

# Science Quiz: Specialized Cells

Grade 6 | Total Marks: 10 | Time: 10 Minutes

## Section A: Multiple Choice Questions (5 Marks)

Circle the correct answer.

**1. Which cell is shaped like a biconcave disc (sunken in the middle) to carry oxygen?**

- a) Neuron
- b) Red Blood Cell
- c) Ciliated Cell

**2. What is the main job of a Neuron (Nerve Cell)?**

- a) To trap dust and bacteria
- b) To carry electrical messages around the body
- c) To fight off germs

**3. Where in the human body would you most likely find Ciliated Cells?**

- a) In the brain
- b) In the windpipe (breathing tubes)
- c) In the blood

**4. Red blood cells do not have a nucleus. Why?**

- a) To make more space to carry oxygen
- b) Because they are dead cells
- c) To help them move faster

**5. Ciliated cells have tiny hair-like parts called "cilia." What do these hairs do?**

- a) They help the cell swim in the blood
- b) They sweep mucus and dust away from the lungs
- c) They catch electrical signals

**6. A scientist observes a leaf and notice that the Palisade cells are shaped like tall, narrow columns and are packed very tightly at the top. Why is this specific structure important?**

- a) It helps the leaf stay waterproof so it doesn't drown.
- b) It allows the cells to move around the leaf to find water.
- c) It ensures maximum sunlight is captured by the chloroplasts for photosynthesis.
- d) It makes the leaf taste bitter so animals won't eat it.

**7. Root hair cells have a long, finger-like extension. If a plant was grown in very dry soil, how would this extension help the plant survive?**

- a) It acts like a spear to dig deeper into the ground to find rocks.
- b) It increases the surface area to absorb as much limited water as possible.
- c) It stores extra sunlight to keep the roots warm at night.
- d) It helps the root hair cell turn into a stem if needed.

**8. You are looking at two mystery cells under a microscope. Cell A has many green chloroplasts, while Cell B has no chloroplasts but has a long, thin projection. Which statement is correct?**

- a) Cell A is a root hair cell; Cell B is a palisade cell.
- b) Both cells are found in the roots to help the plant stay anchored.
- c) Cell A is a palisade cell (for light capture); Cell B is a root hair cell (for water uptake).
- d) Neither cell belongs to a plant because they don't look the same.

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### **Section B: True or False (5 Marks)**

Write **T** if the statement is true and **F** if the statement is false.

| #  | Statement                                                                                                             | T / F |
|----|-----------------------------------------------------------------------------------------------------------------------|-------|
| 1. | Neurons are very long so they can carry messages over long distances.                                                 |       |
| 2. | Red blood cells use hemoglobin to grab onto oxygen.                                                                   |       |
| 3. | Ciliated cells are found in the stomach to help digest food.                                                          |       |
| 4. | A neuron sends messages using tiny electrical pulses.                                                                 |       |
| 5. | Red blood cells are the only cells in the body that carry dust.                                                       |       |
| 6. | Root hair cells do not contain chloroplasts because they live underground where there is no light for photosynthesis. |       |
| 7. | Palisade cells have a very small vacuole because they do not need to store any water or cell sap.                     |       |

