ATI TEAS 7 Practice Questions and Answers.

1) Chemical bonding –
   a. Uses electrons that are closest to the nucleus of the atoms bonding
   b. Always uses electrons from only of the atoms involved
   c. Uses all the electrons in all atoms involved
   d. Uses the valence electrons of all the atoms involved

2) Which of the following would have the most dramatic effect in changing the reaction rate?
   a. Decreasing the temperature by two-fold
   b. Increasing the pressure by two-fold
   c. Decreasing the activation energy by three-fold
   d. Decreasing the concentration of reactants by two-fold

3) Group one in the periodic table has_____valence electrons and is_____reactive than Group two.
   a. Zero; more
   b. Zero; less
   c. One; less
   d. One; more

4) Enzymes are created from amino acid chains. As such, what might prevent the action of an enzyme?
   a. A pH close to 7
   b. A high temperature
   c. The lack of hydrogen ions in solution
   d. A lack of ATP in the cell

5) If a scientists want to determine the rate at which an enzyme works, what could he or she measure?
   a. The rate at which the enzyme is degraded

b. The rate at which the product disappears

c. The rate at which the reactants disappear

d. The rate at which the products appears

6) The rate of a chemical reaction depends on all of the following except

a. Surface area

b. Temperature

c. Presence of catalysts

d. Amount of mass lost

7) 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. Boyle's Law

b. Ideal Gas Law

c. Charles' Law

d. Stefan-Boltzmann Law

8) Prokaryotic and eukaryotic cells are similar in having which of the following?

a. Integral membrane proteins in the plasma membrane

b. Presence of a nucleus

c. Membrane-bound organelles

d. Protein-studded DNA

9) Blood cells that are responsible for transportation of oxygen are called

a. Leukocytes

b. Thrombocytes

c. Erythrocytes

d. Plasma cells

10) What is another name for the Adam's Apple?

a. Vocal box

b. Thyroid cartilage

c. Cricoid cartilage

d. Hyoid bone

11) When exhaling, the diaphragm

a. Relaxes

b. Contracts

c. Moves down and in

d. Stays in the same position

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

a. Tissue, cell, organ, organ system, organism

b. Organism, organ system, organ, tissue, cell

c. Organ system, organism, organ, tissue, cell

d. Cell, tissue, organ, organ system, organism

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

a. It does not affect the cell

b. It will swill

c. It will stay the same

d. It will shrink

Hypertonic solution is a solution with a higher particle concentration and lower water content outside the cell. Water moves from the cell to the solution, losing water and shrinking.

14) What is the longest phase of the cell cycle?

a. Cytokinesis

b. Interphase

c. Metaphase

d. Mitosis

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

	B	g
B	Bg	Bg
g	Bg	gg

What word describes the allele for green eyes?

a. Heterozygous

b. Dominant

c. Recessive

d. Homozygous

i. Recessive alleles are represented by lower case letters

16) What is the possibility that the offspring produces will have brown eyes?

a. 100%

b. 25%

c. 75%

d. 50%

17) What are groups of cells that perform the same function?

a. Molecules

b. Organs

c. Plastids

d. Tissues

18) When does the nuclear division of somatic cells take place during cellular respiration?

a. Mitosis

b. Interphase

c. Meiosis

d. Cytokinesis

i. Nuclear division of somatic cells takes place during mitosis

19) Which group of major parts and organs make up the immune system?

a. Lymphatic system, spleen, tonsils, thymus, and bone marrow

b. Nose, trachea, bronchial tubes, lungs, alveolus, and diaphragm

c. Brain, spinal cord, and nerve cells

d. Heart, veins, arteries, and capillaries

20) What is the role of ribosomes?

a. Waste removal

b. Make proteins

c. Storage

d. Transport

21) Which of the following is an example of a tissue?

a. Mammal

b. Xylem

c. Liver
d. Hamstring

22) The adrenal glands are part of the
a. Emphatic system
b. Respiratory system
c. Endocrine system
d. Immune system

23) Which of the following is exchanged between two or more atoms that undergo ionic bonding?
a. Transitory electrons
b. Electrical charges
c. Neutrons
d. Valence electrons

24) Blood is prevented from changing direction in the veins by
a. Pressure generated from the heart
b. Valves
c. Vacuum generated from the heart
d. Squeezing at the vein by nearby skeletal muscle

25) The liquid part of the blood is called
a. Plasma
b. Blood fluid
c. Serous fluid
d. Serum

26) Which of the following is true regarding the periodic table?
a. Groups have the same number of valence electrons and similar chemical properties
b. Periods are vertical columns
c. Atomic radius increases as you go from left to right
d. Alkali metals are frequently found by themselves in nature

27) A double bond between two atoms, for example the double bond between oxygen in O2 has how many electrons?
a. 2

b. 4

c. 6

d. 8

28) What is the anterior bone of the lower leg?

a. Ulna

b. Fibula

c. Tibia

d. Radius

29) Assuming every variable unmentioned in the Ideal Gas Law remains constant, which is true?

a. As the temperature increases, the pressure of a gas must decrease

b. As the number of molecules in a gas increases, the temperature must increase

c. As volume increases, the number of molecules must increase

d. As pressure increases, volume must increase

30) The humerus and ulna form the

a. Shoulder joint

b. Elbow joint

c. Wrist joint

d. Knee joint

31) The patella is also called the

a. Breastbone

b. Kneecap

c. Finger bone

d. Funny bone

32) The bone that is stationary during movement is called the

a. Insertion

b. Agonist

c. Origin

d. Antagonist

33) Which of the following is the process that produces a liquid fro a gas?

a. Vaporization

b. Condensation

c. Sublimation

d. Denitrification

34) What is the primary function of the quadriceps muscle?

a. Extend the knee joint

b. Flex the knee joint

c. Extend the hip joint

d. Flew the hip joint

35) Which part of the brain is responsible for higher brain functions?

a. The pons

b. The cerebral cortex

c. The cerebellar cortex

d. Medulla

36) How many thoracic spinal nerves are there in the human body?

a. 8

b. 9

c. 12

d. 14

37) Which of the following is not a specialized sense?

a. Touch

b. Balance

c. Sight

d. Hearing

38) In which region of the small intestine are most of the nutrients absorbed?

a. The jejunum

b. The ileum

c. The duodenum

d. The colon

39) Which type of nutrient is broken down by trypsin?

a. Protein

b. Fat

c. Sugar

d. Carbohydrates

40) According to the graph below, which is the most effective enzyme?

a. A
b. B
c. C
d. D

41) What is true of elements found in the same group (column) in the Periodic Table?
a. They have the same atomic mass
b. They have the same level of reactivity
c. They have the same number of protons
d. They have the same number of valence electrons

42) Compounds that are acidic will be able to lower the pH of a solution by doing which of the following?
a. Accepting H+ ions
b. Releasing H+ ions
c. Binding with acidic species in solution
d. Reducing oxidation species in solution

43) Which of the following elements is the most electronegative?
a. Chlorine
b. Iron
c. Magnesium
d. Silicon

44) According to Newton's first law, how fast will a 10-kilogram object accelerate when pushed with 50 Newtons of force?
a. 2.5 m/s^2
b. 5.0 m/s^2
c. 8.0 m/s^2
d. 15.0 m/s^2

45) Upon touching a chair cushion and then a metal plate, John notices that the metal plate feels much colder than the cushion, although the surrounding air temperature is the same. What is an explanation for this?