Anatomy & Physiology I
Exam 1 Practice Questions

Chapter 1

1) The goal of the body is to reach this which means internal equilibrium.
   A. Homeostasis
   B. Homo Erectus
   C. Equalizer
   D. Hemostasis
2) The type of metabolic reaction wherein molecules are combined to create more complex ones is called?
   A. Catabolic
   B. Anabolic
   C. Bigabolic
   D. Metabolic
3) A catabolic reaction is one wherein molecules are _____.
   A. molecules are combined with enzymes to make cats.
   B. larger molecules are broken down simpler/smaller ones.
   C. smaller molecules are combined into larger ones.
   D. enzymes are formed from the cations of the anions of the molecules.
4) The simplest biological organization is the ___ level?
   A. Chemical
   B. Tissue
   C. Enzyme
   D. Molecule
5) The most complex biological organization is the ___ level?
   A. Tissue
   B. Organism
   C. Organ System
   D. Organ
6) All levels of a biological system ranked from simplest to complex is?
   A. Organ, Chemical, Cell, Tissue, Molecule, Organ, System, Organism
   B. Organ System, Organism, Molecule, Organ, Cell, Chemical, Tissue
   C. Cell, Molecule, Organ System, Chemical, Tissue, Organism, Organ
   D. Chemical, Molecule, Cell, Tissue, Organ, Organ System, Organism
7) In anatomical terms the head is referred to as?
   A. Facies
   B. Axilla

C. Cranium
D. Olecranon
E. Cephalon

8) The skull is also referred to as?
A. Mentis
B. Oris
C. Cranium
D. Facies

9) The cervicis or cervical region of the body is referring to what region?
A. Vaginal
B. Pubic
C. Mouth
D. Neck

10) The thoris or thorax houses the thoracic region of the body. It is more commonly known as what?
A. Pelvic
B. Leg
C. Chest
D. Neck

11) The pollex is the ___ and the hallux is the ___.
A. big toe, thumb
B. thumb, big toe
C. middle toe, pinkie finger
D. pinkie finger, middle toe

12) The nervous system's primary function is?
A. Detecting/Processing Information & Sending out actions to the body
B. Supports the body structurally
C. Digesting your food
D. Secretes Hormones

13) The endocrine system's primary function is?
A. Digesting your food
B. Supports the body structurally
C. Regulating hormone levels in the body
D. Detecting/Processing Information & Sending out actions to the body

14) The digestive system's primary function is?
A. Digesting your food
B. Helps in the reproductive process
C. Handles movement of the body
D. Supports the body structurally

15) The muscular system ____?
A. Handles movement of the body
B. Delivers nutrients and Oxygen to the body

C. Supports the body structurally
D. Helps in the reproductive process

16) The lymphatic system's primary function is ___?
A. Removes carbon dioxide from the body and delivers oxygen to the blood
B. Protection of organs
C. Controls water balance in the body & removes wastes from the blood and excretes them
D. Immune system support & returns fluids to the body

17) The respiratory system is involved with?
A. Removal of carbon dioxide from the body and delivery oxygen to the blood
B. Protection of organs
C. Controls water balance in the body & removes wastes from the blood and excretes them
D. Immune system support & returns fluids to the body

18) When moving your hand from the right side of your abdomen region towards your umbillicus (navel) the movement direction you've just done is?
A. Lateral
B. Caudal
C. Cranial
D. Medial

19) When moving from the cranium to the tailbone down the spine you are moving in what direction?
A. Inferior
B. Lateral
C. Cranial
D. Medial

20) When you rotate your forearm so that your palm is facing the ground the direction you have just moved it is called?
A. Superior
B. Inferior
C. Supine
D. Prone

21) Moving ventrally from your lungs in the thoracic cavity would cause you to move towards ___ and the movement is also called ___.
A. the spine, posterior
B. the mamma(breasts), anterior
C. the mamma(breasts), dorsal
D. the spine, ventral

22) A cut that barely breaks the skin is also said to be a ___ cut because it has not passed through very many layers of the dermis(of the integumentary system)
A. anterior
B. superficial
C. deep
D. posterior

23) The plane where the body is cut so that there is a ventral and posterior half is called?
    A. Transverse
    B. Halved
    C. Sagittal
    D. Coronal
24) When the body is cut across the middle of the body into left and right halves a cut has been made across the ____ plane.
    A. Transverse
    B. Halved
    C. Sagittal
    D. Coronal
25) The cranial body cavity contains what organ(s)?
    A. Heart & Lungs
    B. Brain
    C. Stomach
    D. Spinal cord & peripheral nerves
26) The body cavity that contains the lungs and heart is the?
    A. Abdominal
    B. Cranial
    C. Thoracic
    D. Pelvic
27) The cavity containing the stomach is the?
    A. Abdominal
    B. Cranial
    C. Thoracic
    D. Pelvic
28) Starting from the tip of your index finger on your left hand and then moving upwards on the arm what direction are you moving?
    A. Proximal
    B. Distal
    C. Caudal
    D. Dorsal
29) The pleural cavity contains what organ(s)?
    A. Heart
    B. Liver
    C. Kidney & Adrenal Glands
    D. Spleen
    E. None of the Above.
30) The organs of reproduction are housed in the ___ cavity.
    A. Abdominal
    B. Cranial
    C. Thoracic

D. Pelvic

31) The serosa surrounding the organ itself is called the ___ membrane.
A. Mucosa
B. Parietal
C. Visceral
D. Organelles

32) The parietal membrane is the most ___ of the serosa surrounding body cavities.
A. Lateral
B. Superficial
C. Deep
D. Ventral

33) The diaphragm seperates the ___ and ___ cavities and lies _____ to the _____ cavity?
A. thoracic, abdominopelvic, superior, thoracic
B. thoracic, abdominopelvic, inferior, thoracic
C. abdominal, pelvic, inferior, pelvic
D. abdominal, pelvic, superior, pelvic

34) The fluid that is emitted from the mesothelium of the serous membranes is called ___ and its primary function is _____
A. Serous fluid, reducing friction
B. Bile, consuming pathogens
C. Serous fluid, recycling proteins
D. Blood, producing sweat

35) Blood sugar levels in the body drop below normal levels causing the alpha cells of the pancreas to release glucagon which is then processed in the liver to cause glycogen to be converted to glucose which is then release into the blood causing blood sugar levels to return to normal. What type of feedback loop is described above?
A. Lateral
B. Negative
C. Increasing
D. Positive

36) A diabetic's blood sugar level rises above normal levels causing the beta cells of the pancreas to release more insulin which in turn causes cells in the body to take in that glucose and convert it to glycogen, followed by blood sugar levels returning to normal. The feedback loop described above is what?
A. Lateral
B. Negative
C. Increasing
D. Positive

37) In anatomical terms of the forearm is referred to as the ___?
A. Palmar
B. Carpal
C. Manual

D. Brachial
E. None of the above.

Chapter 2

1) The smallest unit of matter is called what?
   A. Molecule
   B. Mole
   C. Isotope
   D. Atom
2) Electrons are contained within the ___ cloud.
   A. Electronic
   B. Elemental
   C. Electron
   D. Atomic
3) A group of atoms that are bound together by a chemical bond is called a what?
   A. Mole
   B. Isotope
   C. Molecule
   D. Atom
4) The combined mass of all of the neutrons, electrons and protons of an atom is called the what?
   A. Atomic weight (or one mole)
   B. Isotope
   C. Molecule
   D. atom
5) A mole is a number that is in direct relation to what attribute of an atom?
   A. Number of neutrons
   B. Atomic weight
   C. Elemental symbol
   D. Periodic number
6) The positively charged part of an atom is the ___?
   A. neutron
   B. proton
   C. electron
   D. positron
7) The outermost shell (commonly shown in diagrams as a ring) contains 2 electrons for the first shell and then 8(in most cases) for all others is called what?
   A. Cloud
   B. Valance
   C. Outermost
   D. Greatest
8) An isotope is an atom that contains a different amount of what in comparison with other atoms of its element?
   A. Electron
   B. Positron

C. Proton
D. Neutron

9) An ion is an atom that has a different number of what types of particle and usually has a $^{+}$or a $^{-}$ after their elemental symbol.
A. Electron
B. Neutron
C. Positron
D. Proton

10) An atom that receives an electron from another atom is called the acceptor and it usually becomes a(n) ___.
A. Cation
B. Positivion
C. Negativion
D. Anion

11) An atom that instead gives up an electron is called a ____ and it becomes a cation.
A. donator
B. donor
C. acceptor
D. giver

12) An ionic bond is formed when a ___ and a(n) ___ come together. An example of this type of bond is NaCL (or table salt)
A. Positivion, negativion
B. Giver, receiver
C. Cation, anion
D. None of the above.

13) A covalent bond is one where elements are held together through ____.
A. the receiver getting an electron from a donor
B. the sharing an electron between both elements
C. stealing an electron from a neighboring molecule

14) A type of bond where atoms are sharing electrons and there are regions that are slightly positive and slightly negative as seen water is what type of bond and which is a subset of this type.
A. Hydrogen, Polar
B. Hydrogen, Nonpolar
C. Water, Nonpolar
D. Water, Polar

15) A triple covalent bond is where multiple elements are held together through the sharing of ____.
A. two electrons
B. four electrons
C. three electrons
D. single electron

16) A chemical reaction where more energy is released than what is required to start the reaction is called?
    A. Endergonic
    B. Exergonic
    C. Catabonic
    D. Anabonic
17) When elements that make up a molecule have their bonds changed it is called a(n)?
    A. Chemical reaction
    B. Extracellular reaction
    C. Molecular recombination
    D. Atomic screwdriver
18) The chemicals/molecules that exist before a chemical reaction starts and are acted upon by the reaction itself are called what?
    A. Atoms
    B. Reactants
    C. Products
    D. Elements
19) The end results of a chemical reaction that are left over after a chemical reaction are called what?
    A. Reactants
    B. Atoms
    C. Products
    D. Elements
20) A chemical reaction where reactants are combined into a resulting product is called?
    A. Synthesis
    B. Decomposition
    C. Exchange
    D. Enzyme
21) In the body a synthesis reaction can also be called?
    A. Anabolism
    B. Catabolism
    C. Osmosis
    D. Hydrolysis
22) An exchange reaction occurs when both synthesis and decomposition occur and the elements of reactants are ____.
    A. broken apart
    B. combined
    C. exchanged
    D. broken up

23) An endergonic reaction is one where ____.
   A. less energy goes into the reaction than is released and the products are less active than the reactants
   B. more energy goes into the reaction than is released and the products store the excess energy that fueled the reaction
   C. more energy goes into the reaction than is released and the reactants absorb this energy to create more reactants.
   D. None of the above.
24) One of the most important types of proteins in the body is the ___ which is a type of ___ and when added to a chemical reaction causes the ___ to decrease.
   A. protein, catalyst, energy to start a reaction
   B. catalyst, enzyme, products
   C. enzyme, catalyst, reactivity
   D. enzyme, catalyst, energy required to start the reaction
25) Water is known as the universal __ due to its high level of ___ which means the ability to integrate a substance by dissolving it within it.
   A. osmosis, solvent
   B. solvent, solubility
   C. hydrophilic, solvent
   D. solubility, solvent
26) Water has a high heat capacity which means?
   A. the energy required to decrease the kinetic energy of a substance
   B. the ability for a substance to withstand high amounts of kinetic energy
   C. the energy required to raise the temperature of a substance by 1*C
   D. None of the above.
27) Due to water molecules having very little friction between each-other it makes a great?
   A. Lubricator
   B. Kinetic energy
   C. Osmosis
   D. Solvent
28) An inorganic substance that conducts an electrical current within a solution as you see in batteries of all types is called a?
   A. Lipid
   B. Electrolyte
   C. Acid
   D. Salt
29) Molecules that interact with water with little energy required are called?
   A. Hydrophobic
   B. Hydrophilic
   C. Aquamamor
   D. Humiditatem

30) Contrarily molecules that do not readily interact with water and instead repel water are called?
   A. Hydrophobic
   B. Aquaamor
   C. Hydrophilic
   D. Humidtatem
31) When water is extracted from a substance it is called?
   A. Aquadamnum
   B. Desiccation
   C. Hydrolysis
   D. Dehydration
32) When water is added to a solvent it is called?
   A. Hydrolysis
   B. Dehydration
   C. Desiccation
   D. Copia aquae
33) The neutral Ph which is the same as water is?
   A. 7.0
   B. 7.5
   C. 6.0
   D. 10.0
34) Which of the following is not a function of proteins?
      1. Defense(antibodies)
      2. Changing states of matter
      3. Coordination/Control(hormones)
      4. Support (Structural)
      5. Metabolic Regulation (Enzymes)
      6. Buffering (regulation of Ph)
      7. Controlling Neural Activity
      8. Transport (carrier)
      9. Movement(contractile)
   B. 2, 7, 9
   C. 1, 7, 9
   D. 8, 6, 4
   E. 2, 7
35) The primary function(s) of fatty acids are?
   A. Energy reserves
   B. Facilitating active membrane transport of lipids, energy reserves
   C. helping dissolve chemicals in water
   D. insulation

36) The steroid cholesterol is a building block of what important chemical that helps with regulation of the body's systems?
   A. Hormones
   B. Nutrients
   C. Probiotics
   D. Synovial fluid
37) Enzymes do what for a chemical reaction?
   A. Reduce the energy required to start the reaction.
   B. Increase the energy required to start a reaction.
   C. Decrease the solubility of water.
   D. None of the above.
38) When an enzyme binds to a protein what happens to it?
   A. It changes shape and the function stays the same
   B. It keeps the same shape and the function changes
   C. It keeps the same shape and the function remains the same.
   D. It changes shape and thus the function changes
39) ATP is used for what purposes in the body?
   A. An energy source used for pretty much everything in the body.
   B. A protein to fuse together DNA/RNA.
   C. An insulator for the viscera to protect them from kinetic damages.
   D. All of the above.

Chapter 3

1) Cells that are not involved with reproduction are called?
   A. Somatic
   B. Organelles
   C. Gametes
   D. Plasma membranes
2) The organizational levels of a cell ranked from innermost to outermost are?
   A. Cell membrane, nucleolus, nucleus, cell body
   B. Cell body, cell membrane, nucleolus, nucleus
   C. Nucleolus, nucleus, cell body, cell membrane
   D. Cell body, cell membrane, nucleolus, nucleus
3) The cytoplasm within a cell is also called the __ and contains what?
   A. Nucleus, chromatin, cell membrane
   B. Nucleoplasm, most cellular organelles, lysosomes
   C. Cell body; most cellular organelles, cytosol
   D. None of the above.
4) The nucleus contains what?
   A. Chromosomes
   B. Lysosomes
   C. Ribosomes
   D. Plasma membrane
5) The rough endoplasmic reticulum gets its name from the many __ that are made from ___ that are attached to its surface and it's primarily involved in ___.
   A. steroids, ribosomes, ATP production
   B. proteins, ribosomes, protein synthesis
   C. ribosomes, proteins, protein synthesis
   D. None of the above.
6) Mitochondria's primary function is what?
   A. Surrounding proteins in vesicles
   B. Cleaning up the cell
   C. Protein synthesis
   D. ATP production
7) This organelle is involved with packaging proteins into vesicles so that they can be transported to their destination.
   A. Golgi postman
   B. Golgi packager
   C. Golgi apparatus
   D. None of the above.
8) The organelle lysosome is also known as the ___.
   A. builders of the cell
   B. transport system of the cell

C. synthesizer of the cell
D. cleaners of the cell

9) Centrosomes contain centrioles and their primary functions are?
   A. Helping the movement of chromosomes during cell division & providing support for the microtubules of the cytoskeleton.
   B. Moving lysosomes across the cell membrane & allowing easier transport of water-based solutes.
   C. Providing structural support for the RER during cell division & movement of the cell membrane.
   D. This organelle's primary functions are providing structural support of cell membrane and movement of cellular materials and structures.
10) The difference between active transport and passive transport is that active transport requires ___ as it is moving ___.
   A. energy, against the gradient
   B. energy, with the gradient
   C. no energy, against the gradient
   D. no energy, with the gradient
11) The plasma membrane contains a Phospholipid bilayer that controls ___.
   A. the movement of chemicals across the membrane.
   B. Steroid production in the cell.
   C. ATP production in the mitochondria.
   D. All of the above.
12) The phosolipid bilayer contains heads that are ___ and tails that are ___.
   A. hydrophilic, hydrophobic
   B. hydrophobic, hydrophilic
   C. aquasanum, hydrophilic
   D. hydrophobic, aquasanum
13) Cilia are structures that are connected to the cell membrane have two primary functions that are?
   A. sensory, movement of the cells
   B. sensory, movement of fluids across cell membrane
   C. increasing surface area of the cell, movement of the cells
   D. All of the above.
14) The small extensions of the cell membrane containing microfilaments and are utilized to increase the surface area of the cell to help in the absorption of extracellular fluids is the what?
   A. Microvilli
   B. Nanovilli
   C. Microcilia
   D. Cilia
15) The organelle that is involved with the breaking down of fats and other organic compounds and then the destruction of all toxic substances created in that process are called the?
   A. Peroxisomes
   B. Lysosomes

C. Ribosomes
D. Proteasomes

16) The only organelle that has its own DNA separate from the rest of the cell is the?
A. Mitochondria
B. Golgi apparatus
C. Rough endoplasmic reticulum
D. None of the above.

17) The process by which a solute moves around randomly in a solvent causing the concentration gradient to be decreased across all of the solvent is called?
A. Diffusion
B. Osmosis
C. Active Transport
D. Passive Transport

18) Osmosis is a special case of diffusion and is where what happens?
A. Solutes move across a membrane to create a higher concentration gradient between each side.
B. Water moves across a membrane to equalize the amount of water and solutes on both sides of it.
C. Water moves across a membrane to cause a higher concentration gradient to occur between both side of the membrane.
D. None of the above.

19) The correct order of mitosis of a cell is?
A. cytokinesis, metaphase, telophase, prophase, prometaphase, anaphase
B. prophase, prometaphase, metaphase, anaphase, telophase, cytokinesis
C. cytokinesis, metaphase, prophase, anaphase, prometaphase, telophase
D. telophase, prophase, anaphase, cytokinesis, metaphase, prometaphase

20) During this stage the chromosomes align along the central plane.
A. Anaphase
B. prometaphase
C. metaphase
D. telophase

21) In anaphase this happens.
A. Chromosomes pull microtubules apart
B. Microtubules create new chromosomes by mixing them
C. Microtubules pull the chromosomes apart, and the centrioles are split in two
D. None of the above.

22) The nuclear envelope material surrounds each set of chromosomes reforming the envelope, the miotic spindle breaks down and the spindles push the poles further apart making it appear as though there are two nuclei in this stage of mitosis.
A. Telophase
B. Prometaphase
C. Cytokinesis
D. Prophase

23) During this stage of mitosis, the chromatin condenses becoming chromosomes and become visible, the nuclear envelope disappears, and centrosomes move towards opposite poles.
   A. Cytokinesis'
   B. Anaphase
   C. Telophase
   D. Prometaphase
   E. Prophase
24) In this stage of mitosis, a cleavage furrow begins to separate the cell into two daughter cells.
   A. Telophase
   B. Cytokinesis
   C. Metaphase
   D. Anaphase
25) An isotonic solution is one where the water in the cell ___.
   A. does not flow in or out due to there being equal amounts of solutes in the water and cell.
   B. gained due to the solution having less solutes.
   C. lost due to the solution having more solutes.
   D. None of the above.
26) A cell in a hypotonic solution has water ___.
   A. that is gained due to the solution having less solutes
   B. that does not flow in or out due to there being equal amounts of solutes and water
   C. that is lost due to the solution having more solutes
   D. None of the above.
27) A cell instead in a hypertonic solution has water ___.
   A. that is lost due to the solution having more solutes
   B. that does not flow in or out due to there being equal amounts of solutes and water
   C. that is gained due to the solution having less solute
   D. None of the above.
28) When a red blood cell gains water and ruptures it is called?
   A. Hemolysis
   B. Crenation
   C. Hydrolysis
   D. Dehydration
29) When a read blood cell shrinks due to the loss of water it is called?
   A. Hydrolysis
   B. Dehydration
   C. Hemolysis
   D. Crenation
30) Endocytosis is the process of ___?
   A. active transport across the cell membrane into the cell
   B. passive transport outside of the cell
   C. passive transport across the cell membrane into the cell
   D. active transport across the cell membrane out of the cell

31) The process by which is the cell absorbs extracellular fluids?
    A. Osmaticcytosis
    B. Pinocytosis
    C. Cenocytosis
    D. Bibenscytosis
32) The process by which a cell “eats” a potential pathogen is called?
    A. Esthiocytosis
    B. Pinocytosis
    C. Trogocytosis
    D. Phagocytosis
33) Exocytosis is where granules are ___.
    A. eaten by the cell
    B. brought into the cell
    C. removed from the cell
    D. None of the above.
34) When the DNA of a cell is damaged during replication and it then starts dividing more rapidly consuming more and more resources of the body, we call this type of cell what?
    A. Cancer
    B. Metastic cellular stem
    C. Stem cell
    D. None of the above.