HONORS BIO Cell Structure and Function ?'s (APBIO) **NAME _____ (f15)**

MULTIPLE CHOICE: Circle all that are TRUE. *There may be MORE THAN ONE correct answer.*

Which of the following is TRUE of cell (plasma) membranes?

A. Cell membranes allow ALL substances to pass through easily
B. It is selectively permeable so only certain molecules can pass through it.
C. It acts more like a fluid than a solid because its molecules are constantly moving.
D. Cell membranes surround all animal, plant, and bacterial cells.
E. It is a bilayer composed mainly of phospholipids and proteins

Cells like muscle cells which require lots of energy have many _____.

A. nuclei
B. flagella
C. mitochondria
D. lysosomes

Viruses, bacteria, and old organelles that a cell wants to get rid of are broken down in _____

A. ribosomes
B. mitochondria
C. rough ER
D. lysosomes

Mitochondria store the energy released when they burn glucose as _____.

A. DNA
B. ATP
C. SER
D. RNA

The dark spot seen in the nucleus in non-dividing cells where ribosomal RNA is made is called the _____

A. cristae
B. nucleolus
C. plastids
D. cytosol

ALL of the following are functions of Smooth ER EXCEPT _____

A. make steroids in gland cells
B. regulate calcium in muscle cells
C. make ribosomal RNA
D. break down toxins in liver cells

The cells organelles that are surrounded by DOUBLE MEMBRANES and contain their OWN DNA are the _____

A. nucleus, ER, and lysosomes
B. nucleus, vacuoles, and chloroplasts
C. nucleus, chloroplasts, and mitochondria
D. ER, Golgi bodies, and vacuoles

Look at the picture on page 204 and remember what you learned from the last chapter. Which two molecules are used to make cell membranes?

- **A. carbohydrates and glycogen**
- **B. polysaccharides and nucleic acids**
- **C. phospholipids and starch**
- **D. phospholipids and proteins**
- **E. nucleic acids and lipids**

In the last chapter you learned about integral proteins with sugars attached which stick out on the exterior surface of cell membranes and help recognize "self" called

- **A. amino acids**
- **B. lipoproteins**
- **C. glycoproteins**
- **D. monosaccharides**

One difference between eukaryotes and prokaryotes is that _____

- **A. prokaryotes are surrounded by a cell membrane and eukaryotes are not**
- **B. prokaryotes have a nucleus and eukaryotes don't**
- **C. eukaryotes have DNA and prokaryotes don't**
- **D. eukaryotes have a nucleus and membranes around their organelles and prokaryotes don't**

Cell membranes form because the hydrophobic tails on phospholipids try to _____ water.

- **A. be near**
- **B. stay away from**

Which cell part plays a role in apoptosis?

- **A. lysosomes**
- **B. nucleolus**
- **C. smooth ER**
- **D. cilia**

Motor proteins can be found "walking" along on _____ to move chromosomes during mitosis.

- **A. Golgi cisternae**
- **B. Rough ER**
- **C. microtubules in the cytoskeleton**
- **D. cristae membranes**

Name the following:

Folded membranes inside mitochondria	
Membrane sacs stacked up inside chloroplasts where chlorophyll is found	
Membrane sacs stacked like pancakes that make up Golgi bodies	
Dark spot in nucleus where RNA for ribosomes is made	
Small sac used for transport in eukaryotic cells	

Evidence for the Endosymbiotic Theory shows the similarities between bacteria and which two cell parts?

_____ _____

Tell three structures found in ALL cells.

_____ _____ _____

Name two organelles found in plant cells that are NOT seen in animal cells.

_____ _____

EXPLAIN how you can tell this cell is <u>NOT</u> A PLANT CELL

_____

EXPLAIN how you can tell this cell is <u>NOT</u> A BACTERIAL CELL

_____

Insulin is a protein hormone made by cells in the pancreas and exported out of the cell to the blood stream to regulate blood sugar. Trace the path of insulin from where it is made in the cell to the cell membrane where it will be released.

_____ → _____ → _____ → _____

<u>Name the molecules found in the cell walls of each of these organisms that makes them sturdy</u>

PLANT CELLS	BACTERIAL CELLS	FUNGAL CELLS

<u>TELL TWO (2) WAYS EACH OF THE FOLLOWING ARE DIFFERENT?</u>

	How tightly packed?	Type of cell found in?
CHROMOSOME		
CHROMATIN		

	NUMBER	LENGTH
CILIA		
FLAGELLA		