

BIOLOGY 12: UNIT D - CHAPTER 3 - REVIEW WORKSHEET
THE CELL – SMALLEST UNIT OF LIFE

A. CELL THEORY

1. Define the cell theory. (p. 46)

2. Why does an electron microscope (either TEM or SEM) have much greater resolving power than the light microscope? (p. 47)

B. EUKARYOTIC CELLS AND PROKARYOTIC CELLS

1. Define a eukaryotic cell. _____

2. What are the two major biochemical components found in plant and animal cell membranes? (p. 49)

3. What are the differences between plant primary and secondary cell walls? (p. 49)

4. Which part of the cell functions as the control center? Which molecule directs protein synthesis? (p. 52)

5. What is the difference between chromatin and chromosomes?

6. What is the function of the nucleolus?

7. How many layers are in the nuclear envelope? _____

8. What role do nuclear pores serve? (p. 52)

9. _____ are dense granules composed of _____ subunits that contain both RNA and _____ . They are the sites of _____ synthesis. When **several** ribosomes are making the same protein, they are arranged in a functional group called a _____ .

10. What is the **structural** difference between rough and smooth endoplasmic reticulum?

11. What are the functions of rough ER?

12. a) What are the functions of smooth ER? (p. 53)
