

#### TEAS SCIENCE SECTION

- 53 questions total.
  - Only 47 questions scored.
- 63 minute time limit.
- Approximately 1.1 minutes per question.
- Graded using a scaled score.

#### SCALED SCORING

#### • What is a scaled score?

- Percentage of questions you get right is irrelevant.
- Percentage of people who took the same test and got fewer questions right does matter.
  - It is not 'how much you know', it is 'do you know more than everyone else'.

#### **BREAKDOWN OF SCIENCE QUESTIONS**

- Human Anatomy and Physiology (32 questions)
  - Describe the general anatomy and physiology of a human.
  - Describe the anatomy and physiology of the respiratory system.
  - Describe the anatomy and physiology of the cardiovascular system.
  - Describe the anatomy and physiology of the gastrointestinal system.
  - Describe the anatomy and physiology of the neuromuscular system.
  - Describe the anatomy and physiology of the reproductive system.
  - Describe the anatomy and physiology of the integumentary system.
  - Describe the anatomy and physiology of the endocrine system.
  - Describe the anatomy and physiology of the genitourinary system.
  - Describe the anatomy and physiology of the immune system.
  - Describe the anatomy and physiology of the skeletal system.
- Life and Physical Sciences (8 questions)
  - Describe the basic macromolecules in a biological system.
  - Compare and contrast chromosomes, genes, and DNA.
  - Explain Mendel's laws of heredity.
  - Recognize basic atomic structure.
  - Explain characteristic properties of substances.
  - Compare and contrast changes in states of matter.
  - Describe chemical reactions.
- Scientific Reasoning (7 questions)
  - Identify basic scientific measurements using laboratory tools.
  - Critique a scientific explanation using logic and evidence.
  - Explain relationships among events, objects, and processes.
  - Analyze the design of a scientific investigation.

#### METRIC PREFIXES

	Table 4a – Metric Prefix			Scientific Notation	
Prefix	Symbol	Multiplier	Exponential	Normalized	E Notation
yotta	Υ	1,000,000,000,000,000,000,000,000	1024	1.0x10 <sup>24</sup>	1.0E24
zetta	Z	1,000,000,000,000,000,000,000	1021	1.0x10 <sup>21</sup>	1.0E21
exa	E	1,000,000,000,000,000,000	10 <sup>18</sup>	1.0x10 <sup>18</sup>	1.0E18
peta	P	1,000,000,000,000,000	1015	1.0x10 <sup>18</sup>	1.0E15
tera	T	1,000,000,000,000	1012	1.0x10 <sup>12</sup>	1.0E12
giga	G	1,000,000,000	109	1.0x10°	1.0E9
mega	М	1,000,000	106	1.0x10 <sup>6</sup>	1.0E6
kilo	k	1,000	10 <sup>3</sup>	1.0x10 <sup>3</sup>	1.0E3
hecto	h	100	10 <sup>2</sup>	1.0x10 <sup>2</sup>	1.0E2
deca	da	10	101	1.0x10 <sup>1</sup>	1.0E1
		1	100	1.0x10°	1.0E0
deci	d	0.1	10-1	1.0x10 <sup>-1</sup>	1.0E-1
centi	С	0.01	10-2	1.0x10 <sup>-2</sup>	1.0E-2
milli	m	0.001	10-3	1.0x10 <sup>-3</sup>	1.0E-3
micro	μ	0.000001	10-6	1.0x10 <sup>-8</sup>	1.0E-6
nano	n	0.00000001	10-9	1.0x10 <sup>-9</sup>	1.0E-9
pico	p.	0.00000000001	10-12	1.0x10 <sup>-12</sup>	1.0E-12
femto	f	0.00000000000001	10-15	1.0x10 <sup>-15</sup>	1.0E-15
atto	а	0.000000000000000001	10-18	1.0x10 <sup>-18</sup>	1.0E-18
zepto	z	0.0000000000000000000000000000000000000	10-21	1.0x10 <sup>-21</sup>	1.0E-21
yocto	y	0.0000000000000000000000000000000000000	10-24	1.0x10 <sup>-24</sup>	1.0E-24

# EXAMPLE OF UNIT CONVERSION FACTORS (EQUIVALENCIES)

A unit conversion factor is a ratio of one unit of measurement to another unit of measurement. They can be written as fractions or equivalencies.

$$100 \ cm = 1 \ m$$
  $0.01 \ m = 1 \ cm$ 

$$\frac{1 m}{100 cm}$$
  $\frac{100 cm}{1 m}$   $\frac{0.01 m}{1 cm}$   $\frac{1 cm}{0.01 m}$ 

#### Unit Conversion Using Equivalencies

An international group of zookeepers with successful breeding programs made the following animal exchanges last year. Using the same bartering system, how many oryxes can a zoo obtain in exchange for 15 flamingos?

3 oryxes = 1 tiger 2 flamingos = 1 anteater 1 camel = 6 anteaters 5 lemurs = 1 rhino 1 rhino = 4 monkeys 3 lemurs = 1 camel 3 monkeys = 1 tiger 1 rhino = 4 oryxes

Step 1 Given 15 flamingos Need oryxes

**Step 2 Plan** flamingos  $\rightarrow$  anteaters  $\rightarrow$  camels  $\rightarrow$  lemurs  $\rightarrow$  rhinos  $\rightarrow$  oryxes

**Step 3** Conversion Factors

$$(15 \text{ flamingos}) \left(\frac{1 \text{ anteater}}{2 \text{ flamingos}}\right) \left(\frac{1 \text{ camel}}{6 \text{ anteaters}}\right) \left(\frac{3 \text{ lemurs}}{1 \text{ camel}}\right) \left(\frac{1 \text{ rhino}}{5 \text{ lemurs}}\right) \left(\frac{4 \text{ oryxes}}{1 \text{ rhino}}\right) =$$

3 oryxes





# 1.) Exchange of gases occurs in which of the following structures of the respiratory system?

- a) Alveoli
- b) Bronchioles
- c) Trachea
- d) Pleura

### 2.) Which of the following composes the rings that support the trachea?

- a) Spongy bone
- b) Fibrous ligaments
- c) Elastic tendons
- d) Hyaline cartilage

### 3.) Which of the following occurs if the epiglottis does not function properly?

- a) The client is unable to recall recent events
- b) The client coughs because food goes into the trachea
- c) The client cannot produce hormones from the pancreas
- d) The client becomes reproductively sterile

# 4.) Through which of the following does blood pass after leaving the right ventricle during contraction of the heart?

- a) Aorta
- b) Pulmonary Artery
- c) Vena cava
- d) Mitral valve

# 5.) After passing through the stomach, food continues into which of the following digestive structures?

- a) Duodenum
- b) Jejunum
- c) lleum
- d) Cecum

## 6.) Breakdown of which of the following begins in the small intestine?

- a) Protein
- b) Fats
- c) Fiber
- d) Carbohydrates

# 7.) Muscular tissue includes all of the following EXCEPT:

- a) Skeletal muscle
- b) Nervous muscle
- c) Cardiac muscle
- d) Smooth muscle

### 8.) Which of the following activities is most likely controlled by the nervous system?

- a) Remove heat from the blood
- b) Regulate blood pressure
- c) Provide nutrients to various parts of the body
- d) Control muscle growth

# 9.) Which of the following nervous systems directs the skeletal muscles to respond in the body's fight-or-flight response?

- a) Enteric
- b) Central
- c) Parasympathetic
- d) Sympathetic

# 10.) Which of the following structures is responsible for egg production?

- a) Vagina
- b) Fallopian tubes
- c) Ovaries
- d) Uterus

## 11.) The reproductive system works with other organ systems by:

- a) Influencing bone growth and form
- b) Releasing hormones that influence muscle strength
- c) Controlling the pituitary gland
- d) Removing some wastes from the lymphatic system

### 12.) Which of the following integumentary structures produces sweat?

- a) Sudoriferous glands
- b) Sebaceous glands
- c) Ceruminous glands
- d) Mammary glands

#### 13.) The adrenal glands are part of the

- a) Empathic system
- b) Endocrine system
- c) Immune system
- d) Respiratory system

# 14.) The pancreas is a component of which of the following systems?

- a) Lymphatic
- b) Nervous
- c) Endocrine
- d) Muscular

## 15.) Which of the following endocrine organs produces insulin?

- a) Thyroid
- b) Pituitary
- c) Adrenal gland
- d) Pancreas

### 16.) Which of the following structures stores urine before excretion?

- a) Kidneys
- b) Ureters
- c) Bladder
- d) Urethra

# 17.) Which of the following is the region of the kidney that contains the glomerulus of the nephron?

- a) Medulla
- b) Pelvis
- c) Cortex
- d) Adrenal

## 18.) Which of the following parts of the adult body makes white blood cells?

- a) Thymus
- b) Bone marrow
- c) Adenoid glands
- d) Liver

# 19.) The spleen and thoracic duct are parts of which of the following systems?

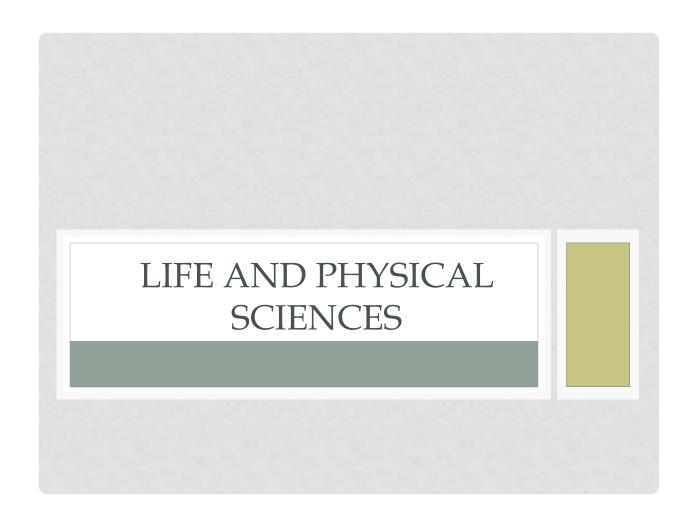
- a) Endocrine
- b) Reproductive
- c) Lymphatic
- d) Urinary

### 20.) Which group of major parts and organs make up the immune system?

- a) Lymphatic system, spleen, tonsils, thymus and bone marrow
- b) Brain, spinal cord, and nerve cells
- c) Heart, veins, arteries, and capillaries
- d) Nose, trachea, bronchial tubes, lungs, alveolus, and diaphragm

# 21.) Which of the following bones supports the tongue and is the only bone in the body not anchored to other bones?

- a) Patella
- b) Coccyx
- c) Hyoid
- d) Scapula



### 22.) Which of the following statement correctly compares prokaryotic and eukaryotic cells?

- a) Prokaryotic cells do not contain organelles, eukaryotic cells do.
- b) Both prokaryotic and eukaryotic cells have a membrane.
- c) Prokaryotic cells have a true nucleus, eukaryotic cells do not.
- d) Prokaryotic cells are more complex than eukaryotic cells.

### 23.) When does the nuclear division of somatic cells take place during cellular reproduction?

- a) interphase
- b) meiosis
- c) cytokinesis
- d) mitosis

# 24.) Which of the following is needed for cellular waste recycling?

- a) Centrosome
- b) Lysosome
- c) Chromosome
- d) Golgi Apparatus

#### 25.) What is the role of ribosomes?

- a) Make proteins
- b) Waste removal
- c) Transport
- d) Storage

#### 26.) What is the longest phase of the cell cycle?

- a) Mitosis
- b) Cytokinesis
- c) Interphase
- d) Metaphase.

### 27.) If a cell is placed in a hypertonic solution, what will happen to the cell?

- a) It will swell.
- b) It will shrink.
- c) It does not affect the cell.
- d) It will stay the same.

## 28.) Which of the following correctly lists the cellular hierarchy from the simplest to the most complex structure?

- a) Tissue, cell, organ, organ system organism
- b) Cell, tissue, organ, organ system, organism
- c) Organism, organ system, organ, tissue, cell
- d) Organ system, organism, organ, tissue cell

#### 29.) What are groups of cells that perform the same function called?

- a) tissues
- b) molecules
- c) plastids
- d) organs

#### 30.) Which of the following is an example of a tissue?

- a) liver
- b) mammal
- c) hamstring
- d) xylem

## 31.) Which of the following by-products of cellular respiration is used by autotrophs in the production of glucose?

- a) ATP
- b) Carbon dioxide
- c) Chlorophyll
- d) Oxygen

## 32.) Which of the following is the term given to multiple forms of a gene that are produced by mutation?

- a) Adaptation
- b) DNA
- c) Allele
- d) Natural Selection

### 33.) Nucleotides are to DNA as amino acids are to \_\_\_\_\_.

- a) Proteins
- b) Ribosomes
- c) RNA
- d) Cells

## 34.) Which of the following describes how a Punnett square can help predict the genotype of the offspring if the alleles of both parents are known?

- a) Provides information of dominant traits in the parents
- b) Shows what genotypes are possible in the offspring
- c) Provides probabilities of getting an incomplete dominance
- d) Show exactly what genotypes will occur in the offspring

B = alleles for brown eyes; g = alleles for green eyes

	В	g
В	BB	Bg
g	Bg	gg

### 35.) Which word describes the allele for green eyes?

- a) dominant
- b) homozygous
- c) heterozygous
- d) recessive

B =alleles for brown eyes; g =alleles for green eyes

	В	g
В	BB	Bg
g	Bg	gg

#### 36.) What is the possibility that the offspring produced will have brown eyes?

- a) 25%
- b) 75%
- c) 50%
- d) 100%.

#### 37.) A substance with a pH of 7 when dissolved in water is:

- a) A strong acid
- b) A weak base
- c) A neutral salt
- d) A weak acid

### 38.) An unknown element is found to contain 45 protons and an atomic mass of 64, what is its atomic number:

- a) It cannot be determined
- b) 19
- c) 45
- d) 64

### 39.) Water undergoes relatively minor temperature and phase changes compared to other substances due to both its:

- a) Low specific heat and low heat of vaporization
- b) Low specific heat and high heat of vaporization
- c) High specific heat and low heat of vaporization
- d) High specific heat and high heat of vaporization

40.) One group of chemical elements referred to as a family has gram atomic weights of approximately 19, 35.5, 79.9 and 126.9. If one of these elements is a solid at room temperature, its gram atomic weight must be:

- a) 19
- b) 35.5
- c) 79.9
- d) 126.9

# 41.) Which of the answer choices provided best defines the following statement? For a given mass and constant temperature, an inverse relationship exists between the volume and pressure of a gas?

- a) Charles' Law.
- b) Ideal Gas Law.
- c) Boyle's Law.
- d) Stefan-Boltzmann Law

#### 42.) The rate of a chemical reaction depends on all of the following except

- a) presence of catalysts.
- b) temperature.
- c) surface area.
- d) amount of mass lost.

## 43.) Which of the following is exchanged between two or more atoms that undergo ionic bonding?

- a) Transitory electrons
- b) Electrical charges
- c) Valence electrons
- d) Neutrons

### 44.) Which of the following formulas best summarizes a single replacement reaction?

- a)  $A + B \rightarrow AB$
- b)  $AB + C \rightarrow AC + B$
- c)  $AB + CD \rightarrow AD + CB$
- d)  $AB \rightarrow A + B$

 $\_$  CH<sub>4</sub> +  $\_$  O<sub>2</sub>  $\rightarrow$   $\_$  CO<sub>2</sub> +  $\_$  H<sub>2</sub>O

#### 45.) Which of the following correctly balances the combustion reaction above?

- a)  $CH_4 + O_2 \rightarrow CO_2 + H_2O$
- b)  $CH_4 + 3O \rightarrow CO + 2H_2O$
- c)  $CH_4 + O_2 \rightarrow CO_2 + 2H_2O$
- d)  $CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$

## 46.) When an automobile traveling at 60 miles per hour is brought to a rapid stop, the two types of energy most involved are

- a) Potential and heat
- b) Potential and kinetic
- c) Kinetic and chemical
- d) Kinetic and heat



Robert Koch, a German physician, helped to establish the Germ Theory of Infectious Disease by a chain of postulates that bear his name. The postulates demonstrated that a specific pathogen was capable of generating disease in a human host. Koch's Postulates entailed: (1) recovering a suspected pathogen from a diseased host, (2) growing the pathogen on a culture medium, (3) isolating the pathogen, (4) establishing the pathogen's identity.

#### 47.) What is the most logical step (5) of the postulate?

- a) Inject the isolated pathogen into a diseased host to determine if its condition worsens.
- b) Inject the isolated pathogen into a heathy host and monitor for signs and symptoms of disease
- Serially dilute the pathogen and see if it will continue to grow in pure culture
- d) None of the above

48.) Pathogenic bacteria stimulate the release of macrophages which release interleukins that activate prostaglandins. This causes a rise in body temperature (fever). The best experimental protocol based on Koch's theory is to test the hypothesis that acetyl salicylic acid (aspirin) reduces fever is to treat:

- a) One patient with 6 x 102 mg aspirin. Take his/her temperature initially and every hour for six hours.
- b) Six patients with 6 x 102 mg aspirin and follow the same protocol as in option a.
- c) Six patients with 6 x 102 mg aspirin and check their temperatures in 5 minutes.
- d) Six patients and check their temperatures in 24 hours.

### 49.) Which of the following is considered least useful in conducting quantitative scientific research?

- a) Modeling data
- b) Applying empirical formulas
- c) Using highly precise measurement tools
- d) Recording qualitative observations

Soil Samples				
Nutrient	Sample 1	Sample 2		
Nitrates	Yes	Yes		
Phosphates	Yes	No		

## 50.) A student is testing the materials in two different soil samples. Which of the following assumptions can be inferred from the data presented in the table?

- a) Different soils contain different nutrients
- b) Sample 1 is the best soil
- c) Nitrates are more frequently found in soil than are phosphates
- d) Most plants thrive in nitrate-rich soil

## 51.) In a medication study, population A is given the medication, and population B is given a placebo. Which of the following describes population B?

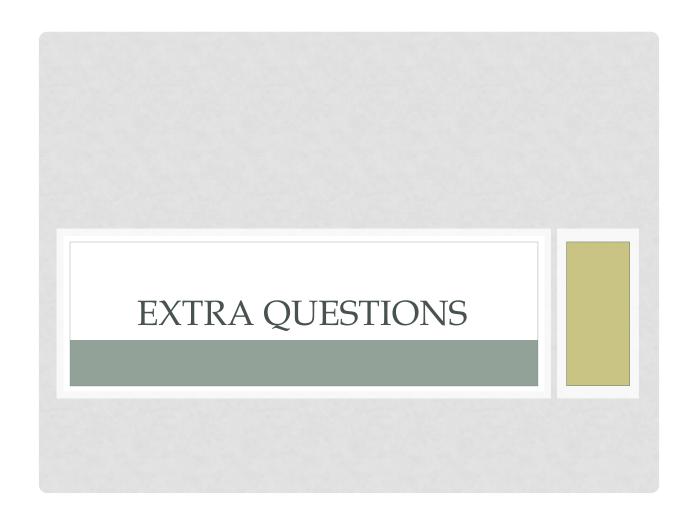
- a) Control group
- b) Treatment group
- c) Dependent variable
- d) Independent variable

## 52.) A student measures 2,000 mL of water into a cylinder. If water has a mass of 1 g/mL, which of the following is the approximate mass of the water?

- a) 200 mg
- b) 2g
- c) 200 cg
- d) 20 hg

#### 53.) Which is an example of deductive reasoning?

- a) Only 21% of a town's population have expressed a desire to ban all cars. Therefore, the new proposition banning cars in the state is not likely to pass.
- b) People who brush their teeth regularly have fewer instances of heart disease. Therefore, good dentistry can prevent heart attacks.
- c) All soccer players who play professionally can kick well. Therefore, any future soccer player who is recruited to play professionally will be able to kick well.
- d) All secretaries are good typists. Cynthia is a secretary. Therefore, she is a good typist.



### 54.) The spleen functions are part of the \_\_\_\_\_ system.

- a) Digestive
- b)Lymphatic
- c) Endocrine
- d) Circulatory

## 55.) Which of the following is a possible cause of herniated discs.

- a) hepatitis
- b) whiplash
- c) Plantar fasciitis
- d) ulcer

## 56.) Which of the following is a characteristic of the autonomic nervous system?

- a) It regulates the voluntary control of body movements through the skeletal muscles.
- b) It is part of the nervous system consisting of the brain and spinal chord.
- c) It regulates involuntary activity in the heart, stomach, lungs, and intestines.
- d) It is thought to be the center of intelligence.

## 57.) During photosynthesis, which two compounds are combined to create the output of glucose and oxygen?

- a) Carbon dioxide and water.
- b) Carbon dioxide and bicarbonate
- c) Bicarbonate and water
- d) Carbon dioxide and multiple alkaline substances.

## 58.) What type of bond between the complimentary bases of DNA stabilizes the double helix structure?

- a) covalent
- b)ionic
- c) hydrogen
- d) nuclear

### 59.) Which of the following subatomic particles are found inside of an atom's nucleus?

- a) Electrons, neutrons, protons
- b) Neutrons, protons
- c) Electrons, protons
- d) electrons

#### 60.) Which of the following statements is true regarding trophic levels?

- a) Tertiary consumers acquire more energy content than secondary consumers.
- b) Producers acquire less energy than primary consumers.
- c) Secondary consumers acquire more energy than primary consumers.
- d) Tertiary consumers acquire less energy than primary consumers.

#### 61.) Why does the human eye perceive a red colored dress as the color red?

- a) The molecules of the dress do not absorb red light wavelengths.
- b) The molecules of the dress absorb green and blue light wavelengths.
- c) A red dress will primarily absorb red light wavelengths.
- d) A red dress will not absorb light wavelengths from non-red colors.

#### 62.) In a lab experiment designed to test the rate at which plants grow under artificial light, the kind of light used is which type of variable?

- a) dependent
- b)independent
- c)random
- d) responding

# 63.) Which organ system is primarily responsible for regulating metabolism, mood, and growth?

- a) respiratory
- b) endocrine
- c) digestive
- d) lymphatic

# 64.) In a vacuum, why doesn't an elephant accelerate faster than a penny as it falls to the ground?

- a) Vector components of an elephant are more complex than those of a penny
- b) An elephant is not a projectile, while a penny is
- c) They both have an acceleration of 9.8 m/s^2
- d) The elephant is greater in mass but is slowed less by the effects of air resistance.

#### 65.) Which train described below would have the greatest momentum?

- a) A 9500 kg train car moving at 200 mph
- b) An 8000 kg train car moving at 215 mph
- c) An 9300 kg train car moving at 190 mph
- d) An 8600 kg train car moving at 195 mph

66.) A scientist found that when an invasive species was introduced into a river, the population of salmon native to the region decreased. The type of correlation between these two populations could be described as

- a) A direct correlation
- b) An inverse correlation
- c) A direct and indirect relationship
- d) No decisive relationship

#### 67.) The addition of a catalyst to chemical reaction will have what effect?

- a) Increase the energy required for the reaction to take place.
- b) Increase the time required for the reaction to take place.
- c) Increase the rate at which the reaction takes place.
- d) Reduce the amount of products in the reaction.

### 68.) The pharynx is part of what body system?

- a) respiratory
- b) muscular
- c) lymphatic
- d) circulatory

### 69.) Which of the following is true about eukaryotic cells?

- a) They do not contain lysosomes
- b) They contain one chromosome
- c) They do not contain a nucleus
- d) They contain mitochondria

### 70.) What characteristic of an element determines its specific isotope?

- a) Number of protons
- b) Number of neutrons
- c) Number of electrons
- d) Number of quarks

#### 71.) What is not true about RNA?

- a) It contains a sugar called ribose
- b) Thymine is not one of its base pairings
- c) It is unstable in alkaline conditions
- d) Its sugar is more reduced than DNA's sugar

#### 72.) Which of the scenarios would NOT give a normal distribution?

- a) A distribution of the yearly income of families in the US
- b) The distribution of heights in a large sample of people.
- c) The percentage of toxic wastes and pollution in the atmosphere vs. the lifespan of organisms in the location.
- d) A curve with 97% of the population within the first two standard deviations.

#### 73.) In a cell, the Golgi apparatus is found in what location?

- a) Inside the nucleus
- b) Inside mitochondria
- c) In the cell wall
- d) In the cytoplasm

#### 74.) Which taxonomy rank is the nextsmallest after Order?

- a) Phylum
- b) Family
- c) Species
- d) Genus

#### 75.) In plants \_\_\_\_\_ involves the formation of a \_\_\_\_\_?

- a) Cytokinesis, cleavage furrow
- b) Telophase, cell plate
- c) Cytokinesis, cell plate
- d) Prophase, DNA

#### 76.) Which base is NOT found in DNA?

- a) guanine
- b) cytosine
- c) uracil
- d) adenine

### 77.) Which of the following layers of the atmosphere is the closest to space?

- a) troposphere
- b) stratosphere
- c) mesosphere
- d) thermosphere

### 78.) Which is NOT one of the four basic types of tissue?

- a) parenchyma
- b) epithelial
- c) nervous
- d) connective

#### 79.) The stomach is \_\_\_\_\_ to the small intestine.

- a) lateral
- b) superior
- c) posterior
- d) proximal

80.) Which of the following is the atomic mass of an atom containing 42 protons, 42 electrons and 37 neutrons?

- a) 42
- b) 79
- c)84
- d) 121

81.) A patient who has suffered head trauma is not able to recognize people he has met around an hour earlier but is still able to recognize people he met before the injury. He most likely has damage to the:

- a) Medulla oblongata
- b) Corpus callosum
- c) Hippocampus
- d) Pituitary gland

#### 82.) Of the following, which is not a type of chemical bond?

- a) Ionic
- b)covalent
- c) polar
- d) magnetic

# 83.) If the amount of hydrogen in a balloon of fixed size is doubled, what happens to the mass and density of the balloon?

- a) The mass and density both decrease
- b) The mass increases but the density decreases
- c) The mass decreases but the density increases
- d) The mass and density both increase

# 84.) If you have 200 mL of a 60% sodium chloride solution, how much NaCl is dissolved in the solution?

- a) 20 g
- b)50 g
- c)80 g
- d) 120 g

85.) A scientist wants to write an equation using the variables X, Y, and Z. What is the proper relationship between the variables if X represents time, Y represents energy, and Z represents power?

- a)2XY=Z
- b) XZ=2Y
- c) Z=X/Y
- d)Z=Y/X

Power = Energy/Time

#### 86.) What type of cells result from mitosis?

- a) One diploid cell
- b) Two haploid cells
- c) Two diploid cells
- d) Four haploid cells

# 87.) The presence of which hormone would NOT cause an increase in water retention?

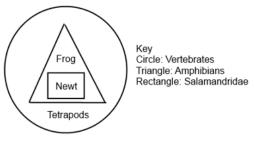
- a) renin
- b) ANP
- c) ADH
- d) Aldosterone

#### 88.) Which of the following hormones are secreted directly by the hypothalamus?

- a) melatonin
- b) oxytocin
- c) dopamine
- d) calcitonin

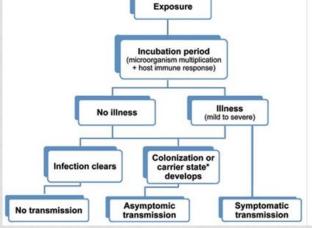
Prolactin Inhibiting Hormone

89.) Which of the following is true about the frog?



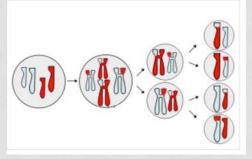
- a) It is a member of the salamandridae family
- b) Type of amphibian
- c) It is a non-vertebrate
- d) It is closer to most tetrapods than to most newts.

90.) What would this diagram be useful for?



- a) Determining outcomes for potential infection
- b) Diagnosing an infectious disease
- c) Controlling the spread of disease in undeveloped countries
- d) Training nurses to detect early onset symptoms of disease

### 91.) What process is illustrated in the diagram above?



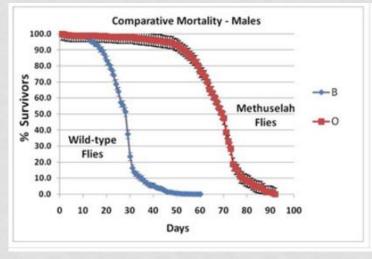
- a) meiosis
- b) mitosis
- c) replication
- d) codification

### 92.) How many carbon dioxide molecules are required to balance the equation

$$4C_6H_{12}O_6 + 24O_2 \rightarrow CO_2 + 24H_2O + Energy$$

- a)4
- b)8
- c) 16
- d)24

93.) The graph below records the death rate of two types of male files a certain number of days after a chemical pesticide is sprayed. What is the probability a male methuselah fly will be alive after 75 days after exposure to the pesticide?

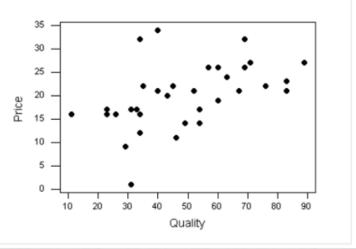


d) 1/5

b) 1/3

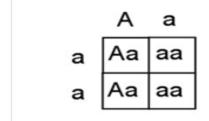
c) 1/4

94.) What type of correlation is presented between price and quality?



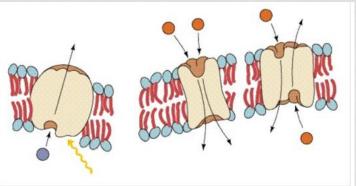
- a) Strong direct correlation
- b) Weak direct correlation
- c) Strong indirect correlation
- d) No correlation

95.) The square below is based on the eye color of two parents, one of whom has brown eyes (A) and carries the recessive gene for green eyes (a). What is the probability that a biological child of these parents will have brown eyes?



- a)0%
- b) 25%
- c) 50%
- d) 100%

96.) Which of the following terms do these diagrams NOT portray?



- a) Active transport
- b) Facilitated Transport
- c) Antiporter
- d) Ion Channel

### 97.) Cheetahs, rainbow trout, and inchworms belong to the same

- a) Order
- b) Kingdom
- c) Class
- d) Phylum

### 98.) In which part of the heart does oxygenated blood flow out of?

- a) Right Atrium
- b) Right Ventricle
- c) Left Ventricle
- d) Left Atrium



#### **Questions**



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