Directions: Match each term with its correct definition (Note: They are grouped into groups of 10 or less terms, look for the lines separating the groups)

\_\_\_\_1. Active Transport A. a linkage between adjacent epithelial cells that forms when cadherins

in the plasma membrane attach to intermediate filaments

\_\_\_\_2. Cell Wall B. a plant cell organelle that carries out photosynthesis

\_\_\_\_3. Central Vacuole C. The entire region between the plasma membrane and the

nuclear envelope, consisting of organelles suspended in the gel-like cytosol, the cytoskeleton, and various chemicals

\_\_\_\_4. Chloroplast D. an area of high concentration across from an area of low

concentration

\_\_\_\_5. Cilium E. the network of protein fibers that collectively maintains the shape of

the cell, secures some organelles in specific positions, allows cytoplasm and vesicles to move within the cell, and enables unicellular organisms to move

\_\_\_\_6. Concentration F. the method of transporting material that requires energy

 Gradient

\_\_\_\_7. Cytoplasm G. a large plant cell organelle that acts as a storage compartment, water

reservoir, and site of macromolecule degradation

\_\_\_\_8. Cytoskeleton H. the gel-like material of the cytoplasm in which cell structures are

suspended

\_\_\_\_9. Cytosol I. (plural: cilia) a short, hair-like structure that extends from the plasma

membrane in large numbers and is used to move an entire cell or move substances along the outer surface of the cell

\_\_\_\_10. Desmosome J. a rigid cell covering made of cellulose in plants, peptidoglycan in

bacteria, non-peptidoglycan compounds in Archaea, and chitin in fungi that protects the cell, provides structural support, and gives shape to the cell

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\_\_\_\_11. Diffusion A. a type of active transport that moves substances, including fluids and

particles, into a cell

\_\_\_\_12. Electrochemical B. (plural: flagella) the long, hair-like structure that extends from the

Gradient plasma membrane and is used to move the cell

\_\_\_\_13. Endocytosis C. the group of organelles and membranes in eukaryotic cells that work

together to modify, package, and transport lipids and proteins

\_\_\_\_14. Endomembrane D. a passive process of transport of low-molecular weight material

System down its concentration gradient

\_\_\_\_15. Endoplasmic E. A series of interconnected membranous structures within eukaryotic

Reticulum (ER) cells that collectively modify proteins and synthesize lipids

\_\_\_\_16. Eukaryotic Cell F. a process of passing material out of a cell

\_\_\_\_17. Exocytosis G. the material, primarily collagen, glycoproteins, and proteoglycans,

secreted from animal cells that holds cells together as a tissue, allows cells to communicate with each other, and provides mechanical protection and anchoring for cells in the tissue

\_\_\_\_18. Extracellular H. A processs by which material moves down a concentration gradient

Matrix (from high to low concentration) using integral membrane

proteins

\_\_\_\_19. Facilitated I. a cell that has a membrane-bound nucleus and several other

Transport membrane-bound compartments or sacs

\_\_\_\_20. Flagellum J. a gradient produced by the combined forces of the electrical gradient

and the chemical gradient

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\_\_\_\_21. Fluid Mosaic A. a channel between two adjacent animal cells that allows ions,

Model nutrients, and other low-molecular weight substances to pass

between the cells, enabling the cells to communicate

\_\_\_\_22. Gap Junction B. describes a solution in which extracellular fluid has higher osmolarity

than the fluid inside the cell

\_\_\_\_23. Golgi C. describes a solution in which the extracellular fluid has the same

Apparatus osmolarity as the fluid inside the cell

\_\_\_\_24. Hypertonic D. a eukaryotic organelle made up of a series of stacked membranes

that sorts, tags, and packages lipids and proteins for distribution

\_\_\_\_25. Hypotonic E. the instrument that magnifies an object

\_\_\_\_26. Isotonic F. describes a solution in which extracellular fluid has lower osmolarity

than the fluid inside the cell

\_\_\_\_27. Lysosome G. (singular: mitochondrion) the cellular organelles responsible for

carrying out cellular respiration, resulting in the production of ATP, the cell’s main energy-carrying molecule

\_\_\_\_28. Microscope H. the double-membrane structure that constitutes the outermost

portion of the nucleus

\_\_\_\_29. Mitochondria I. a model of the structure of the plasma membrane as a mosaic of

components, including phospholipids, cholesterol, proteins, and glycolipids, resulting in a fluid rather than static character

\_\_\_\_30. Nuclear J. An organelle in an animal cell that functions as the cell’s digestive

Envelope component; it breaks down proteins, polysaccharides,

lipids, nucleic acids, and even worn-out organelles

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\_\_\_\_31. Nucleolus A. the cell organelle that houses the cell’s DNA and directs the synthesis

of ribosomes and proteins

\_\_\_\_32. Nucleus B. the transport of water through a semipermeable membrane from an

area of high water concentration to an area of low water concentration across a membrane

\_\_\_\_33. Organelle C. a small, round organelle that contains hydrogen peroxide, oxidizes

fatty acids and amino acids, and detoxifies many poisons

\_\_\_\_34. Osmolarity D. a process that takes macromolecules that the cell needs from the

extracellular fluid; a variation of endocytosis

\_\_\_\_35. Osmosis E. a process that takes solutes that the cell needs from the extracellular

fluid; a variation of endocytosis

\_\_\_\_36. Passive Transport F. the darkly staining body within the nucleus that is responsible for

assembling ribosomal subunits

\_\_\_\_37. Peroxisome G. the total amount of substances dissolved in a specific amount of solution

\_\_\_\_38. Phagocytosis H. a method of transporting material that does not require energy

\_\_\_\_39. Pinocytosis I. a phospholipid bilayer with embedded (integral) or attached

(peripheral) proteins that separates the internal contents of the cell from its surrounding environment

\_\_\_\_40. Plasma J. a membrane-bound compartment or sac within a cell

Membrane

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\_\_\_\_41. Plasmodesma A. a unicellular organism that lacks a nucleus or any other membrane-

bound organelle

\_\_\_\_42. Prokaryotic Cell B. a variant of endocytosis that involves the use of specific binding

proteins in the plasma membrane for specific molecules or particles

\_\_\_\_43. Receptor-mediated C. the characteristic of a membrane that allows some substances

Endocytosis through but not others

\_\_\_\_44. Ribosome D. a cellular structure that carries out protein synthesis

\_\_\_\_45. Rough Endoplasmic E. a firm seal between two adjacent animal cells created by protein

Reticulum (RER) adherence

\_\_\_\_46. Selectively F. the region of the endoplasmic reticulum that is studded with

Permeable ribosomes and engages in protein modification

\_\_\_\_47. Smooth Endoplasmic G. a substance dissolved in another to form a solution

Reticulum (SER)

\_\_\_\_48. Solute H. the region of the endoplasmic reticulum that has few or no

ribosomes on its cytoplasmic surface and synthesizes carbohydrates, lipids, and steroid hormones; detoxifies chemicals like pesticides, preservatives, medications, and environmental pollutants, and stores calcium ions

\_\_\_\_49. Tight Junction I. the amount of solute in a solution.

\_\_\_\_50. Tonicity J. (plural: plasmodesmata) a channel that passes between the cell walls

of adjacent plant cells, connects their cytoplasm, and allows materials to be transported from cell to cell

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\_\_\_\_51. Unified Cell A. a small, membrane-bound sac that functions in cellular storage and

Theory transport; its membrane is capable of fusing with the

plasma membrane and the membranes of the endoplasmic reticulum and Golgi apparatus

\_\_\_\_52. Vacuole B. a membrane-bound sac, somewhat larger than a vesicle, that

functions in cellular storage and transport

\_\_\_\_53. Vesicle C. the biological concept that states that all organisms are composed of

one or more cells, the cell is the basic unit of life, and new cells arise from existing cells