

Midterm MegaMatch Practice Exam

Scientific Method/Taxonomy

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

Taxonomic Category	Human Classification
Kingdom	12) <u>c. Anamalia</u>
13) <u>b. Phylum</u>	Chordata
Class	14) <u>g. Mammalia</u>
15) <u>f. Order</u>	Primate
Family	16) <u>d. Hominidae</u>
17) <u>e. Genus</u>	Homo
Species	18) <u>a. sapiens</u>

- a. sapiens
- b. Phylum
- c. Anamalia
- d. Hominidae
- e. Genus
- f. Order
- g. Mammalia

Chemistry Review

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|--------------------------------|---|
| 19) <u>j</u> Chemical Reaction | a. a neutral particle in the nucleus of an atom |
| 20) <u>d</u> Atom | b. what goes into a chemical reactant, left side of the equation |
| 21) <u>e</u> Proton | c. a substance made by combining two or more elements |
| 22) <u>a</u> Neutron | d. the building blocks of matter, smallest part of an element |
| 23) <u>h</u> Electron | e. a positive particle in the nucleus of an atom |
| 24) <u>b</u> Reactant | f. the study of life |
| 25) <u>i</u> Product | g. the study of the chemical reactions that occur in living things |
| 26) <u>k</u> Element | h. a negatively charged particle found outside the nucleus of an atom |
| 27) <u>c</u> Compound | i. the result of a chemical reaction, on the right side of the equation |
| 28) <u>f</u> Biology | j. the interaction between chemicals to form new substances |
| 29) <u>g</u> 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) <u>b</u> Cellular Organization | a. passing on traits to your offspring |
| 31) <u>a</u> Heredity | b. being made of cells/cell theory |
| 32) <u>e</u> Reproduction | c. the ability to maintain a constant internal environment |
| 33) <u>c</u> Homeostasis | d. the sum total of all the chemical reactions in an organism |
| 34) <u>d</u> Metabolism | e. the ability to produce offspring |

Match the characteristic of life with the example

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|------------------------------------|---|
| 35) <u>d</u> Cellular Organization | a. a tree makes a seed, which grow into another tree |
| 36) <u>e</u> Heredity | b. you shiver because you are cold |
| 37) <u>a</u> Reproduction | c. you eat a steak, break it down, and convert it into muscle mass |
| 38) <u>b</u> Homeostasis | d. you are made of many different types of cells |
| 39) <u>c</u> 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) <u>d</u> Fat/Lipid | a. Amino Acids |
| 41) <u>a</u> Protein | b. Simple Sugar/Monosaccharide |
| 42) <u>b</u> Carbohydrate | c. Nucleotide |
| 43) <u>c</u> Nucleic Acid | d. Glycerol & 3 Fatty Acids |

Match the dietary sources with the macromolecule

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

Match the functions with the macromolecule

- 48) d Fat/Lipid
 49) c Protein
 50) b Carbohydrate
 51) a 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) i Cell Membrane
 53) c Ribosome
 54) d Mitochondria
 55) h Endoplasmic reticulum
 56) b Nucleus
 57) e Lysosome
 58) k Chloroplast
 59) a Centriole
 60) j Vacuole
 61) g Golgi Body
 62) f 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) b Hypotonic
 64) d Hypertonic
 65) f Isotonic
 66) g Diffusion
 67) c Osmosis
 68) e Solvent
 69) a 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) h Active Transport
 71) d Passive Transport
 72) e Endocytosis
 73) k Exocytosis
 74) g Phagocytosis
 75) b Pinocytosis
 76) a Marker Protein
 77) c Channel Protein
 78) i Receptor Protein
 79) f 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) e Chloroplast
 81) c Thylakoid of the Chloroplast
 82) a Cytoplasm
 83) b Mitochondria
 84) d 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) b Light Reactions
 86) g Dark Reactions
 87) d Glucose
 88) c Water
 89) f Carbon Dioxide
 90) e ATP & NADPH
 91) a 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) e Krebs Citric Acid Cycle
 93) d Alcoholic Fermentation
 94) a Lactic Acid Fermentation
 95) b Glycolysis
 96) h Aerobic Respiration (Oxidative)
 97) i Anaerobic Respiration
 98) f Electron Transport Chain
 99) g Pyruvate
 100) c 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