

Biology
Mrs. Smith

Name

KEY

Date

MIDTERM STUDY GUIDE

Choose the best possible answer for each of the following statements.

1. A well tested explanation that unifies a broad range of observations is called a
 - a. Hypothesis
 - b. Theory
 - c. Law
 - d. Scientific Method

2. A proposed scientific explanation for a set of observations
 - a. Hypothesis
 - b. Theory
 - c. Law
 - d. Scientific Method

3. An idea that is accepted to be true by the scientific community
 - a. Theory
 - b. Hypothesis
 - c. Law
 - d. Scientific Method

4. An organized way of using evidence to learn about the natural world
 - a. Experimenting
 - b. Theorizing
 - c. Demonstrating
 - d. Science

5. Factor being tested in an experiment
 - a. Control
 - b. Variable
 - c. Tester
 - d. Testee

6. Factor not being tested in an experiment

- a. Control
- b. Variable
- c. Tester
- d. Testee

7. Data represented by numbers

- a. Variables
- b. Qualitative
- c. Controlled
- d. Quantitative

8. Data represented by descriptions

- a. Variables
- b. Qualitative
- c. Controlled
- d. Quantitative

9. The shape of DNA is the

- a. Single Helix
- b. Double Helix
- c. Single Chain
- d. Double Chain

10. The process by which an organism maintains internal balance is called

- a. Equilibrium
- b. Isotonic
- c. Homeostasis
- d. Concentration

11. When electrons are transferred from one atom to another they make

- a. Friendly Bonds
- b. Covalent Bonds
- c. Chemical Bonds
- d. Ionic Bonds

12. Electrons available for bonding are called

- a. Ionic Bonds
- b. Covalent Bonds
- c. Ions
- d. Valence Electrons

13. The smallest part of compound is called

- a. Molecules
- b. Atoms
- c. Ions
- d. Bonds

14. Share electrons are called

- a. Ionic Bonds
- b. Covalent Bonds
- c. Valence Electrons
- d. Ions

15. Positively or negatively charged atoms are called

- a. Cations
- b. Anions
- c. Subatomic Particles
- d. Ions

16. A biological catalyst is called an

- a. Glucose
- b. Enzyme
- c. Ion
- d. Cation

17. Macromolecules that store and transmit genetic information are called

- a. Carbohydrates
- b. Nucleic Acids
- c. Protein
- d. Lipids

18. Macromolecules that store energy are called

- a. Carbohydrates
- b. Nucleic Acids
- c. Protein
- d. Lipids

19. The building blocks of protein are called

- a. Matter
- b. Carbohydrates
- c. Nucleic Acids
- d. Amino Acids

20. Energy available for immediate use

- a. Starch
- b. Glucose
- c. Chemical Energy
- d. Protein

21. Macromolecules that build bones and muscle, help fight disease and regulate reactions are called

- a. Carbohydrates
- b. Lipids
- c. Nucleic Acids
- d. Proteins

22. Macromolecules that provide most of the energy in the human body are called

- a. Carbohydrates
- b. Lipids
- c. Nucleic Acids
- d. Protein

23. The building blocks of matter

- a. Molecules
- b. Ions
- c. Amino Acids
- d. Atoms

24. Anything that takes up space and has mass

- a. Volume
- b. Mass
- c. Matter
- d. Atoms

25. The protons plus neutrons in an atom

- a. Atomic Number
- b. Isotope
- c. Ion
- d. Mass Number

26. Has a different number of neutrons than protons

- a. Atomic Number
- b. Isotope
- c. Ion
- d. Mass Number

27. Living matter with a specialized function

- a. Atoms
- b. Ions
- c. Cells
- d. Isotopes

28. Protects and supports the plant cell

- a. Cell Wall
- b. Cell Membrane
- c. Cytoplasm
- d. Cytoskeleton

29. Cells that contain nuclei

- a. Prokaryotes
- b. Unicellular
- c. Eukaryotes
- d. Multicellular

30. Controls what enters and leaves the cell

- a. Cell Wall
- b. Cell Membrane
- c. Cytoplasm
- d. Cytoskeleton

31. Cells that do not contain nuclei

- a. Prokaryotes
- b. Unicellular
- c. Eukaryotes
- d. Multicellular

32. Movement of materials away from concentration levels

- a. Diffusion
- b. Active Transport
- c. Osmosis
- d. Isotonic

33. Converts sunlight into food

- a. Centrioles
- b. Cytoplasm
- c. Chloroplast
- d. Mitochondria

34. Regulate cell division

- a. Mitochondria
- b. Vacuoles
- c. Ribosomes
- d. Centrioles

35. Converts chemical energy into compounds

- a. Mitochondria
- b. Centrioles
- c. Golgi Apparatus
- d. Vacuoles

36. If the concentration is high in a solution it is

- a. Hypotonic
- b. Hypertonic
- c. Isotonic
- d. Diffusion

37. If the concentration is equal both inside and outside the cell it is

- a. Hypotonic
- b. Hypertonic
- c. Solution
- d. Isotonic

38. The diffusion of water across a permeable membrane

- a. Active Transport
- b. Permeability
- c. Osmosis
- d. Fusion

39. Photosynthesis takes place in the

- a. Mitochondria
- b. Chloroplast
- c. Chlorophyll
- d. Cytoplasm

40. A light absorbing molecule

- a. Pigment
- b. Photosystem
- c. Chloroplast
- d. Cytoplasm

41. Basic energy of all living things

- a. Metabolism
- b. NAD+
- c. ATP
- d. Water

42. Principle pigment of plants

- a. Xenophyll
- b. Chlorophyll
- c. Beta Carotene
- d. Chloroplast

43. The process of breaking down glucose into pyruvic acid

- a. Glycolysis
- b. Cellular Respiration
- c. Fermentation
- d. Kreb's Cycle

44. The process of breaking down food into ATP in the absence of oxygen

- a. Kreb's Cycle
- b. Fermentation
- c. Cellular Respiration
- d. Glycolysis

45. The process of breaking down pyruvic acid into carbon dioxide

- a. Calvin Cycle
- b. Kreb's Cycle
- c. Fermentation
- d. Cellular Respiration

46. The energy inside of compounds

- a. ATP
- b. NADH
- c. NAD
- d. Chemical Energy

47. The process of breaking down glucose in the presence of oxygen

- a. Cellular Respiration
- b. Fermentation
- c. Kreb's Cycle
- d. Electron Transport Chain

48. Pathways that do not require oxygen

- a. Anabolic
- b. Anaerobic**
- c. Aerobic
- d. Kreb's Cycle

49. Pathways that do require oxygen

- a. Glycolysis
- b. Anabolic
- c. Aerobic**
- d. Anaerobic

50. Protein ball that converts ADP and high speed holders into ATP

- a. Electron Transport Chain
- b. ATP Synthase**
- c. Photosystem
- d. Fermentation

Biology
Mrs. Smith

Name _____
Date _____

MIDTERM STUDY GUIDE

Choose the best possible answer for each of the following statements.

1. A well tested explanation that unifies a broad range of observations is called a
 - a. Hypothesis
 - b. Theory
 - c. Law
 - d. Scientific Method

2. A proposed scientific explanation for a set of observations
 - a. Hypothesis
 - b. Theory
 - c. Law
 - d. Scientific Method

3. An idea that is accepted to be true by the scientific community
 - a. Theory
 - b. Hypothesis
 - c. Law
 - d. Scientific Method

4. An organized way of using evidence to learn about the natural world
 - a. Experimenting
 - b. Theorizing
 - c. Demonstrating
 - d. Science

5. Factor being tested in an experiment
 - a. Control
 - b. Variable
 - c. Tester
 - d. Testee

12. Electrons available for bonding are called

- a. Ionic Bonds
- b. Covalent Bonds
- c. Ions
- d. Valence Electrons

13. The smallest part of compound is called

- a. Molecules
- b. Atoms
- c. Ions
- d. Bonds

14. Share electrons are called

- a. Ionic Bonds
- b. Covalent Bonds
- c. Valence Electrons
- d. Ions

15. Positively or negatively charged atoms are called

- a. Cations
- b. Anions
- c. Subatomic Particles
- d. Ions

16. A biological catalyst is called an

- a. Glucose
- b. Enzyme
- c. Ion
- d. Cation

17. Macromolecules that store and transmit genetic information are called

- a. Carbohydrates
- b. Nucleic Acids
- c. Protein
- d. Lipids

24. Anything that takes up space and has mass

- a. Volume
- b. Mass
- c. Matter
- d. Atoms

25. The protons plus neutrons in an atom

- a. Atomic Number
- b. Isotope
- c. Ion
- d. Mass Number

26. Has a different number of neutrons than protons

- a. Atomic Number
- b. Isotope
- c. Ion
- d. Mass Number

27. Living matter with a specialized function

- a. Atoms
- b. Ions
- c. Cells
- d. Isotopes

28. Protects and supports the plant cell

- a. Cell Wall
- b. Cell Membrane
- c. Cytoplasm
- d. Cytoskeleton

29. Cells that contain nuclei

- a. Prokaryotes
- b. Unicellular
- c. Eukaryotes
- d. Multicellular

36. If the concentration is high in a solution it is

- a. Hypotonic
- b. Hypertonic
- c. Isotonic
- d. Diffusion

37. If the concentration is equal both inside and outside the cell it is

- a. Hypotonic
- b. Hypertonic
- c. Solution
- d. Isotonic

38. The diffusion of water across a permeable membrane

- a. Active Transport
- b. Permeability
- c. Osmosis
- d. Fusion

39. Photosynthesis takes place in the

- a. Mitochondria
- b. Chloroplast
- c. Chlorophyll
- d. Cytoplasm

40. A light absorbing molecule

- a. Pigment
- b. Photosystem
- c. Chloroplast
- d. Cytoplasm

41. Basic energy of all living things

- a. Metabolism
- b. NAD⁺
- c. ATP
- d. Water

48. Pathways that do not require oxygen

- a. Anabolic
- b. Anaerobic
- c. Aerobic
- d. Kreb's Cycle

49. Pathways that do require oxygen

- a. Glycolysis
- b. Anabolic
- c. Aerobic
- d. Anaerobic

50. Protein ball that converts ADP and high speed holders into ATP

- a. Electron Transport Chain
- b. ATP Synthase
- c. Photosystem
- d. Fermentation