Teacher Answer Key

Case Study

1. Because strong upwelling and nutrients fuel massive phytoplankton blooms.

2. Warming and circulation changes could reduce nutrient supply and alter CO_2 uptake.

Multiple Choice

1. D

2. B

3. B

Matching

1-D, 2-A, 3-E, 4-C, 5-B

Fill-in-the-Blank

1) Biological pump, 2) Carbon dioxide, 3) Sediments

Short Answer (Sample Responses)

Q1: It transfers carbon from the atmosphere to the deep ocean, limiting greenhouse gases.

Q2: Deep ocean sequestration lasts centuries, while sediments can store carbon for millions of years.

Q3: Because altering marine systems could have unintended ecological consequences.