms a _____ meniscus.

a. flat
b. serrated
c. convex
d. concave

Q. 296 How many grams are present in 1 mole of Al2O3?

a. 90 g
b. 102 g
c. 65 g
d. 250 g

Q. 297 What is the gram formula mass of (NH4)3PO4?

a. 113 g
b. 121 g
c. 149 g
d. 404 g

Q. 298 How is the Stefan-Boltzmann constant represented?

a. ∂
b. φ
c. ω
d. σ

Q. 299 The Faraday constant is the magnitude of electric charge per _____, and can be used to find the amount of an element that has been oxidized.

a. degree K
b. mole of electrons
c. unit area

Q. 300 The value of the Stefan–Boltzmann constant is given in SI units by _____ .

a. 5.670373(21)×10−8Wm−2K−4
b. 1.054×10−34Js
c. 6.626×10−34Js
d. 7.5657×10−16Jm−3K−4

Q. 301 The Stefan–Boltzmann constant allows for temperature (K) to be converted to units for _____ , (Wm2), which is power per unit area.

a. work
b. intensity
c. frequency
d. proportionality

Q. 302 Quantum _____ is the phenomenon where a particle transitions through a barrier that it classically could not pass.

a. jumping
b. oscillation
c. tunneling
d. relocation

Q. 303 What is the oxidation number of hydrogen in H2O?

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

Q. 304 A spot travels 12 cm, while a solvent travels 20 cm. What is the value of Rf?

a. Rf=0.6
b. Rf=1.67
c. Rf=0.03
d. None of the above

Q. 305 A spot travels 13 cm, while the solvent travels 15 cm. What is the Rf value?

a. Rf=1.15
b. Rf=0.87
c. Rf=1.00
d. None of the above

Q. 306 Which of the following represents the decay mode of H-3?

a. alpha
b. beta
c. positron
d. gamma

Q. 307 Which of the following forms of radioactive decay does carbon-14 undergo?

a. beta
b. alpha
c. gamma
d. positron

Q. 308 Which of the following types of radioactive decay involves a change in atomic number, but not in mass number?

a. alpha
b. beta
c. gamma
d. (b) and (c)

Q. 309 An increase in _____ would most likely decrease the concentration of gases in seawater?

a. salinity
b. pressure
c. wind speed
d. wave turbulence

Q. 310 What kind of chemical reactions spontaneously take place in electrochemical cells?

a. decomposition reaction
b. redox reaction
c. synthesis reaction
d. displacement reaction

Q. 311 To be placed into the sulfide mineral group, the mineral must have _____ .

a. Silicon
b. Carbon
c. Sodium
d. Sulfur

Q. 312 Out of 2000 nuclides, approximately how many are considered stable?

a. 350
b. 120
c. 279
d. 1000

Q. 313 The thalamus, hypothalamus, amygdala, and hippocampus are all _____ .

a. classes of neurons
b. parts of the limbic system
c. structures of the brain stem
d. divisions of the nervous system

Q. 314 Which of the following number of protons or neutrons will lead to stability?

a. 3
b. 9
c. 28
d. 127

Q. 315 What is the order of the rate of decay?

a. second order
b. first order
c. third order
d. pseudo first order

Q. 316 Which of the following would be considered stable?

a. N-14
b. S-32
c. He-4
d. H-2

Q. 317 Which of the following particles will be the heaviest, when emitted from an unstable nuclide?

a. Beta
b. Positron
c. Neutron
d. Alpha

Q. 318 Which of the following numbers, based on the number of protons or neutrons, will lead to stability?

a. 8
b. 21
c. 27
d. 51

Q. 319 A real gas most closely approaches the behavior of an ideal gas under conditions of _____ .

a. low P and T.
b. low P and high T.
c. high P and low T.
d. high P and T.

Q. 320 Due to which property of fluids, a gas will expand, changing the pressure and temperature, to fill any container?

a. viscosity
b. compressibility
c. expandabilty
d. hydrostatics

Q. 321 The solar system coalesced due to rotational forces and _____ .

a. gravity
b. heat
c. radioactivity
d. solar wind

Q. 322 Oxygen moves from the alveoli to the capillaries by _____ .

a. active transport
b. osmosis
c. diffusion

Q. 323 Cell walls can be found in _____ .

a. plants
b. fungi
c. bacteria
d. all of the above

Q. 324 Each column on the periodic table is known as _____ .

a. reactant
b. period
c. group
d. product

Q. 325 The thick layer of heart muscle is called the _____ .

a. Pericardium
b. Endocardium
c. Myocardium
d. Epicardium

Q. 326 A hurricane that forms in the western Pacific Ocean is called _____ .

a. Hurricane
b. Storm Surge
c. Typhoon
d. Eye Wall

Q. 327 What is the glomerular filtration rate?

a. it does not exist
b. the rate the glomeruli reabsorbs toxins
c. an opposing filtration pressure
d. the volume of filtrate formed each minute by the

Q. 328 Which of the following half-reactions involves oxidation?

a. Fe in $Fe(OH)_2 \rightarrow Fe(OH)_3$
b. V in $VO^{2+}(aq) \rightarrow V^{3+}(aq)$
c. Cl in $OCl^-(aq) \rightarrow Cl^-(aq)$

Q. 329 Which of the following chemical equations represents a double displacement reaction?

a. $H_2O(g) \rightarrow 2H_2O(g)+O_2(g)$
b. $BaCl_2(aq)+K_2CrO_4(aq) \rightarrow 2BaCrO_4(aq)+2KCl(s)$
c. $Ag(s)+NaCl(aq) \rightarrow AgCl(s)+Na(s)$
d. $NH_3(g)+HCl(g) \rightarrow NH_4Cl(s)$

Q. 330 What is the SI unit of molar concentration?

a. molm3
b. molcm1
c. molcm3
d. moldm2

Q. 331 A geologist excavates an alternating sequence of light and dark shales. Which is the most likely depositional environment for the rock sequence?

a. fluvial
b. marine
c. alluvial
d. lacustrine

Q. 332 _____ produces a hormone that regulates the body's balance of calcium and phosphorus.

a. parathyroid
b. hypothalamus
c. thyroid
d. pituitary

Q. 333 Which of the following chemical equations represents a single displacement reaction?

a. $H2O(g) \rightarrow 2H2O(g)+O2(g)$
b. $2Ag2O(s) \rightarrow 4Ag(s)+O2(g)$
c. $Ag(s)+NaCl(aq) \rightarrow AgCl(s)+Na(s)$
d. $NH3(g)+HCl(g) \rightarrow NH4Cl(s)$

Q. 334 The main component found in a glass is _____ .

a. Water
b. Lime
c. Sodium Oxide
d. Silica

Q. 335 The earth's atmosphere has had _____ major stage(s) in its evolution.

a. one
b. two
c. three
d. four

Q. 336 The following are structures within the dermis, except:

a. subcutaneous layer
b. muscle
c. hair follicles
d. oil gland

Q. 337 Nerve fibers in the brain and spinal cord that have a myelin covering make up is known as _____.

a. white matter
b. gray matter
c. meninges
d. cranial nerves

Q. 338 What is estrous?

a. The complete cycle from one ovulation is the next
b. Heat produced from metabolism
c. When the female is most receptive to copulation
d. The process of cell division

Q. 339 The branch of science dealing with the study of the flow of energy is called _____.

a. kinesiology
b. thermodynamics
c. ergodynamics
d. ergonomics

Q. 340 The _____ gland regulates the amount of calcium and phosphorous in the blood.

a. thyroid
b. parathyroid
c. pituitary
d. sweat

Q. 341 A polar body is:

a. a non functional egg cell
b. a functional egg cell
c. a fertilized egg cell
d. a non fertilized egg cell

Q. 342 Which of the following groups of crustaceans looks similarly to the mollusks superficially?

a. the isopods
b. the decapods
c. the copepods
d. the barnacles

Q. 343 Which of these features allows for heat retention in a vertebrate?

a. leathery skin on sharks
b. feathers on birds
c. watertight skin on reptiles
d. scales on fish

Q. 344 In hyperparathyroidism,_____ is reabsorbed from the kidneys, bones, and stomach into the blood.

a. potassium
b. calcium
c. sodium
d. hormones

Q. 345 The hypothalamus, pituitary gland, and pineal gland are located in the _____ .

a. neck
b. stomach
c. back
d. brain

Q. 346 Which of the following molecules contains only London dispersion forces?

a. CF4
b. HCl
c. H2O
d. MgO (aq)

Q. 347 Moon mountains, formed by the peaks of craters, that give the moon a rugged landscape are known as _____ .

a. Craters
b. Highlands
c. Maria
d. Volcanoes

Q. 348 _____ prevents re-annealing.

a. SSB
b. Ligase
c. Polymerase
d. Helicase

Q. 349 Which of the following is not a major tissue types?

a. epithelial
b. connective
c. stomach
d. nervous

Q. 350 Which branch of chemistry is the study of substances which are compounds of carbon ?

a. organic chemistry
b. analytical chemistry
c. inorganic chemistry
d. physical chemistry

Q. 351 What gland serves both the digestive and endocrine systems? As an endocrine gland it secretes glucagon and insulin, which regulates the level of glucose in the blood. As a digestive gland, it secretes trypsin, which assists with the breakdown of proteins.

a. pineal gland
b. pituitary gland
c. pancreas
d. thymus

Q. 352 Which of the following characteristics do mammals and birds share?

a. dry scaly skin
b. live birth
c. ectotherms
d. endotherms

Q. 353 _____ is 1 to 2 kilometer deep, several kilometers wide, land from which splits many segments of the oceanic-ridge crust.

a. continental shelf
b. mid-oceanic ridge
c. oceanic crust
d. rift valley

Q. 354 Johannes Kepler's theory was based upon analysis of planet observations taken by _____ .

a. Nicholas Copernicus
b. Tycho Brahe
c. Johannes Kepler
d. Galileo Galilei

Q. 355 In Rutherford's experiment, most of the alpha particles _____ .

a. passed through undeflected
b. deflected
c. thrown back
d. absorbed

Q. 356 Acid hydrolysis of methyl acetate is the example of _____ .

a. Third order reaction
b. Zero order reaction
c. Second order reaction
d. First order reaction

Q. 357 The relation Δx×Δp=(h4Π) represents _____ .

a. De-Broglie equation
b. Heisenberg's uncertainty principle
c. Schrodinger's wave equation
d. Pauli's exclusion principle

Q. 358 _____ is the gland that serves both the digestive and endocrine systems. As an endocrine gland it secretes glucagon and insulin, which regulates the level of glucose in the blood.

a. pineal gland
b. pituitary gland
c. pancreas
d. thymus

Q. 359 A seamount is a(n) _____ .

a. Volcano whose summit rises above sea level.
b. Ancient volcano whose summit has been cut off by erosion.
c. An elevated part of the ocean floor, possibly an
d. Rock column located near the coast formed by erosion.

Q. 360 When a physicist bombards a nucleus with another nuclear particle in a laboratory setting, the first nucleus becomes unstable, and nuclear disintegration occurs. This type of nuclear reaction is called _____ .

a. spontaneous decay.
b. nuclear fission.
c. nuclear fusion.
d. artificial transmutation.

Q. 361 The major categories of tissues found in the human body include all of the following except _____ .

a. epithelial
b. bone
c. muscle
d. nervous

Q. 362 Dumas method is used for the estimation of _____ .

a. carbon
b. nitrogen
c. oxygen
d. sulphur

Q. 363 Which molecule is used during the light-independent reactions to drive the fixing of carbon?

a. RuBP
b. NADPH
c. ATP
d. Acetyl CoA

Q. 364 Fluorine molecule is formed by _____ .

a. p-p orbitals (sidewise overlap)
b. p-p orbitals (end to end overlap)
c. sp-sp orbitals overlaps
d. s-s orbitals overlaps

Q. 365 What is the formula for nitrogen dioxide?

a. NO
b. N2O
c. NO2
d. N2O2

Q. 366 As the temperature of the solid surface increases, the extent of adsorption of a gas _____ .

a. increases
b. decreases
c. remains unchanged
d. first increases then decreases

Q. 367 Which body system forms the external surface of the body and provides protection from dehydration, environmental chemicals, and impacts?

a. Endocrine
b. Nervous
c. Digestive
d. Integumentary

Q. 368 Which of the following is NOT a coastal feature?

a. archipelago
b. plateau
c. strait
d. peninsula

Q. 369 What is secreted in the mouth?

a. Mucin and Pepsin
b. Mucus, salivary amylase and water
c. Saliva and water
d. Trypsin, Lipase and Carbon

Q. 370 Which region of the brain includes the midbrain, pons, and medulla oblongata?

a. cerebrum
b. brain stem
c. cerebellum
d. parietal lobe

Q. 371 Which of the following equations represents a decomposition reaction?

a. H_2O(g) -> 2H_2O(g) + O_2(g)
b. 2Ag_2O(s)->4Ag(s)+O_2(g)
c. Ag(s)+NaCl(aq)->AgCl(s)+Na(s)
d. NH_3(g)+HCl(g)->NH_4Cl(s)

Q. 372 Zinc metal dipped in zinc sulfate solution is an example of _____ .

a. a metal-metal ion electrode
b. a gas electrode
c. a metal-sparingly soluble salt electrode
d. a redox electrode

Q. 373 The ideal gas law predicts that the molar volume (volume of one mole) of gas equals to _____ .

a. (MW)P/RT.
b. gRT/PV.
c. RT/P.
d. 1/2ms-2.

Q. 374 Which of these solutes will increase the surface tension of water?

a. surfactant
b. sugar
c. inorganic salts
d. alcohol

Q. 375 Manufacturers of glassware and other tools calibrate their measurement marks to account for the meniscus of _____ .

a. Bromine
b. Liquid Nitrogen
c. Mercury
d. Water

Q. 376 Which organ helps us to smell and uses small hair/mucus to clean warm air?

a. nose
b. eyes
c. ears
d. lungs

Q. 377 Which pulse supplies blood to head, neck, and brain?

a. carotid
b. tibial
c. brachial
d. radial

Q. 378 Which of the following forms of radioactive decay does calcium-37 undergo?

a. alpha
b. gamma
c. positron
d. beta

Q. 379 What is the oxidation number of hydrogen in a molecule of H2?

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

Q. 380 The deepest epidermal layer is called _____ .

a. Stratum germinativum
b. Stratum spinosum
c. stratum lucidum
d. stratum granulosum

Q. 381 Which of the following represents the rate of decay correctly?

a. ln(NNo)=kt
b. ln(NNo)=kt
c. ln(NNo)=−kt
d. ln(NNo)=−kt

Q. 382 Which of the following nuclides would be considered unstable?

a. Si-29
b. O-16
c. He-4
d. Ca-40

Q. 383 Life along the floor of the mid-ocean ridges depends on _____ .

a. sunlight
b. black smokers and chemosynthesis
c. photosynthesis
d. all of the above

Q. 384 What produces thyroxine, which regulates metabolism throughout the body?

a. Testes
b. Thymus
c. Pineal Gland
d. Thyroid Gland

Q. 385 Aluminum is made from which ore?

a. Hematite
b. Bauxite
c. Cinnabar
d. Malachite

Q. 386 What is the oxidation number of Nitrogen (N) in HNO3?

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

Q. 387 Which of the following properties of a solvent defines its capacity for separating oppositely charged particles of a solute?

a. Dielectric constant
b. Autoprotolysis constant
c. Solvation energy
d. Levelling effect

Q. 388 Rock that is composed of rounded gravel-sized fragments, or pebbles is known as _____ .

a. Marble
b. Breccia
c. Granite
d. Conglomerate

Q. 389 Which of the following is least permeable?

a. silt
b. clay
c. sand
d. gravel

Q. 390 Which gland regulates the development of the immune system?

a. pancreas
b. thyroid
c. thymus
d. pineal

Q. 391 What is the oxidation number of carbon in K2C2O4?

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

Q. 392 A balance is used to determine an object's _____ .

a. volume
b. weight
c. area
d. mass

Q. 393 Homogeneous mixtures are also referred to as _____ .

a. gases
b. substances
c. solutions
d. liquids

Q. 394 Which organ makes pancreatic juice and insulin to regulate blood sugar?

a. large intestine
b. spleen
c. small intestine
d. pancreas

Q. 395 Which of the following molecules would have the lowest boiling point?

a. CH4
b. C2H6
c. C3H8
d. C4H10

Q. 396 A _____ is a combination of two or more pure substances in which each pure substance retains its individual chemical properties.

a. solution
b. mixture
c. precision
d. accuracy

Q. 397 A combination of interrelated and interactive components is called _____ .

a. theory
b. hypothesis
c. gradualism
d. system

Q. 398 The volume of one mole of an ideal gas under conditions of standard temperature and pressure is _____ .

a. 0.0224 liters.
b. 2.24 liters
c. 22.4 liters
d. 44.8 liters.

Q. 399 The oceanic crust is composed primarily of which kind of stone?

a. iron oxide
b. limestone
c. granite
d. basalt

Q. 400 If the value of the azimuthal quantum number is 2, there will be _____ values for the magnetic quantum number.

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

Q. 401 Which one of the following is not a form of chemical bonding?

a. covalent bonding
b. hydrogen bonding
c. ionic bonding
d. metallic bonding

Q. 402 What is the size of colloidal particles?

a. 10−10m→10−9m
b. 10−6m→10−4m
c. 10−9m→10−6m
d. 10−5m→10−2m

Q. 403 Which of the following redox reactions represents the Daniel Cell?

a. Zn(s)+Cu2+(aq)→Zn2+(aq)+Cu(s)
b. Cu(s)+2Ag+(aq)→Cu2+(aq)+2Ag(s)
c. 2Al(s)+3Cu2+(aq)→2Al3+(aq)+3Cu(s)
d. Cu(s)+2Fe3+(aq)→Cu2+(aq)+2Fe2+(aq)

Q. 404 Which of the following equations correctly describes the relation between Faraday(F) and Couloumb (C)?

a. 1F=9.65×104C
b. 1F=9.64×103C
c. 1F=9.63×102C
d. 1F=9.62×105C

Q. 405 Which of the following is not a type of connective tissue?

a. Bone
b. Spinal Cord
c. Blood
d. Adipose

Q. 406 _____ the part of the eye that focuses the image?

a. lens
b. retina
c. iris
d. pupil

Q. 407 Myometrium belong to _____ system.

a. reproductive system
b. urinary system
c. digestive system
d. muscular system

Q. 408 The right ventricle pumps blood to the _____ .

a. right atrium
b. left ventricle
c. lungs
d. entire body

Q. 409 What is the oxidation number of Pt in [PtCl6]2−?

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

Q. 410 The tetravalency of carbon is explained by its _____ .

a. ground state electronic configuration
b. excited state electronic configuration
c. sp3hybridization
d. sp2hybridization

Q. 411 Atolls may be described as

a. coral reefs paralleling a nearby coastline
b. a flat-topped submerged seamount
c. a coral reef surrounding a lagoon
d. coral reefs separated by the mainland by a shallow lagoon

Q. 412 The two small glands that secrete testosterone and produce sperm are the _____.

a. adrenal glands
b. parathyroid glands
c. ovaries
d. testes

Q. 413 When egg and sperm meet, it is called:

a. Fertilization
b. Sexual intercourse
c. Ovulation
d. Menstruation

Q. 414 A ruminant _____ .

a. has a long digestive tract
b. is a carnivore
c. lacks hair
d. is found only in omnivores

Q. 415 Consider the following redox reaction: (VO)2+(aq)→V3+(aq) ,What is the change in the oxidation number of vanadium in this reaction?

a. It decreases from +4 to +3
b. It decreases from +4 to -4
c. It increases from +4 to +2
d. It decreases from +4 to -3

Q. 416 A mixture that does not have a uniform composition throughout is known as _____ .

a. homogeneous mixture
b. heterogeneous mixture
c. solution
d. gas

Q. 417 The telescope that uses a mirror to gather light is called _____ .

a. refractor telescope
b. x-ray telescope
c. reflector telescope
d. radio telescope

Q. 418 _____ is a scientific explanation based on many observations during repeated experiments.

a. theory
b. law
c. model

Q. 419 Which of the following is not a source of water for the tarrawarra?

a. Food
b. Metabolic water
c. Free water
d. Concentrated urine

Q. 420 Rhino horns are made of:

a. Mass of hair - keratin
b. Collagen
c. Bone
d. Modified tooth material

Q. 421 Planck's constant can be seen as a(n)_____ scale constant.

a. macroscopic
b. statistical
c. atomic
d. subatomic

Q. 422 The rods and cones collectively known as _____ .

a. the fovea
b. photoreceptors
c. vitreous humor
d. optotectors

Q. 423 What causes the "lubb dubb" heart sounds?

a. Blood rushing into the heart

b. Blood rushing out of the heart

c. Atrioventricular (AV) and semi lunar (SL) valves opening

d. AV and SL valves closing

Q. 424 The densest layer of the Earth is _____ .

a. The crust because rotational forces throw heavy materials to the outside.

b. The crust because the collisions of tectonic plates create tremendous pressures that increases density.

c. The core because molten iron sank to the center in

d. The mantle because it is the thickest layer.

Q. 425 Which largest single organ cleans out poisons in blood and takes vitamins out of the blood?

a. liver

b. lungs

c. heart

d. kidneys

Q. 426 An overlap of actin and myosin filaments occurs in the _____ .

a. A band

b. I band

c. Z line

d. H band

Q. 427 In which lobe is the visual cortex located?

a. Frontal Lobe

b. Parietal Lobe

c. Occipital Lobe

d. Temporal Lobe

Q. 428 The right atria pumps blood to the _____ .

a. left atria

b. right ventricle

c. left ventricle

d. lungs

Q. 429 Which class does the eastern gray squirrel belong to?

a. Scuridae

b. Rodentia

c. Chordata

d. Mammalia

Q. 430 How many nuclei does cardiac muscle cells have?

a. one

b. five

c. several

d. none

Q. 431 What is the chief threat to soil?

a. erosion
b. pests
c. destructive plant life
d. decay

Q. 432 Hutton's observations of the nature of the development of sandstone would be an example of _____.

a. tectonic plate theory
b. catastrophism
c. the carbon cycle
d. gradualism

Q. 433 Which of the following structure forms at the surface and temporarily restores the integrity of the epidermis and restricts the entry of microorganisms?

a. Scab
b. Abrasion
c. Incision
d. Inflammatory response

Q. 434 A combination of Avagadro's law, Boyle's law, and Charles' law is the _____ .

a. the ideal or universal gas law
b. Gay-Lussac's law
c. the kinetic-molecular theory
d. the STP formula

Q. 435 _____ is called the heart's pacemaker.

a. Atrioventricular (AV) node
b. Sinoatrial (SA) node
c. Fibrillation (F) node
d. I don't node

Q. 436 The covering of the heart is called the:

a. Epicardium
b. Myocardium
c. Pericardium
d. Endocardium

Q. 437 In what lobe of the brain is the motor cortex located?

a. Frontal Lobe
b. Parietal Lobe
c. Occipital Lobe
d. Temporal Lobe

Q. 438 How many bones are there in the body?

a. 450
b. 120
c. 206
d. 117

Q. 439 Sperm are carried from the testes to the urethra through _____ .

a. Testes
b. Scrotum
c. Vas Deferens
d. Epididymis

Q. 440 _____ functions as the major inhibitory neurotransmitter in the brain.

a. Serotonin
b. Acetylcholine
c. GABA
d. Oxytocin

Q. 441 _____ is a chain of islands formed from volcanoes.

a. accreted terranes
b. seamount
c. island arcs
d. continental crust

Q. 442 Which of the following one or more substances change into one or more new substances called products?

a. chemical property
b. precipitate
c. reactant
d. chemical reaction

Q. 443 The shoulder girdle consists of all the following bones except _____ .

a. ulna
b. scapula
c. humerus
d. clavicle

Q. 444 Which of the following glands help the body deal with stress and respond to emergencies?

a. endocrine glands
b. pineal glands
c. parathyroid glands
d. adrenal glands

Q. 445 Which of the following structures supply blood to the myocardium?

a. Aorta
b. Pulmonary vein
c. Coronary arteries
d. All of the above

Q. 446 _____ is used in an experiment to show that the results of an experiment are actually a result of the condition being tested:

a. the independent variable
b. the control
c. hypothesis
d. the dependent variable

Q. 447 What is the function of simple cuboidal epithelium?

a. Covering and lining
b. Movement and contractions
c. Heat and insulation
d. Secretion and absorption in the kidneys and various other glands

Q. 448 Which of these is an instrument used to measure atmospheric pressure?

a. barometer
b. thermometer
c. odometer
d. luxmeter

Q. 449 A combination of interrelated and interactive components is known as _____ .

a. theory
b. hypothesis
c. gradualism
d. system

Q. 450 The thickened area of scar tissue called _____ .

a. Scar tissue
b. Scab
c. Keloid
d. Granulation tissue

Q. 451 What is the underlying layer in the hair shaft called?

a. Hair shaft
b. Medulla
c. Cortex
d. Arrector pili

Q. 452 _____ is a pair of pea-sized glands that lie beneath the prostate gland. They produce an alkaline fluid that forms part of the semen that neutralizes the acidic environment of the urethra, thereby protecting the sperm.

a. ejaculatory duct
b. seminal vesicle
c. adrenal gland
d. cowper's gland

Q. 453 The birth canal is also known as the _____ .

a. Cervix
b. Uterus
c. Vagina
d. Fallopian tube

Q. 454 Life deep along the floor of the mid-ocean ridges depends on _____ .

a. sunlight
b. black smokers and chemosynthesis
c. photosynthesis
d. all of the above

Q. 455 Which branch of chemistry is the foundational , applying theories of physics to reaction and properties of matter?

a. organic chemistry
b. physical chemistry
c. biochemistry
d. analytical chemistry

Q. 456 Which of the following organelles may be absent from eukaryotic cells?

a. nucleus
b. mitochondria
c. plasma membrane
d. chloroplast

Q. 457 What are the functions of hormones?

a. to regulate the sensation of nervous system response
b. controls the body's immune system
c. regulates the body's internal temperature
d. chemical substances that help regulate many of the

Q. 458 A cell that obtains food by phagocytosis could be expected to _____ .

a. have a cell wall
b. be using energy
c. be producing oxygen
d. contain a chloroplast

Q. 459 A substance the contains two or more substances combined chemically is called _____ .

a. a compound
b. an element
c. a period
d. a group

Q. 460 Somatic cells are _____ .

a. cells from the testes or ovaries
b. egg cells and sperm cells
c. normal body cells
d. produced through meiosis

Q. 461 A single skeletal muscle cell is called a muscle _____ .

a. spasm
b. neuron
c. contraction
d. fiber

Q. 462 The most consistent structure to classify a plant is _____ .

a. The leaf shape
b. The seed shape
c. The plant form
d. The flower structure

Q. 463 What are the possible oxidation numbers of Iron (Fe) in a compound?

a. +3, +2
b. +3, +1
c. +3, +5
d. +3, +4

Q. 464 The part of the hair that we see is called the _____ .

a. Root
b. Follicle
c. Cortex
d. Shaft

Q. 465 Which process can be used to separate a solid from a liquid in a heterogeneous solution?

a. physical change
b. distillation
c. evaporation
d. filtration

Q. 466 The atmosphere helps to support life on earth by _____ .

a. providing oxygen
b. protecting from solar radiation
c. regulating the temperature
d. all of the above

Q. 467 The atrioventricular valves connect which of the following two heart chambers?

a. Atrium to atrium
b. Atrium to ventricle
c. Ventricle to ventricle
d. Ventricle to pulmonary artery

Q. 468 Which structure nourishes the fetus and removes waste from the fetus to the mother?

a. Cervix
b. Uterus
c. Placenta
d. Fallopian tube

Q. 469 Which of the following two muscle tissue types are striated?

a. Skeletal and Smooth
b. Skeletal and Cardiac
c. Smooth and Cardiac
d. None of the above

Q. 470 When plant cells are viewed through a light microscope, a structure that could be visible would be _____ .

a. mitochondria
b. chloroplasts
c. centrioles
d. ribosomes

Q. 471 Atolls may be described as _____ .

a. coral reefs parallel to a nearby coastline
b. a flat-topped submerged seamount
c. a coral reef surrounding a lagoon
d. coral reefs separated by the mainland by a shallow lagoon

Q. 472 When working gas law problems, all temperatures must be converted to the _____ .

a. Celsius scale.
b. Fahrenheit scale.
c. Boyle scale.
d. Kelvin scale.

Q. 473 Which of the following is NOT a reason for the loss of Earth's early atmosphere?

a. solar winds
b. the molecules were light and vaporized
c. it were absorbed through the earth's crust
d. it "boiled off"

Q. 474 What do scientists speculate that shortly after our planet formed, _____ was lost from its early atmosphere?

a. its early nitrogen
b. volatile compounds such as hydrogen and helium
c. clouds
d. oxygen

Q. 475 Which does not maintain the health of your endocrine system?

a. engaging in regular physical activity
b. getting six hours of sleep
c. getting regular medical check-ups
d. eating balanced meals

Q. 476 The orange-yellow pigment that accumulates in the epidermal cells are called _____ .

a. Melanin
b. UV radiation
c. Carotene
d. Keratin

Q. 477 A substance present at the start of a reaction is _____ .

a. product
b. group
c. precipitate
d. reactant

Q. 478 The suggested explanation for an observation is _____ .

a. the independent variable
b. the constant
c. hypothesis
d. the dependent variable

Q. 479 A solid that forms when two liquids react is known as _____ .

a. reactant
b. product
c. precipitate
d. liquid

Q. 480 The tricuspid valve has how many flaps?

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

Q. 481 Which part of the Earth's spheres is composed of a mixture of gases?

a. geosphere
b. hydrosphere
c. atmosphere
d. biosphere

Q. 482 Which gland stimulates the pituitary gland to secrete hormones?

a. pineal gland
b. hypothalamus
c. parathyroid gland
d. adrenal gland

Q. 483 The _____ produces hormones that regulate metabolism, body heat, and bone growth.

a. thymus gland
b. pineal gland
c. thyroid gland
d. parathyroid gland

Q. 484 Which of the following factor in an experiment can change if other factors are changed?

a. the independent variable
b. the constant
c. hypothesis
d. the dependent variable

Q. 485 A muscle fascicle is a bundle of _____ .

a. myofibrils
b. fibers
c. filaments
d. facia

Q. 486 The semilunar valves connect _____ .

a. ventricles to arteries
b. ventricles to ventricles
c. atrium to atrium
d. ventricles to veins

Q. 487 A bundle of smooth muscle cells that extends from the papillary dermis to the connective tissue sheath is called a _____.

a. Epidermis
b. Arrector pili
c. Hair papilla
d. Hair

Q. 488 _____ is a scientific explanation which is a basic fact that describes the behavior of natural phenomenon.

a. theory
b. law
c. model

Q. 489 The _____ is the sphere inhabited by life.

a. biosphere
b. geosphere
c. atmosphere
d. hydrosphere

Q. 490 Which gland regulates the amount of calcium and phosphorous in the blood?

a. parathyroid gland
b. pituitary gland
c. sweat gland
d. adrenal gland

Q. 491 If not properly managed, _____ can pollute water wastes and can damage local aquatic ecosystems.

a. pollutants
b. acid rain
c. invasive species
d. aquaculture

Q. 492 A mixture with uniform composition throughout is known as _____ .

a. heterogeneous mixture
b. homogeneous mixture
c. solid
d. mass

Q. 493 About 10,000 years ago, Earth's seas were _____ than they are today.

a. higher
b. lower
c. saltier
d. less salty

Q. 494 The oceanic crust is composed mainly of what kind of stone?

a. iron oxide
b. limestone
c. granite
d. basalt

Q. 495 Which of the following is NOT a reason for the loss of our early atmosphere?

a. solar winds
b. the molecules were light and vaporized
c. it was absorbed through the earth's crust
d. it "boiled off"

Q. 496 Which of the following chemical equations represents a combination reaction?

a. $H2O(g) \rightarrow 2H2O(g)+O2(g)$
b. $2Ag2O(s) \rightarrow 4Ag(s)+O2(g)$
c. $Ag(s)+NaCl(aq) \rightarrow AgCl(s)+Na(s)$
d. $NH3(g)+HCl(g) \rightarrow NH4Cl(s)$

Q. 497 Which of the following long, narrow depression is formed when the sinking tectonic plate drags the sea floor downward?

a. island arc
b. volcano
c. oceanic trench
d. rift valley

Q. 498 Why are protective structures erected in the waters off the coastlines?

a. to protect homes
b. to protect ports
c. both of the above
d. none of the above

Q. 499 Charles Darwin theorized

a. that volcanic islands sink over time
b. that lagoons are round
c. that reefs are made from coral
d. that seamounts move away from the mantle plume

Q. 500 Sperm mature in _____.

a. Testes
b. Scrotum
c. Vas Deferens
d. Epididymis

Q. 501 _____ glands are ductless or tubeless organs or groups of cells that secrete hormones directly into the bloodstream.

a. adrenal glands
b. parathyroid glands
c. endocrine glands
d. pancreas

Q. 502 Which gland is responsible for producing testosterone?

a. pancreas
b. testes
c. ovaries
d. pituitary

Q. 503 What is the chief threat to soil?

a. erosion
b. pests
c. destructive plant life
d. decay

Q. 504 The atmosphere helps support life on earth by _____ .

a. providing oxygen
b. protecting from solar radiation
c. regulating the temperature
d. all of the above

Q. 505 _____ is the factor in an experiment that can change if other factors are changed.

a. the independent variable
b. the constant
c. hypothesis
d. the dependent variable

Q. 506 A substance that is formed during a reaction is known as _____ .

a. element
b. compound
c. product
d. reactant

Q. 507 Matter with a uniform and definite composition is called _____ .

a. a sample
b. a vapor
c. a substance
d. baseball player

Q. 508 The Earth is about how old?

a. 4,600 years old
b. 460,000 years old
c. 4,600,000 years old
d. 4,600,000,000 years old

Q. 509 The _____ links the endocrine system and the nervous system and stimulates the pituitary gland to secrete hormones.

a. adrenal medulla
b. pancreas
c. thymus
d. hypothalamus

Q. 510 Which gland secretes the hormone melatonin?

a. thyroid gland
b. pineal gland
c. parathyroid gland
d. thymus gland

Q. 511 Which gland regulates and controls the activities of all other endocrine glands?

a. pituitary gland
b. pineal gland
c. pancreas
d. parathyroid gland

Q. 512 Which of the following would not be considered an endocrine gland?

a. pineal gland
b. sweat gland
c. placenta

Q. 513 _____ studies the materials that make up Earth.

a. astronomy
b. meteorology
c. geology
d. oceanography

Q. 514 The sebaceous glands secrete _____, that keeps the hair and skin from drying out completely.

a. Vicky
b. Sebum
c. Oil
d. Goo

Q. 515 The term used to describe any part of a sample with uniform composition and properties is known as _____ .

a. phase
b. mixture
c. solution
d. reversible

Q. 516 The lithosphere is the outermost, cool, hard and strong layer of the _____ .

a. core
b. mantle
c. geosphere
d. hydrosphere

Q. 517 Sandstone is found in which geospheric layer?

a. crust
b. mantle
c. core
d. hydrosphere

Q. 518 Identify the ductless or tubeless organs or groups of cells that secrete hormones directly into the bloodstream.

a. pineal gland
b. endocrine gland
c. hypothalamus
d. ovaries

Q. 519 The Earth's heat originated from _____ .

a. gravitation coalescence
b. the sun
c. radioactive decay
d. all of the above

Q. 520 What is Earth's hydrosphere?

a. the gases in the air
b. the solid, rocky part of Earth
c. all of the water on the planet
d. the study of Earth's atmosphere

Q. 521 Mammals produce nitrogenous waste that is excreted as _____ .

a. uric acid
b. urea
c. nitrogen dioxide
d. urine

Q. 522 Which secreted by the pituitary gland and enhances uterine contractions during child birth and facilitates the ejection of milk during nursing?

a. melatonin
b. oxytocin
c. sex hormones
d. adrenal hormones

Q. 523 The _____ produces hormones that regulate metabolism, body heat, and bone growth. It produces thyroxine, which regulates the way cells release energy from nutrients.

a. thymus gland
b. pineal gland
c. thyroid gland
d. endocrine gland

Q. 524 The branch of chemistry science dealing with the study of the flow of energy is called _____ .

a. kinesiology
b. thermodynamics
c. ergodynamics
d. ergonomics

Q. 525 Which of the following is the thinnest of the Earth's spheres?

a. biosphere
b. atmosphere
c. hydrosphere
d. geosphere

Q. 526 How many parts does the adrenal gland have?

a. four parts
b. three parts
c. two parts
d. only one part

Q. 527 This Earth science studies forces and processes that produce weather:

a. astronomy
b. meteorology
c. geology
d. oceanography

Q. 528 The _____ help the body deal with stress and respond to emergencies.

a. pituitary gland
b. adrenal glands
c. parathyroid gland
d. pancreas

Q. 529 A large piece of space debris, such as an asteroid, that crashes into a planet is called a _____ .

a. bolide
b. UFO
c. planetoid
d. rock

Q. 530 Energy from what source drives the atmosphere and hydrosphere?

a. sun
b. radioactive decay
c. primordial coalescence
d. chemical reactions

Q. 531 The embryo grows into a fetus in the:

a. Uterus
b. Ovaries
c. Fallopian tube
d. Cervix

Q. 532 The growth of a plant in response to a stimulus is called

a. tropism
b. taxes
c. kinesis
d. barism

Q. 533 Physically blending two or more parts is

a. a mixture
b. a phase
c. a physical property
d. a mess

Q. 534 Venus has a surface temperature of

a. 375° Celcius
b. 475° Celcius
c. 125° Celcius
d. 250° Celcius

Q. 535 The Earth's atmosphere is made up 78% of

a. Nitrogen
b. Oxygen
c. Argon
d. Carbon Dioxide

Q. 536 The theory explaining that the Earth's outer shell is composed of many moving segments is called the _____ theory

a. lithosphere
b. primordial ooze
c. tectonic plate
d. gradualism

Q. 537 _____ affects neurons involved in sleep, appetite, sensory perception, temperature regulation, pain suppression, and mood

a. Acetylcholine
b. Serotonin
c. Glutamine
d. Dopamine

Q. 538 _____ functions as the major excitatory neurotransmitter in the brain.

a. GABA
b. Dopamine
c. Glutamate
d. Norepinephrine

Q. 539 Which body parts are made up of nerve cells or nervous tissue?

a. Brain
b. Spinal Cord
c. Both a and b
d. None of the above

Q. 540 The gland which secretes a fluid which helps neutralize acid in the urethra is the:

a. Seminal vesicle
b. Prostate gland
c. Epididymis
d. Cowper's gland

Q. 541 _____ affects neurons involved in voluntary movement, learning, memory, emotion, and, possibly, response to novelty.

a. Glutamate
b. Dopamine
c. Acetylcholine
d. GABA

Q. 542 Coiled tubular glands that discharge their secretions directly onto the surface of the skin are what?

a. pituitary glands
b. salivary glands
c. acne glands
d. apocrine glands

Q. 543 Which of the following parts of hair is not always present?

a. Cortex
b. Medulla
c. Cuticle

Q. 544 Which organisms live in the deep areas of the ocean floor?

a. Decomposers
b. Filter feeders
c. jellyfish
d. a and b

Q. 545 The lithosphere is the outermost, cool, hard and strong layer of the

a. core
b. mantle
c. geosphere
d. hydrosphere

Q. 546 A narrow passage of water joining two larger bodies of water is a

a. lagoon
b. straight
c. peninsula
d. bay

Q. 547 Thigmotropism is a plant response to

a. light
b. gravity
c. things
d. touch

Q. 548 Which of the following are asexual reproductive structures in plants

a. bulbs
b. flowers
c. leaves
d. pollen

Q. 549 Continental crust is

a. denser and more rigid than oceanic crust
b. floats on top of the oceanic crust
c. thicker than oceanic crust
d. younger than the oceanic crust

Q. 550 What is technology?

a. science
b. computer
c. electronics
d. the application of scientific discoveries

Q. 551 Which of the following animals produce shelled eggs

a. birds
b. elephants
c. frogs
d. salamanders