Name: _____ Date: _____ Per: _____ Assign # _____

Homeostasis: Maintaining a stable internal environment for the survival of the cell

1. **Scenario: Paramecium in Salt Lake. Paramecium have about 1% salt water in the cytoplasm. Salt Lake has about 5% salt water.**
    a. Where is the hypotonic solution? _____
    b. Where is the hypertonic solution? _____
    c. In which direction will net osmosis occur? _____
    d. In which direction will net dialysis occur?
    _____
    e. Would the paramecium tend to swell or shrink? _____
    f. Explain the answer to (e):

    g. Would you expect plasmolysis or cytolysis? _____
    h. Explain your answer to (g):

2. **Scenario: Crunchy or wilted salad. Grocery stores frequently spray their vegetables with fresh water. Does it really work?**
    a. Where is the hypotonic solution? _____
    b. Where is the hypertonic solution? _____
    c. What is osmosis? _____
    d. What does this treatment do to the turgor pressure of cells? _____
    _____
    e. Would the veggies be wilted or crisp?
    f. Explain the answer to (e):

3. **Scenario: Hemolysis of blood: What would happen to blood cells if distilled water is added to them?**
    a. What is the hypotonic solution? _____
    b. What is the hypertonic solution? _____
    c. In which direction would osmosis tend to occur? _____
    d. Would blood cells shrink or expand? _____
    e. Explain the answer to (d):

    f. In which direction would dialysis tend to occur? _____
    g. What substances would move through the cell membrane due to dialysis? _____
    _____

4. **Scenario: Saltwater fish dilemma: Consider fish living in the ocean. Seawater is 3.5% salt.**
    a. What is hypotonic: Seawater or fish cells? _____
    b. What is hypertonic? _____
    c. Would osmosis cause the fish cells to gain or lose water? _____
    d. Explain (c):

    e. Would dialysis cause the fish to gain or lose salt?
    f. Explain (e):

    g. How do fish keep from getting dehydrated? _____