

Life Functions and Cells

Answer Key

[New Exam]

1. 2

2. 1

3. 3

4. 1

5. 1

a A = vacuole (or food vacuole); B = vacuole (or contractile vacuole); C = nucleus; D = cell membrane

b A = Food is digested (or stored) in the vacuole. B = Liquid wastes are stored in the vacuole. C = The nucleus controls the activities of the cell. D = The cell membrane controls the movement of molecules into and out of the cell.

c A = digestive system; B = excretory system; C = nervous system; D = excretory system, lining of digestive system (or respiratory system)

6. 1

7. 1

8. 4

9. 2

10. 2

11. 2

12. 2

13. 3

14. 1

15. 2

16. 3

17. 2

18. 1

19. 3

20. 2

21. 4

22. Essay

23. ribosome

24. chloroplast

25. 1

26. 2

27. 3

28. *Examples:* — A (cell membrane) regulates what enters and leaves the cell. — B (nucleus) controls cell activities or contains the genetic codes. (Do *not* accept “brain” or “control center” without further explanation.) — C (mitochondrion) respiration or energy release or production of ATP (Do *not* accept “power house” without further explanation.)

29. *Examples:* A — cell/plasma membrane or B — nucleus or C — mitochondrion.

30. 4

31. 3

32. 1

33. 2

34. 4

35. 2

36. 4

37. 3

38. 3

39. 4

40. 2

41. 4

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Answer Key [New Exam]

42. 1

43. 3

44. 2

45. 2

46. 2

47. 2

48. 1

49. **Structure 1**

- ribosome
- site of protein synthesis
- amino acid — used to make proteins
- nucleus — the ribosome gets instructions from the nucleus determining which proteins are produced by the cell

Structure 2

- nucleus
- control of cell processes
- DNA — makes up the chromosomes in the nucleus
- ribosome — nucleus sends instructions to ribosomes for protein synthesis

Structure 3

- mitochondrion
- site of energy release/cell respiration
- ATP — produced in the mitochondrion
- cell membrane — allows glucose to enter cell and be used by the mitochondrion for energy release

50. 1
