Teacher Answer Key

Case Study

1. The combination of expensive dental work and childhood malnutrition markers suggests a person whose economic circumstances changed significantly over their lifetime — perhaps born into poverty but later employed by a wealthy household. The extreme labor markers in the spine and shoulders confirm this was someone who did heavy physical work, possibly as a domestic servant or craftsman who could afford dental care despite doing grueling labor.

2. Individual skeletal markers can be misleading in isolation — a single fracture could be accidental or deliberate, and one nutrition marker could reflect a short-term illness rather than chronic poverty. Reading multiple indicators together allows bioarchaeologists to build a more complete and accurate picture, catching contradictions that a single data point would hide.

Multiple Choice

1. B

2. D

3. A

Matching

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

Fill-in-the-Blank

1) osteology, 2) Harris, 3) enthesopathies

Short Answer (Sample Responses)

Q1: A bioarchaeologist can determine estimated age, biological sex, stature, ancestry, and health conditions from skeletal remains. The limits include an inability to determine a person's name, social identity, or cultural background without additional evidence, and many soft-tissue diseases leave no trace in bone at all.

Q2: A medieval laborer's skeleton would likely show extreme enthesopathies from repetitive heavy work, spinal compression, and possibly malnutrition markers like Harris lines. A noble's skeleton might show dental decay from a sugar-rich diet, obesity-related joint changes, and fewer labor stress markers — differences caused by years of divergent physical demands and nutritional access.

Q3: A healed fracture proves the person survived their injury and lived long enough for the bone to remodel, which typically takes weeks to months. An unhealed

fracture at or near the time of death suggests the injury may have been fatal or occurred very close to when the person died, providing clues about cause of death.