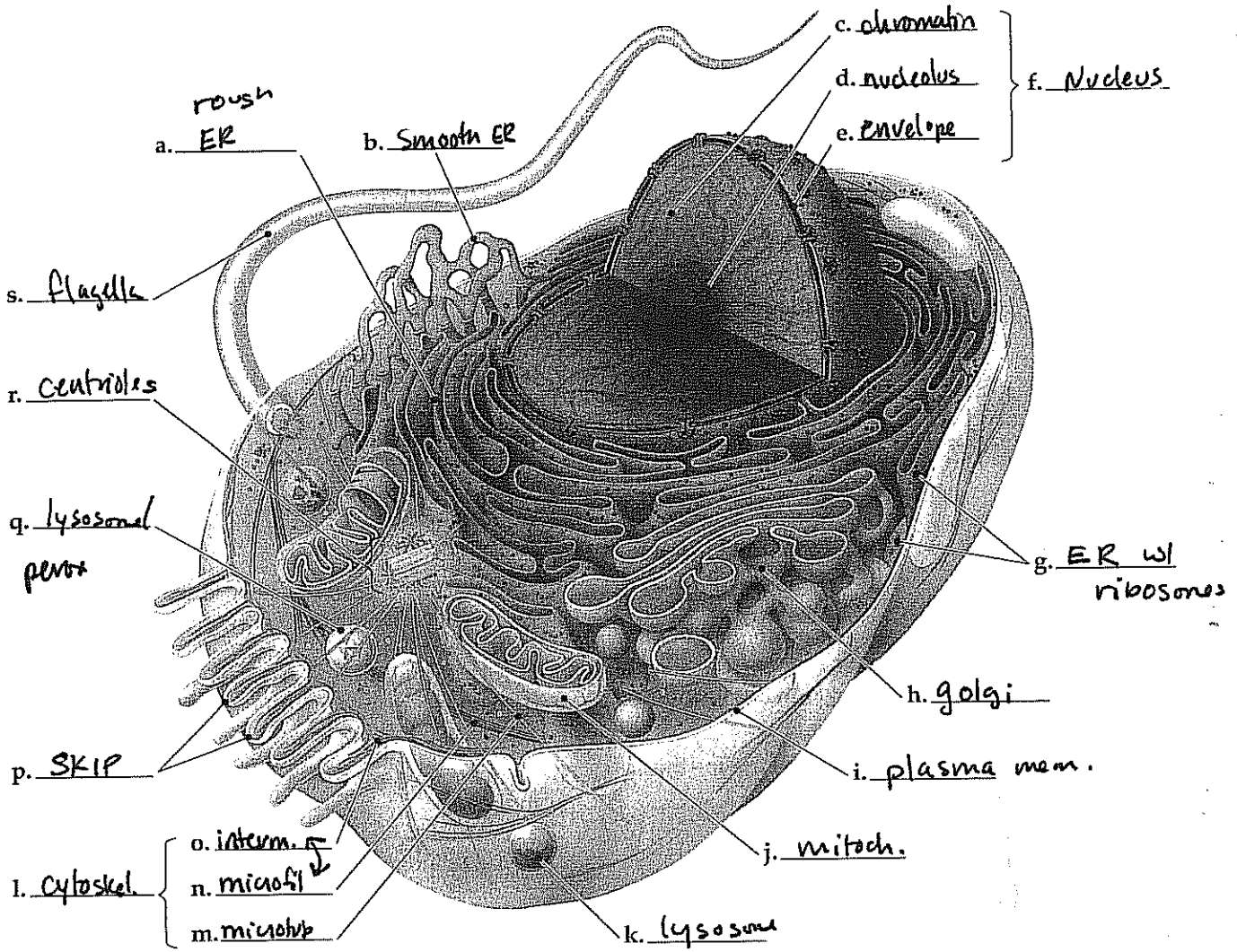


CH7 Review Questions

KEY

Compare presence of:	Plant	Animal
Plasma membrane	Y	Y
Cell wall	Y	N
Mitochondria	Y	Y
Centrioles	N	Y
Tonoplast	Y	N
Chloroplast	Y	N
Lysosome	N	Y
Microtubules	Y	Y
Cilia/flagella	S	Y
Gap junctions	N	Y
Tight junctions	N	Y
Desmosomes	N	Y
Plasmodesmata	Y	N
Type of Junction	Plant	Animal
Sealing Junctions	—	tight desmosome
Communication Junctions (aid flow of materials from cell to cell).	plasmadesmata	gap

3. Label the indicated structures in this diagram of an animal cell.



4. Create a diagram or flow chart in the space below to trace the development of a secretory product (such as a digestive enzyme) from the DNA code to its export from the cell.

Ribosome → Rough ER → vesicle → Golgi → vesicle → out of cell.

13. Proteins to be used within the cytosol are generally synthesized
- by ribosomes bound to rough ER.
 - by free ribosomes.
 - by the nucleolus.
 - within the Golgi apparatus.
 - by mitochondria and chloroplasts.
14. Plasmodesmata in plant cells are similar in function to
- desmosomes.
 - tight junctions.
 - gap junctions.
 - the extracellular matrix.
 - integrins.
15. In a cell fractionation procedure, the first pellet formed would most likely contain
- the extracellular matrix.
 - ribosomes.
 - mitochondria.
 - lysosomes.
 - nuclei.

Use the cells described as follows to answer questions 16-20.

- muscle cell in the thigh muscle of a long-distance runner
 - pancreatic cell that manufactures digestive enzymes
 - macrophage (white blood cell) that engulfs bacteria
 - epithelial cell lining digestive tract
 - ovarian cell that produces estrogen (a steroid hormone)
16. In which cell would you expect to find the most tight junctions? **D**
17. In which cell would you expect to find the most lysosomes? **C**

18. In which cell would you expect to find the most smooth endoplasmic reticulum? **E**
19. In which cell would you expect to find the most bound ribosomes? **B**
20. In which cell would you expect to find the most mitochondria? **A**

FILL IN THE BLANKS with the appropriate cellular organelle or structure.

- vesicles 1. transports membranes and products to various locations
- cristae 2. infoldings of mitochondrial membrane with attached enzymes
- ECM 3. consists of collagen, proteoglycans, and fibronectins
- lysosome 4. small sacs with specific enzymes for a particular metabolic pathway
- grana 5. stacks of flattened sacs inside chloroplasts
- basal bodies 6. anchoring structure for cilia and flagella
- cytosol 7. semifluid medium between nucleus and plasma membrane
- cytoskeleton 8. system of fibers that maintains cell shape, anchors organelles
- tight junct. 9. connection between animal cells that creates impermeable layer
- tonoplast 10. membrane surrounding central vacuole of plant cells