DIRECTIONS: Circle the letter that best matches the statement or question. See accompanying page for answers.

1. Workers should not handle food or eating and drinking utensils when they have or recently had any of the following symptoms:
   A. Vomiting, diarrhea, fever, sore throat with fever, jaundice, infected cuts
   B. Runny nose, sneezing, cough, congestion, cold symptoms
   C. A and B
   D. None of the above

2. Food workers should wash their hands after which of the following:
   A. Coughing, sneezing, scratching, wiping nose, cleaning
   B. Touching exposed body parts, handling raw animal food, handling money
   C. Before putting on disposable gloves or after using the rest room
   D. All of the above

3. The minimum time food workers should wash their hands is:
   A. 5 seconds
   B. 20 seconds
   C. 30 seconds
   D. 40 seconds

4. Disposable gloves should be worn by workers handling which foods:
   A. raw chicken being placed in a deep fryer
   B. sandwich bread for immediate service to customers
   C. A and B
   D. None of the above

5. For simplicity and safety, all raw poultry, beef, fish and meat should be cooked to what minimum temperature:
   A. 165°F (74°C)
   B. 185°F (85°C)
   C. 212°F (100°C)
   D. None of the above

6. All foods that must be refrigerated should be held at or below what maximum temperature:
   A. 51°F (11°C)
   B. 41°F (5°C)
   C. 32°F (0°C)
   D. None of the above

7. Examples of cross-contamination are:
   A. Raw chicken is processed on cutting board then lettuce is sliced on same surface
   B. Food worker handles raw meat then assembles sandwich without washing hands
   C. Liquids from raw hamburger drip onto vegetables for salad
   D. All of the above

8. Examples of how to rapidly cool food include:
   A. Portioning large quantities of foods into smaller units by slicing and pouring
   B. Using metal rather than plastic containers
   C. Ensuring vigorous air circulation around food
   D. All of the above
ANSWERS TO FOOD SAFETY QUIZ

1. ANSWER: A.
Food workers that have or recently had symptoms including vomiting, diarrhea, fever, sore throat with fever, jaundice or infected cuts must not handle food being served to the public or handle any eating or drinking utensils. This restriction is because of the high risk such workers pose to transmit disease-causing bacteria and viruses to others through food or utensils.

Food workers that have other symptoms such as runny nose, sneezing, cough or congestion are allowed to handle food and utensils provided they wash hands when required and are careful to not contaminate food or utensils.

As implied above, bacteria and viruses are the primary organisms of concern with regards to preventing food-borne illness. These organisms cause thousands of documented and undocumented cases of food-borne illness each year around the world. The most prevalent virus causing food-borne illness is Norovirus, while *Salmonella* is the most frequent bacteria implicated in outbreaks.

2. ANSWER: D.
Food workers must wash their hands after any activity that contaminates their hands. Such activities include, but are not limited to: using the rest room, coughing, sneezing, scratching, wiping nose, cleaning, touching exposed body parts, handling raw animal food, handling money and before putting on disposable gloves.

3. ANSWER: B.
The minimum time food workers should wash their hands after contaminating them is 20 seconds in order to remove non-indigenous organisms from the skin’s surface.

4. ANSWER B.
Disposable gloves must be worn by food workers handling any ready-to-eat foods. Foods being handled that are subject to a further cooking or re-heating step are not required to wear gloves. For example, gloves are not required for a food worker making a pizza that will be baked later in processing. However, gloves are required when handling lettuce or vegetables for a salad to be served.

5. ANSWER: A.
For simplicity and safety, all raw poultry, beef, fish and meat should be cooked to 165°F (74°C). There are some animal foods that do not need to cooked to this temperature, but it is best to cook all food thoroughly. Typically, most hamburgers and other deep fried foods from commercial establishments cook foods to at least 180°F (82°C) before serving to patrons.

6. ANSWER B.
The purpose of refrigerating food is to reduce the number of times bacteria can reproduce in a given period of time. Scientific studies show that 41°F (5°C) is the maximum temperature food can be safely held for seven days and minimize growth of *Listeria* bacteria of an unknown dose, if they are present in food.

7. ANSWER: D.
Cross-contamination is one of the leading causes of food-borne illness outbreaks. It occurs when harmful organisms are transferred from one item to another item without further washing, cooking or re-heating. The best ways to prevent cross-contamination are to process raw animal foods on a separate surface from other foods and store raw animal foods below and away from other foods.

8. ANSWER: D.
Potentially hazardous foods such as most soups, beef and poultry must be rapidly cooled to minimize growth and reproduction of microorganisms. Rapid cooling means food is chilled from 135°F (57°C) to 41°F (5°C) in six hours or less. However, if cooling food cannot be chilled from 135°F (57°C) to 70°F (21°C) within the first two hours of the process, the food should be re-heated to 165°F (74°C) and the cooling process should be re-started.

Increasing the surface area of cooling food is one method to rapidly chill food. This method can be achieved by cutting large pieces of meat, pork and poultry into smaller units, and pouring large volumes of liquids into shallow containers less than four ounces in depth. Other methods include use of ice baths, ice wands, metal containers, blast chillers and air circulation.