Supplemental Test Items to accompany OpenStax College *Concepts of Biology*. Note that not all chapters of OpenStax College *Concepts of Biology* have accompanying test items. Building on the community-oriented nature of OpenStax College resources, we invite you to submit items to be considered for future inclusion.

**Chapter 03: Cell Structure and Function**

1. Where is most of the DNA found in the cell? (Outcome #1) (DOK 2)
2. nucleus\*
3. mitochondria
4. Golgi
5. The study of DNA and inheritance is known as: (Outcome #1) (DOK 1)
6. physiology
7. genetics\*
8. anatomy
9. Why do charged molecules have difficulty crossing a phospholipid bilayer? (Outcome #1) (DOK 1)
10. they are too big
11. they are too nonpolar
12. they are too polar\*
13. The inside of a phospholipid bilayer is known as being: (Outcome #1) (DOK 1)
14. hydrophobic\*
15. hypotonic
16. hydrophilic
17. Explain why phospholipids spontaneously form bilayer when mixed with water? (Outcome #1) (DOK 3)
18. because they have on end that is polar and another that is non-polar\*
19. because the polar tails come together in the inside of the membrane
20. because the polar head groups come together
21. What property of the phospholipid bilayer allows proteins to move laterally in the membrane? (Outcome #1) (DOK 3)
22. proteins attract each other with opposite charges
23. phospholipid molecules are not covalently bonded to each other\*
24. phospholipids are attracted to each other by opposite charges
25. Which type of microspore can be used to view cellular organelles such as the endoplasmic reticulum and Golgi? (Outcome #2) (DOK 1)
26. light microscope
27. transmission electron microscope\*
28. scanning electron microscope
29. Which if the following are found in eukaryotic cells but not prokaryotic cells? (Outcome #2) (DOK 1)
30. Golgi body\*
31. DNA
32. ribosomes
33. Describe why eukaryotic cells being compartmentalized can make their metabolism more complex? (Outcome #2) (DOK 3)
34. different chemical reactions can occur in isolation of each other\*
35. different chemical reactions can occur together more frequently
36. only compartmentalized cells perform complex processes such as photosynthesis
37. Which of the following does a prokaryotic cell shave that an animal cell does not? (Outcome #2) (DOK 1)
38. DNA
39. ribosomes
40. cell wall\*
41. What is the major component of the plant cell wall? (Outcome #2) (DOK 1)
42. starch
43. glycogen
44. cellulose\*
45. Which of the following carbohydrates is used to store energy in plant cells? (Outcome #2) (DOK 1)
46. starch\*
47. glycogen
48. cellulose
49. Which of the following carbohydrates is used to store energy in animal cells? (Outcome #2) (DOK 1) (Clone1)
50. starch
51. glycogen\*
52. cellulose
53. Stimulation of a cell by a molecule that the cell itself makes is called \_\_\_\_\_ stimulation. (Outcome #2) (DOK 1)
54. autocrine\*
55. paracrine
56. anacrine
57. Inside which organelle are secreted proteins often usually synthesized? (Outcome #3) (DOK 1)
58. nucleus
59. Golgi body
60. endoplasmic reticulum\*