Cell Differentiation & Specialized Cells Test

Part I – Multiple Choice: *Choose the best answer for each question.*

1. What is cell differentiation?
   A. Cells dividing into two identical cells
   B. The process by which cells become specialized
   C. Cells dying naturally
   D. The movement of cells through the body
2. Which type of cell can develop into many different kinds of cells?
   A. Muscle cell
   B. Nerve cell
   C. Stem cell
   D. Blood cell
3. What is the main function of red blood cells?
   A. Carry oxygen
   B. Fight infection
   C. Produce hormones
   D. Send signals
4. Which specialized cell sends messages throughout the body?
   A. Skin cell
   B. Nerve cell
   C. Bone cell
   D. Fat cell
5. Muscle cells are specialized to help the body:
   A. Digest food
   B. Pump blood only
   C. Move
   D. Store oxygen
6. Which structure helps sperm cells swim?
   A. Nucleus
   B. Chloroplast
   C. Flagellum
   D. Cell wall
7. White blood cells are important because they:
   A. Carry oxygen
   B. Protect the body from disease
   C. Help digest food
   D. Build muscles
8. Which cell is specialized to absorb water and nutrients in plants?
   A. Root hair cell
   B. Guard cell
   C. Red blood cell
   D. Nerve cell
9. Differentiated cells usually have:
   A. The same function
   B. Different structures and functions
   C. No nucleus
   D. No membrane
10. Which of the following is an example of a specialized animal cell?
    A. Stem cell
    B. Root hair cell
    C. Leaf cell
    D. Red blood cell

Part II – Fill in the Blank: *Use the word bank to complete the sentences.*

Word Bank				
Specialized	stem cells	oxygen	neurons	muscle
differentiation	root hair	infection	flagellum	function

11. Cell _____ is the process where cells become different types.
12. _____ can become many kinds of cells in the body.
13. Red blood cells carry _____ throughout the body.
14. Nerve cells are also called _____.
15. A sperm cell uses its _____ to move.
16. White blood cells help fight _____.
17. Muscle cells are designed to help with body _____.
18. Root hair cells increase the surface area of the plant's _____.
19. Specialized cells have a specific _____ to perform.
20. Cells become _____ as they mature.

Part III – True or False: *Write T or F*

21. ____ - All cells in the body perform the exact same job.
22. ____ - Stem cells can develop into different types of cells.
23. ____ - Red blood cells help carry oxygen.
24. ____ - Nerve cells help transmit messages in the body.
25. ____ - Muscle cells are specialized for movement.
26. ____ - Plant cells cannot become specialized.
27. ____ - White blood cells help defend the body against disease.
28. ____ - Sperm cells are specialized reproductive cells.
29. ____ - Differentiation occurs only in plants.
30. ____ - Specialized cells have structures that help them do their jobs better.