Teacher Answer Key

Case Study

1. Overpacking the shelves blocked air circulation and created warm pockets, so the back corner sat at 47 degrees F inside the danger zone. A correct setting does not guarantee a correct temperature everywhere in the unit.

2. The reading says a dial indicates a setting, not an actual measured temperature, so temperature must be verified with a thermometer inside the unit. Multiple internal thermometers reveal the warm spots a single sensor near the vent hides.

Multiple Choice

1. B

2. A

3. D

Matching

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

Fill-in-the-Blank

1) 41, 2) 0, 3) out

Short Answer (Sample Responses)

Q1: Packing shelves edge to edge blocks the airflow the unit needs to move cold air through the cabinet, creating warm pockets. The sensor near the vent reads cold air while a back corner sits in the danger zone.

Q2: At 0 degrees F bacterial growth stops entirely, so pathogens do not increase no matter how long the food is held. Quality still degrades because moisture sublimates out of the surface and fats break down, producing freezer burn and off flavors.

Q3: A seam dent can break the seal that keeps the can airtight, creating the oxygen-free conditions where Clostridium botulinum produces its toxin. A dent on the flat face usually does not affect the seal and is cosmetic.