Teacher Answer Key

Case Study

1. Dr. Vasquez should recommend that any recovery operation must include a qualified marine archaeologist directing the excavation, detailed photographic and positional documentation of every artifact before removal, a requirement that all recovered items remain in public trust rather than being sold privately, and a published scientific report. These conditions would ensure that the letters are recovered with their contextual information preserved while preventing purely profit-driven salvage.

2. Commercial value should not be the primary factor in salvage decisions because it incentivizes recovering visually impressive items while ignoring scientifically important but less valuable objects. When profit drives excavation, archaeological context is often sacrificed for speed and selectivity. However, the reality is that deep-sea operations are extremely expensive, so some commercial framework may be necessary to fund legitimate preservation work, as long as strict archaeological oversight is maintained.

Multiple Choice

1. B

2. A

3. C

Matching

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

Fill-in-the-Blank

1) 1985, 2) Halomonas titanicae, 3) 2,000

Short Answer (Sample Responses)

Q1: The ROV technology refined during Titanic expeditions transformed multiple fields beyond marine archaeology. The ability to operate remotely controlled vehicles with cameras at extreme depths advanced ocean science research, military deep-water operations, and industrial applications like underwater pipeline and cable inspection. The Titanic project essentially proved that ROVs could perform detailed work in conditions too deep and dangerous for human divers.

Q2: Archaeologists argue that removing artifacts without carefully recording their exact position, relationship to other objects, and surrounding context destroys the

scientific information that makes them historically meaningful. A recovered object tells us far less when separated from its spatial context than it does when documented in place. Additionally, critics argue that commercial salvage prioritizes visually impressive items over scientifically important ones and disrespects a site where over 1,500 people died.

Q3: Digital preservation has become essential because the Titanic is deteriorating at an accelerating rate due to iron-eating bacteria, deep-sea currents, and salt corrosion. Entire structural sections are collapsing, and scientists estimate the recognizable wreck could disappear within decades. Comprehensive three-dimensional scans, like the 2022 photogrammetric model, create permanent digital records that will allow future researchers to study the site long after the physical wreck has disintegrated.