

Midterm MegaMatch Practice Exam**Scientific Method/Taxonomy**

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|------------------------------|---|
| 1) ___ Law | a. the variable that you add to an experiment that you want to test |
| 2) ___ Hypothesis | b. what you measure in an experiment. |
| 3) ___ Theory | c. a hypothesis that has been supported many times. |
| 4) ___ Sample Size | d. the system of scientific naming |
| 5) ___ Independent Variable | e. what you do to test a hypothesis |
| 6) ___ Dependent Variable | f. descriptive information, adjectives |
| 7) ___ Experiment | g. how well an experiment tests a hypothesis |
| 8) ___ Binomial Nomenclature | h. the number of subjects in an experiment |
| 9) ___ Qualitative | i. a unifying concept or overarching framework that explains things |
| 10) ___ Quantitative | j. an educated guess that explains a question |
| 11) ___ Validity | k. data in the form of numbers |

Taxonomic Category	Human Classification
Kingdom	12)
13)	Chordata
Class	14)
15)	Primate
Family	16)
17)	Homo
Species	18)

- sapiens
- Phylum
- Anamalia
- Hominidae
- Genus
- Order
- Mammalia

Chemistry Review

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|---------------------------|---|
| 19) ___ Chemical Reaction | a. a neutral particle in the nucleus of an atom |
| 20) ___ Atom | b. what goes into a chemical reactant, left side of the equation |
| 21) ___ Proton | c. a substance made by combining two or more elements |
| 22) ___ Neutron | d. the building blocks of matter, smallest part of an element |
| 23) ___ Electron | e. a positive particle in the nucleus of an atom |
| 24) ___ Reactant | f. the study of life |
| 25) ___ Product | g. the study of the chemical reactions that occur in living things |
| 26) ___ Element | h. a negatively charged particle found outside the nucleus of an atom |
| 27) ___ Compound | i. the result of a chemical reaction, on the right side of the equation |
| 28) ___ Biology | j. the interaction between chemicals to form new substances |
| 29) ___ Biochemistry | k. atoms with the same number of protons that share similar properties |

Characteristics of Life

Match the characteristic of life with the definition

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|-------------------------------|---|
| 30) ___ Cellular Organization | a. passing on traits to your offspring |
| 31) ___ Heredity | b. being made of cells/cell theory |
| 32) ___ Reproduction | c. the ability to maintain a constant internal environment |
| 33) ___ Homeostasis | d. the sum total of all the chemical reactions in an organism |
| 34) ___ Metabolism | e. the ability to produce offspring |

Match the characteristic of life with the example

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|-------------------------------|---|
| 35) ___ Cellular Organization | a. a tree makes a seed, which grow into another tree |
| 36) ___ Heredity | b. you shiver because you are cold |
| 37) ___ Reproduction | c. you eat a steak, break it down, and convert it into muscle mass |
| 38) ___ Homeostasis | d. you are made of many different types of cells |
| 39) ___ Metabolism | e. dad has brown hair, he passes the gene to you, you have brown hair |

Macromolecules

Match the Monomer to the Polymer

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|----------------------|--------------------------------|
| 40) ___ Fat/Lipid | a. Amino Acids |
| 41) ___ Protein | b. Simple Sugar/Monosaccharide |
| 42) ___ Carbohydrate | c. Nucleotide |
| 43) ___ Nucleic Acid | d. Glycerol & 3 Fatty Acids |

Match the dietary sources with the macromolecule

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|----------------------|------------------------------|
| 44) ___ Fat/Lipid | a. meat, nuts, eggs |
| 45) ___ Protein | b. lard, butter, oil, grease |
| 46) ___ Carbohydrate | c. ATP, DNA, RNA |
| 47) ___ Nucleic Acid | d. candy, bread, pasta |

Match the functions with the macromolecule

- 48) ___ Fat/Lipid
49) ___ Protein
50) ___ Carbohydrate
51) ___ Nucleic Acid
- a. store genetic info, aid in protein production, ATP
b. quick energy, cell wall of plants
c. structural components, transport, build muscle, enzymes
d. long term energy storage, cushioning, insulation

Cell Parts

- 52) ___ Cell Membrane
53) ___ Ribosome
54) ___ Mitochondria
55) ___ Endoplasmic reticulum
56) ___ Nucleus
57) ___ Lysosome
58) ___ Chloroplast
59) ___ Centriole
60) ___ Vacuole
61) ___ Golgi Body
62) ___ Cell Wall
- a. aids in cell division
b. controls the cell
c. protein synthesis occurs here
d. part that creates energy for the cell, powerhouse
e. breaks down bad things in the cell
f. made of cellulose, supports plant cells
g. organelle that packages proteins for storage/transport
h. transport system throughout the cell, detox in liver
i. formed from a lipid bilayer
j. stores water and nutrients in the cell
k. site of photosynthesis

Osmosis & Diffusion

- 63) ___ Hypotonic
64) ___ Hypertonic
65) ___ Isotonic
66) ___ Diffusion
67) ___ Osmosis
68) ___ Solvent
69) ___ Solute
- a. the stuff that is dissolved in a solution
b. having a lower concentration of solute than its surroundings
c. the movement of water from high to low concentration
d. having a higher concentration of solute than its surroundings
e. the stuff that does the dissolving (usually water)
f. having the same concentration of solute as its surroundings
g. the movement of solute particles from high to low concentration

Cell Transport

- 70) ___ Active Transport
71) ___ Passive Transport
72) ___ Endocytosis
73) ___ Exocytosis
74) ___ Phagocytosis
75) ___ Pinocytosis
76) ___ Marker Protein
77) ___ Channel Protein
78) ___ Receptor Protein
79) ___ Protein Pump
- a. a membrane protein that identifies a cell
b. a cell "drinking", one form of endocytosis
c. a protein passage for things too large or charged, requires no energy
d. movement of things through the membrane without using energy
e. the taking in of things by the cell, requiring energy
f. a protein used to transport things against their concentration gradient
g. a cell "eating", one form of endocytosis
h. movement of things through the membrane using energy
i. a protein that binds to hormones to relay information into the cell
k. the releasing of things by the cell requiring energy

Photosynthesis & Cell Respiration (Locations)

- 80) ___ Chloroplast
81) ___ Thylakoid of the Chloroplast
82) ___ Cytoplasm
83) ___ Mitochondria
84) ___ Stroma of the Chloroplast
- a. where glycolysis and fermentation occurs
b. where oxidative respiration occurs
c. where the light reactions occur
d. where the dark reactions occur
e. where photosynthesis occurs

Photosynthesis Reactions

- 85) ___ Light Reactions
86) ___ Dark Reactions
87) ___ Glucose
88) ___ Water
89) ___ Carbon Dioxide
90) ___ ATP & NADPH
91) ___ Melvin Calvin
- a. discovered the dark reactions
b. aka Light Dependant Reactions, absorbs light/breaks water/makes O₂
c. the source of electrons for the photosystems
d. the final product of the Calvin Cycle
e. what gets made by the light reactions and used in the dark reactions
f. the source of carbon for glucose production
g. aka Calvin Cycle/Light Independent Reactions, makes glucose

Cell Respiration Reactions

- 92) ___ Krebs Citric Acid Cycle
93) ___ Alcoholic Fermentation
94) ___ Lactic Acid Fermentation
95) ___ Glycolysis
96) ___ Aerobic Respiration (Oxidative)
97) ___ Anaerobic Respiration
98) ___ Electron Transport Chain
99) ___ Pyruvate
100) ___ Carbon Dioxide & Water
- a. process to regenerate NAD⁺ in animals w/o O₂, soreness results
b. breaking of glucose in the cytoplasm, first step of respiration
c. end products of the breakdown of glucose with oxygen
d. process to regenerate NAD⁺ in bacteria w/o O₂, alcohol & CO₂ made
e. reaction where pyruvate is broken down to CO₂ in the mitochondria
f. most of the ATP made here in the mitochondria, O₂ final electron acceptor
g. half of a glucose produced in glycolysis
h. respiration in mitochondria with oxygen present
i. respiration in cytoplasm without oxygen present