

Jeopardy

organelles	Microscope	Plant vs Animal	Cells	WILD CARD
10	10	10	10	10
20	20	20	20	20
30	30	30	30	30
40	40	40	40	40
50	50	50	50	50

Organelles work together inside of each
_____ in order to regulate all
metabolic activities

10pts

cell



Molecules of ATP are transformed into energy by breaking energy rich bonds inside the _____ of a cell

20 points



mitochondria

Muscle cells typically have greater amount of mitochondria than hair cells. This suggests that the need for _____ is greater in muscle cells

30 points

Energy/ATP



the cell membrane contains _____
to communicate with other cells as well
as enzymes, hormones and occasionally
viruses and other pathogens

40 points

receptors



The primary component of the cell wall in plants is the sugar molecule _____

50 points



cellulose

Which of the following is most likely to be seen under a compound light microscope?

Mitochondria

DNA

Entire cells

Nucleolus

Entire cells



In order to calculate the total magnification a student must know the magnification of which parts of the compound light microscope?

20 points

Objective lens AND
ocular lens



The _____ should be used when focusing the microscope on the high powered objective

30 points

Fine adjustment



The microscope allows us to
see specimens in _____
detail, but we see _____ of the
object

40 points

Greater, Less



The person most credited with the invention of the microscope is

50 points

Anton van leeuwenhoek



Animal cells contain structures called _____, which are not in plant cells

10 points

centrioles



In both plant and animal cells which organelle is most responsible for excretion from the cell

20 points

Cell membrane



Plant and animal cells use enzymes to create energy inside of which organelle?

30 points

mitochondria



Autotrophic nutrition is exclusively created by which organelle?

40 points

chloroplasts



List all of the places DNA can be found inside of an animal cell

50 points

Nucleus, Mitochondria



Proteins are created in which organelle?

10 points

Ribosomes



A student examines the DNA of her cat's liver cells, skin cells and hair cells. She discovers that the DNA inside of the three types of cells is _____

20 points

identical



The exceptions to the cell theory are
_____ and _____

30 points



Viruses and the first
cell

_____ are chemical messengers which allow cells to communicate and maintain homeostasis through the feedback mechanism

40 points

hormones



The requirements of all living organisms to be classified as alive are:

50 points



Growth
Made of cells
Need energy
reproduce

Objects under a compound light microscope appear to be _____ and _____ compared to the actual specimen

10 points

Upside down and backwards



A wet mount slide is prepared with the coverslip angled toward the specimen in order to limit the amount of _____ trapped underneath the slide

20 points

Air bubbles



Identical _____ is found on
_____ inside the nucleus of every
cell inside your body

30 points

DNA on
CHROMOSOMES



An experiment created to test what factors affect enzymes would show that the 4 major environmental factors affecting enzymes ability to change chemical reactions are:

_____, _____, _____,
_____. (answer 3 correct for the
points)

40 points

Temperature, pH,
Substrate
concentration,
Shape



_____ is a process of adding a color to a specimen in order to view better under the microscope.

50 points

staining



FINAL JEOPARDY

List the levels of organization of life in order from least complex to most complex.

Provide 1 example OF EACH LEVEL (not cell and tissue) for a plant AND provide 1 example OF EACH LEVEL (not cell and tissue) for an animal

Organelle-cell-tissue-organ-organ system-organism

Chloroplast-plant cell-leaf tissue-leaf-root system-oak tree

Mitochondria-animal cell-stomach tissue-stomach-digestive system-human