Teacher Answer Key

Case Study

1. Priya's experience illustrates "alert fatigue" — the phenomenon in which clinicians begin ignoring alerts because they fire too frequently and are wrong most of the time. When 11 of 14 alerts are false alarms, the rational human response is to reduce the weight given to each alert, which creates a dangerous situation when a real case arrives.

2. The reading advocates for transparency requirements so that clinicians know when AI is influencing a recommendation and can apply their own judgment. This implies that AI alerts should be a prompt for clinical assessment, not a substitute for it. Priya's situation suggests the system was not being used this way — the volume of alerts made careful individual assessment practically impossible on a twelve-patient shift.

Multiple Choice

1. C
2. D
3. B

Matching

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

Fill-in-the-Blank

1) 200, 2) darker, 3) device

Short Answer (Sample Responses)

Q1: The Optum algorithm used total healthcare costs as a proxy for health need, assuming that patients who spent more on medical care must have greater health needs. Black patients in the United States spend less on healthcare than white patients with the same conditions due to historical and systemic barriers — not because they are healthier. The algorithm therefore read lower spending as lower need and under-referred Black patients for care management services.

Q2: When AI dermatology tools are trained on datasets that underrepresent darker skin tones, they perform less accurately on darker-skinned patients — meaning those patients are more likely to receive delayed or missed diagnoses. Those same patients already face greater barriers to dermatological care. So the AI does not

merely reflect existing inequality; it adds a new layer of disadvantage on top of existing disadvantage, making the gap in outcomes larger.

Q3: Equitable in this context means that the benefits of AI healthcare tools — faster diagnosis, better monitoring, earlier detection — reach all patient populations at comparable accuracy and quality, not just those who are well-represented in training data. Achieving that would require demographic performance reporting to identify gaps, independent validation studies before deployment, ongoing monitoring after deployment, and the collection of training data that represents the full diversity of patients who will be treated.