

# ServSafe - Quiz Questions with Answers

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## ServSafe Manager

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ServSafe Manager

1.

What is the difference between the sell by date and the best by date?

**The sell by date tells the store how long to display the product for sale. The best by date is the date by which the product should be eaten for best quality.**

The best by date tells the store how long to display the product for sale. The sell by date is the date by which the product should be eaten for best quality.

Both date marks are interchangeable and do not mean different things.

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*Correct answer: The sell by date tells the store how long to display the product for sale. The best by date is the date by which the product should be eaten for best quality.*

*There are other dates on labels aside from use-by date or expiry date. A sell by date tells the store how long to display the products for sale. A best by date is the date by which the product should be eaten for the best flavor or quality.*

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**2.**

What is the minimum internal cooking temperature for roasted vegetables that will be hot-held for service?

**135°F (57°C) (no minimum time)**

165°F (74°C) for <1 second (Instantaneous)

155°F (68°C) for 17 seconds

145°F (63°C) for four minutes

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*Correct answer: 135°F (57°C) (no minimum time)*

**135°F (57°C) (no minimum time)**

- *Food from plants, including fruits, vegetables, grains (e.g., rice, pasta), and legumes (e.g., beans, refried beans) that will be hot-held for service*

*Other minimum internal cooking temperature requirements are:*

**165°F (74°C) for <1 second (Instantaneous)**

- *Poultry—whole or ground chicken, turkey or duck*
- *Stuffing made with fish, meat, or poultry*
- *Stuffed meat, seafood, poultry, or pasta*
- *Dishes that include previously cooked TCS ingredients*

**155°F (68°C) for 17 seconds**

- *Ground meat—beef, pork, and other meat*
- *Meat mechanically-tenderized with needles or blades or by injecting it with brine or flavors (e.g. brined ham or flavor-injected roasts)*
- *Meat vacuum-tumbled with marinades or other solutions*
- *Ground meat from game animals commercially raised and inspected*

**145°F (63°C) for 15 seconds**

- *Seafood—including fish, shellfish, and crustaceans*
- *Steaks/chops of pork, beef, veal, and lamb*
- *Commercially raised game*
- *Shell eggs that will be served immediately*

**145°F (63°C) for four minutes**

- *Roasts of pork, beef, veal, and lamb*
  - *Alternate cooking times/temperatures*
    - *130°F (54°C) 112 minutes*
    - *131°F (55°C) 89 minutes*
    - *133°F (56°C) 56 minutes*
    - *135°F (57°C) 36 minutes*
    - *136°F (58°C) 28 minutes*
    - *138°F (59°C) 18 minutes*
    - *140°F (60°C) 12 minutes*
    - *142°F (61°C) 8 minutes*
    - *144°F (62°C) 5 minutes*
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**3.**

Which of the following is the correct practice in handling ice?

**Store ice scoops outside of the ice machine in a clean, protected location.**

Hold or carry ice in containers that have held raw meat, seafood, poultry, or chemicals

Touch ice with your hands, or use a glass to scoop the ice.

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*Correct answer: Store ice scoops outside of the ice machine in a clean, protected location.*

*Follow these guidelines to avoid contaminating ice:*

- *Make ice from water that is safe to drink.*
  - *Never use ice as an ingredient if it is used to keep food cold.*
  - *Store ice scoops outside of the ice machine in a clean, protected location.*
  - *Never hold or carry ice in containers that held raw meat, seafood, poultry, or chemicals.*
  - *Never touch ice with your hands or use a glass to scoop the ice.*
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**4.**

What must be the temperature of coolers?

**41°F (5°C) or lower**

45°F (7°C)

50°F (10°C)

135°F (57°C)

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*Correct answer: 41°F (5°C) or lower*

*This temperature ensures that food items stored in coolers are not exposed to the temperature danger zone - 41°F to 135°F (5°C to 57°C).*

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**5.**

Which of the following is an example of a biological hazard?

**Virus**

Allergen

Sanitizers

Cleaners

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*Correct answer: Virus*

*Biological contaminants:*

- *Bacteria*
- *Viruses*
- *Parasites*
- *Fungi*

*Allergens are proteins found in food. Sanitizers and cleaners are considered chemical hazards.*

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**6.**

What range of temperature is the most dangerous part of the temperature danger zone (TDZ)?

**70°F to 125°F (21°C to 52°C)**

41°F to 135°F (5°C to 57°C)

41°F to 70°F (5°C to 21°C)

70°F to 135°F (21°C to 57°C)

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*Correct answer: 70°F to 125°F (21°C to 52°C)*

*The temperature danger zone is 40°F to 135°F (5°C to 57°C) and most pathogens grow in this range. However, most pathogens grow much faster between 70°F and 125°F (21°C and 52°C).*

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7.

Which virus is best described by the following:

Source: Human feces

Foods linked: Ready-to-eat food

Prevention measure: Exclude from the operation staff who are vomiting or have diarrhea

- Norovirus**
- Hepatitis A
- Salmonella typhi*
- Shiga toxin-producing *Escherichia coli*

Correct answer: Norovirus

|                    | <i>Salmonella typhi</i>                   | Non-typhoidal <i>Salmonella</i>                       | <i>Shigella spp.</i>  | Shiga toxin-producing <i>Escherichia coli</i>                      | Hepatitis A  | Norovirus  |
|--------------------|---|---|---|--|--|--|
| Source             | People                                    | Farm animals, people                                  | Human feces   | Intestines of cattle; infected people                              | Human feces  | Human feces  |
| Foods linked       | Beverage                                  | Poultry and eggs                                      | Food easily contaminated by hands, such as salads containing TCS food | Ground beef (raw and undercooked)                                  | Ready-to-eat food  | Ready-to-eat food  |
| Prevention measure | Cook food to minimum internal temperature | Cook poultry and eggs to minimum internal temperature | Control flies inside and outside the operation                        | Cook food, especially ground beef, to minimum internal temperature | Exclude from the operation staff who have had jaundice for seven | Exclude from the operation staff who are vomiting or have diarrhea |



*days or  
less*



**8.**

Which of the following is not an approved portable water source?

**Deep well**

Closed water containers

Water transport vehicles

Regularly-tested private sources

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*Correct answer: Deep well*

*Approved sources of potable water:*

- *Approved water mains*
- *Regularly-tested private sources*
- *Closed water containers*
- *Water transport vehicles*

*Deep wells are not approved, regularly tested, maintained, and are kept open. Therefore, it is not an accepted source of potable water.*

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**9.**

A cook is vomiting or has diarrhea. What must a manager do?

**Report the situation to the regulatory authority.**

Have the food handler wear gloves when handling food.

Instruct the food handler to wash their hands twice as often.

Call a medical practitioner to prescribe medication to the cook before starting work.

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*Correct answer: Report the situation to the regulatory authority.*

*If a food handler is vomiting or has diarrhea and has been diagnosed with an illness caused by one of these pathogens:*

- *Norovirus*
- *Shigella spp.*
- *Nontyphoidal Salmonella*
- *Shiga toxin-producing E. coli (STEC)*
- *Hepatitis A*
- *Salmonella typhi*

*The manager must:*

- *Exclude the food handler from the operation*
- *Report the situation to the regulatory authority*
- *Work with the medical practitioner and the local regulatory authority*

*Requiring the food handler to wear gloves when handling food does not stop the fecal-oral route of the pathogen. Having the food handler take medication onsite is not acceptable because a food handler must be symptom-free for 24 hours before handling food. Instructing the food handler to wash their hands twice as often will not ensure that pathogen transfer will not occur.*

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**10.**

Which type of thermometer uses the ice-point calibration method?

**Bimetallic stemmed thermometer**

Time and temperature indicators

Maximum registering thermometer

Thermocouple and thermistor

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*Correct answer: Bimetallic stemmed thermometer*

*Bimetallic stemmed thermometers can be adjusted onsite and do not require external calibration, therefore, ice point method is done.*

*Time and temperature indicators (TTI) , and maximum registering thermometers (MRT) cannot be calibrated. For digital thermometers like thermocouples and thermistors, it is best to follow the manufacturer's guidelines for calibration.*

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**11.**

What is the first step that should be taken when there is a suspected foodborne illness?

**Separate and set aside the suspected food, and label with "do not use" and "do not discard".**

Gather information from supplier, storage, preparation and serving of the food.

Call the authorities, and cooperate with them for investigation.

Review procedures, and revise if deemed necessary.

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*Correct answer: Separate and set aside the suspected food, and label with "do not use" and "do not discard".*

*The following are the steps that must be done when investigating a foodborne illness:*

- *Segregate product*
- *Gather information*
- *Document information*
- *Identify staff*
- *Notify authorities*
- *Cooperate with authorities*
- *Review procedures*

*Since there is a suspected foodborne illness, the first step is to prevent the spread by separating and setting aside the suspected food, and labeling with DO NOT USE and DO NOT DISCARD. Do not use to prevent further spread, and do not discard for laboratory analysis. Once this is done, other procedures can immediately follow.*

*The other options are incorrect because if they are done first, and the suspected food is still being served, then the spread of the foodborne illness is not controlled immediately.*

- *Gather information from supplier, storage, preparation and serving of the food.*
  - *Call the authorities, and cooperate with them for investigation.*
  - *Review procedures, and revise if deemed necessary.*
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**12.**

After which activity must a server wash their hands?

**Clearing up tables**

Putting on single-use gloves

Stacking up clean plates

Applying hand sanitizer

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*Correct answer: Clearing up tables*

*Clearing tables contaminates hands because the server is handling used plates, cups, glasses and cutlery. The other activities require washing hands prior.*

- *Hands must be washed before putting on single-use gloves. Gloves must not be washed or rinsed.*
  - *Hands must be washed before stacking up clean plates. Since the plates are already cleaned, not washing hands before will cause cross contamination.*
  - *Hands must be washed before applying hand sanitizer.*
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**13.**

Roshona placed a bag of garbage on the prep table before tying it and taking it out to dispose of it. Which of the following steps must be done next?

**Wash, rinse, and sanitize the preparation table.**

Replace the inner liner of the trash bin.

Re-train the staff to not place any garbage bags on the preparation table.

Clean the garbage bin.

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*Correct answer: Wash, rinse, and sanitize the preparation table.*

*The immediate corrective action must be to wash, rinse, and sanitize the preparation table in order to prevent cross-contamination.*

*After this is done, the manager must re-train the staff to not place any garbage bags on the preparation table to make sure that this non-compliance will not happen again. Once the first two corrective actions are done, the staff can proceed by replacing the inner liner of the trash bin. At the end of the operations, the garbage bins must be cleaned.*

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**14.**

What is a cross-connection?

**Physical link between safe water and dirty water**

Backup of sewage from an operation's floor drain

Space that separates an outlet of safe water from a potentially contaminated source of water

A back flow preventer device

*Correct answer: Physical link between safe water and dirty water*

- *Cross-connection - Physical link between safe water and dirty water*
  - *Backflow - Reverse flow of contaminants through a cross-connection into a drinkable water supply, Backup of sewage from an operation's floor drain*
  - *Air gap - Space that separates an outlet of safe water from a potentially contaminated source of water*
  - *Vacuum breaker - A back flow preventer device*
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**15.**

What is the first and most important step in pest prevention?

**Deny pest access to the operation.**

Deny pests food, water, and shelter.

Work with a licensed Pest Control Operator (PCO).

No first step, all can be implemented at the same time.

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*Correct answer: Deny pest access to the operation.*

*Denying pest access to the operation must be done first and is the most important step in pest prevention.*

*Three rules of pest prevention are:*

- 1. Deny pests access to the operation.*
- 2. Deny pests food, water, and shelter.*
- 3. Work with a licensed Pest Control Operator (PCO).*

*If there is access to the facility, even if steps 2 and 3 are done regularly, there will always be pests in the facility.*

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**16.**

Why are elderly people at a higher risk of getting foodborne illness?

**People's immune systems weaken with age.**

They have weaker muscles.

They have chronic illnesses.

They are not able to correctly recall the food they eat.

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*Correct answer: People's immune systems weaken with age.*

*The immune system is our body's defense against illnesses, and as it weakens with age, elderly people have lowered defenses against illnesses, including foodborne illness. The other options are incorrect, because they are not necessarily true for all elderly people and:*

- They have weaker muscles. Weaker muscles are not related to a higher risk of foodborne illness.*
  - They have chronic illnesses. Not all chronic illness translates to a higher risk of foodborne illness.*
  - They are not able to correctly recall the food they eat. This is not related to having a foodborne illness.*
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**17.**

Which of the following is true with regards to sanitizer effectiveness?

**Sanitizers should be mixed with water to the correct concentration.**

Use less sanitizer when mixing it with hot water.

Double the strength of the sanitizer to increase its effectiveness.

Soak the equipment in sanitizer longer to be more effective.

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*Correct answer: Sanitizers should be mixed with water to the correct concentration.*

*Sanitizers should be mixed with water to the correct concentration.*

*Using less than the recommended sanitizer may make the solution weak and useless. Too much sanitizer may make the solution too strong, unsafe, and corrode metal. Sanitizers also have a defined contact time, where the sanitizer must be in contact with the surface, and making this time shorter means sanitizer will not be effective. Soaking the equipment longer does not make the sanitizer more effective.*

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**18.**

What is not an example of achieving active managerial control in an operation?

**Integrated Pest Management (IPM)**

Hazard Analysis Critical Control Point (HACCP)

Incorporation of Standard Operating Procedures (SOPs)

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*Correct answer: Integrated Pest Management (IPM)*

*Integrated Pest Management (IPM) is one of the pre-requisite programs that must be implemented before implementing active managerial control.*

*There are many ways to achieve active managerial control in the operation. According to the Food and Drug Administration (FDA), you can use simple tools such as training programs, manager supervision, and incorporation of SOP's. Active managerial control can also be achieved through more complex solutions such as a Hazard Analysis Critical Control Point (HACCP) program.*

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**19.**

Which of the following seals does not imply that the equipment is tested to be safe for food?

**ServSafe®**

NSF mark

UL EPH classified mark

ETL sanitation mark

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*Correct answer: ServSafe® mark*

*ServSafe® is a trademark that provides ANSI accredited Food Safety Programs.*

*When purchasing equipment, the following marks mean that the equipment meets certain standards if it comes into contact with food:*

- *UL EPH classified mark*
  - *NSF mark*
  - *ETL sanitation mark*
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20.

Which of the following situations can lead to pest infestation?

**A delivery person brings food into the kitchen to be inspected.**

A dumpster is left closed during the night.

Food delivery is rejected because it contains packages with egg and egg casings.

The hole around the drain pipe was sealed.

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*Correct answer: A delivery person brings food into the kitchen to be inspected.*

*Inspection of deliveries must happen before a product is received and stored or brought inside the kitchen.*

*Ceiling holes around drain pipes, closing the dumpster at night, and rejecting food deliveries with pest signs are examples of denying pest access to the operation.*

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**21.**

What can be used to measure the final sanitizing rinse temperature of a high temperature dishwashing machine?

**Maximum registering thermometer**

Infrared thermometer

Bimetallic stemmed thermometer

Time-temperature indicator

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*Correct answer: Maximum registering thermometer*

*For high-temperature dishwashing machines, provide tools to check the temperature of the items being sanitized, such as maximum registering thermometers, and temperature sensitive tape.*

*Infrared thermometers and bimetallic stemmed thermometers are used to take food temperatures. A time-temperature indicator is used to determine if a pack of food was time and temperature abused*

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**22.**

The kitchen has limited space and receives a lot of orders. In order to prevent cross-contact, which of the following orders should be prepared first?

**Wheat-free sandwich**

Cheeseburger

Grilled salmon

Tofu salad

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*Correct answer: Wheat-free sandwich*

*A wheat free sandwich must have been ordered by a customer that has a wheat allergy. It is best to prepare the allergen order first to prevent cross-contact.*

*The other options – cheeseburger, grilled salmon, and tofu salad all contain one of the eight big allergens. Therefore, they would be sources of cross-contact.*

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**23.**

Which of the following is the correct way of preparing food?

**Thaw frozen food in a cooler that keeps it at 41°F (5°C) or lower.**

Cook pooled eggs promptly after mixing and store them at room temperature.

Store ice scoopers inside of the ice bins.

Dispose of ready-to-eat food in a cooler after 10 days.

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*Correct answer: Thaw frozen food in a cooler that keeps it at 41°F (5°C) or lower.*

*41°F (5°C) or lower is the correct temperature for storing chilled items.*

*Pooled eggs must be cooled down and stored in the cooler and not at room temperature where they will be exposed to the temperature danger zone. Ice scoopers must be stored outside of the ice bins to avoid cross-contamination. The maximum time that ready-to-eat food can be stored inside a cooler is seven days.*

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24.

Which virus is best described by the following:

Source: Human feces

Foods linked: Ready-to-eat food

Prevention measure: Exclude from the operation staff who have had jaundice for seven days or less

**Hepatitis A**

*Salmonella typhi*

Non-typhoidal *Salmonella*

Norovirus

Correct answer: Hepatitis A

|                    | <i>Salmonella typhi</i>                   | Non-typhoidal <i>Salmonella</i>                       | <i>Shigella spp.</i>  | <i>Shiga toxin-producing Escherichia coli</i>                      | Hepatitis A  | Norovirus  |
|--------------------|---|---|---|--|--|--|
| Source             | People                                    | Farm animals, people                                  | Human feces   | Intestines of cattle; infected people                              | Human feces  | Human feces  |
| Foods linked       | Beverage                                  | Poultry and eggs                                      | Food easily contaminated by hands, such as salads containing TCS food | Ground beef (raw and undercooked)                                  | Ready-to-eat food  | Ready-to-eat food  |
| Prevention measure | Cook food to minimum internal temperature | Cook poultry and eggs to minimum internal temperature | Control flies inside and outside the operation                        | Cook food, especially ground beef, to minimum internal temperature | Exclude from the operation staff who have had jaundice for seven | Exclude from the operation staff who are vomiting or have diarrhea |

*days or  
less*



**25.**

There are gallons of milk that will be delivered today. They were received at 45°F (7°C). What next step will make this receiving temperature acceptable?

**Lower the temperature of the milk to 41°F (5°C) or lower in four hours.**

The batch of delivery is consumed in 48 hours.

Lower the temperature of the milk to 41°F (5°C) or lower in 24 hours.

The batch of delivery is consumed in 4 hours.

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*Correct answer: Lower the temperature of the milk to 41°F (5°C) or lower in four hours.*

*Consuming the milk delivery that was not cooled down to 41°F (5°C) is unsafe, regardless of the time frame. Cooling the milk to 41°F (5°C) in 24 hours exposes the dairy to the temperature danger zone - 41°F to 135°F (5°C to 57°C).*

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**26.**

Which of the following is not an example of cross-contamination?

**Touch or scratch wounds and then touch food**

Contaminated ingredients are added to food that will not be cooked

Ready-to-eat food comes into contact with contaminated surfaces

Contaminated food drips fluids on ready-to-eat food

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*Correct answer: Touch or scratch wounds and then touch food*

*Since the food handler is the source of contamination, this is an example of poor personal hygiene.*

*Examples of cross-contamination include:*

- *Contaminated ingredients are added to food that will not be cooked*
  - *Ready-to-eat food comes into contact with contaminated surfaces*
  - *Contaminated food drips fluids on ready-to-eat food*
  - *Contaminated wiping cloths touch food-contact surfaces*
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**27.**

Of the following food handlers, who must be restricted from working with exposed food, utensils, and equipment?

**Bob, a cook in a restaurant, who has a runny nose**

Jill, a server that has diarrhea

Linda, a server in a hospital kitchen

Moe, a busser that has been diagnosed with Norovirus

*Correct answer: Bob, a cook in a restaurant, who has a runny nose*

*Food handlers must be RESTRICTED from working with exposed food, utensils, and equipment when:*

- *The food handler has an infected wound or boil that is not properly covered.*
- *The food handler has a sore throat with a fever.*
- *The food handler has persistent sneezing, coughing, or a runny nose with discharges from the eyes, nose, or mouth*

*Food handlers must be EXCLUDED from the operations when:*

- *The food handler has a sore throat with a fever, and if you primarily serve a high-risk population.*
  - *The food handler has at least one of these symptoms of an infectious condition:*
    - *Vomiting*
    - *Diarrhea*
    - *Jaundice (yellow skin or eyes)*
  - *The food handler is vomiting or has diarrhea, and has been diagnosed with an illness caused by one of these pathogens:*
    - *Norovirus*
    - *Shigella spp.*
    - *Nontyphoidal Salmonella*
    - *Shiga toxin-producing E. coli (STEC)*
    - *Hepatitis A*
    - *Salmonella Typhi*
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**28.**

A food handler can contaminate food in the following scenarios, except:

**Using the restroom and then washing their hands**

Having wounds or boils that contain a pathogen

Sneezing or coughing on the food

Having contact with a person who is sick

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*Correct answer: Using the restroom and then washing their hands*

*Food handlers are the most common sources of food contamination. They need to understand that quick scenarios like:*

- *Having a foodborne illness*
- *Having wounds or boils that contain a pathogen*
- *Sneezing or coughing on food*
- *Having contact with a person who is sick*
- *Using the restroom and not washing their hands*
- *Having symptoms such as diarrhea, vomiting, or jaundice—a yellowing of the eyes or skin*

*increase their risk of contaminating the food.*

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**29.**

What is the sanitizer contact time for chlorine?

 **$\geq 7$  seconds** $\geq 30$  seconds $\geq 60$  seconds $\geq 10$  seconds

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*Correct answer:  $\geq 7$  seconds*

*Sanitizer contact times are as follows:*

*Chlorine:  $\geq 7$  seconds*

*Iodine and Quats:  $\geq 30$  seconds*

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**30.**

Which of the following must an operation have or do to offer raw or undercooked items on their menu?

**Disclose any raw or undercooked time-temperature control food in the menu.**

A reasonable sized photo of the menu item with the raw or undercooked ingredients.

After a customer ordered a menu item with the raw or undercooked ingredients, servers must verbally remind them of the risk of consuming raw or undercooked food.

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*Correct answer: Disclose any raw or undercooked time-temperature control food in the menu.*

*Operations that offer raw or undercooked items on their menu must provide consumer advisories including disclosures and reminders. Disclose any raw or undercooked time-temperature control food items. This can be done through icons or legends in the menu, for example: An asterisk with a footnote can be used. The footnote must state that the item is raw or undercooked, or contains raw or undercooked ingredients.*

*Remind customers who order raw or undercooked TCS food of the increased risk of foodborne illness. Examples are posting a notice in the menu. State this information using brochures, table tents, or signs.*

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**31.**

A conveyor type dishwashing machine will be installed in the facility. Which of these requirements must be followed?

**Mount on legs at least six inches (15 cm) high**

Install wheels for easier cleaning

Mount on legs at least four inches (10 cm) high

Consider the height of the users of the machine

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*Correct answer: Mount on legs at least six inches (15 cm) high*

*In general, equipment must be installed as follows:*

*Floor-mounted equipment must be either:*

- *Mounted on legs at least six inches (15 cm) high, or*
- *Sealed to a masonry base*

*Tabletop equipment should be either:*

- *Mounted on legs at least four inches (10 cm) high, or*
- *Sealed to the countertop*

*Dishwashing machines are not installed with wheels due to plumbing and electrical connections.*

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**32.**

Which of the following is a safe food contact surface?

**Stainless steel**

Copper

Zinc

Painted pottery

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*Correct answer: Stainless steel*

*A safe and widely used food contact surface to use for equipment is stainless steel as it withstands heat and acidity, without transferring harmful chemicals to food.*

*Certain types of kitchenware and equipment like items made from pewter, copper, zinc, and some types of painted pottery can be sources of chemical contamination. When subject to heat and/or acidity some of these chemicals may transfer to food.*

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**33.**

What is the required minimum internal cooking temperature for a beef roast?

**145°F (63°C) for four minutes**

165°F (74°C) for <1 second (Instantaneous)

155°F (68°C) for 17 seconds

135°F (57°C) (no minimum time)

*Correct answer: 145°F (63°C) for four minutes*

**145°F (63°C) for four minutes**

- *Roasts of pork, beef, veal, and lamb*

*Alternate cooking times/temperatures*

- *130°F (54°C) 112 minutes*
- *131°F (55°C) 89 minutes*
- *133°F (56°C) 56 minutes*
- *135°F (57°C) 36 minutes*
- *136°F (58°C) 28 minutes*
- *138°F (59°C) 18 minutes*
- *140°F (60°C) 12 minutes*
- *142°F (61°C) 8 minutes*
- *144°F (62°C) 5 minutes*

*Other cooking temperature requirements are:*

**165°F (74°C) for <1 second (Instantaneous)**

- *Poultry—whole or ground chicken, turkey or duck*
- *Stuffing made with fish, meat, or poultry*
- *Stuffed meat, seafood, poultry, or pasta*
- *Dishes that include previously cooked TCS ingredients*

**155°F (68°C) for 17 seconds**

- *Ground meat—beef, pork, and other meat*
- *Meat mechanically tenderized with needles or blades, or by injecting it with brine or flavors (e.g., brined ham or flavor-injected roasts)*
- *Meat vacuum-tumbled with marinades or other solutions*

- *Ground meat from game animals commercially raised and inspected*

**145°F (63°C) for 15 seconds**

- *Seafood—including fish, shellfish, and crustaceans*
- *Steaks/chops of pork, beef, veal, and lamb*
- *Commercially raised game*
- *Shell eggs that will be served immediately*

**135°F (57°C) (no minimum time)**

- *Food from plants, including fruits, vegetables, grains (e.g., rice, pasta), and legumes (e.g., beans, refried beans) that will be hot-held for service*
-

**34.**

Most bacteria grow well in what condition?

**Little or no acid**

Highly acidic

Highly alkaline

Neutral pH

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*Correct answer: Little or no acid*

*Bacteria grow best in food that contains little or no acid.*

*pH is the measure of acidity. The range of pH values are 0 (highly acidic) to 14.0 (highly alkaline). The neutral pH has a value of 7.0.*

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**35.**

Which of the following is true with regards to food safety training for staff?

**Provide initial and ongoing training.**

Provide the same training for all staff.

Provide training specifically during the first day for the staff.

The first day of work must be about food safety training.

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*Correct answer: Provide initial and ongoing training.*

***Training and monitoring:***

- *Train staff to follow food safety procedures.*
  - *Provide initial and ongoing training.*
  - *Provide all staff with general food safety knowledge.*
  - *Provide job-specific, food safety training.*
  - *Retrain staff regularly.*
  - *Document training.*
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**36.**

Which of the following steps is not required when washing produce?

**Wear single-use gloves.**

Make sure produce does not touch surfaces exposed to raw meat, seafood, or poultry.

Wash the produce thoroughly before cutting, cooking, or combining it with other ingredients.

When washing produce, use running water, pull apart leafy greens, rinse thoroughly.

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*Correct answer: Wear single-use gloves.*

*Single-use gloves should be used when handling ready-to-eat food, except when washing produce.*

*Other guidelines for produce preparation are as follows:*

- *Make sure produce does not come into contact with surfaces exposed to raw meat, seafood, or poultry.*
  - *Wash the produce thoroughly before cutting, and cooking with other ingredients.*
  - *When washing produce, use running water, pull apart leafy greens, rinse thoroughly.*
  - *Approved chemicals may be used to wash produce.*
-



**37.**

Which of the following is an important feature of a chemical storage area?

**Well lit**

Light-colored interiors

Anti-slip floor mats

Storage pallets

---

*Correct answer: Well lit*

*The chemical storage area must have good lighting so chemicals can be easily seen.*

*The storage area must also be provided with hooks for hanging cleaning tools, a utility sink for filling buckets and washing cleaning tools, and a floor drain for disposing of dirty water. Light colored interiors, anti slip floor mats and storage pallets are good items to have secondary to the storage being well lit.*

---

**38.**

Which of the following writes the codes that regulate food service operations?

**State and local regulatory authorities**

Food and Drug Administration (FDA)

U.S. Department of Agriculture (USDA)

Centers for Disease Control and Prevention (CDC) and U.S. Public Health Service (PHS)

---

*Correct answer: State and local regulatory authorities*

*The following are the roles of government agencies responsible for the prevention of foodborne illness:*

- *Food and Drug Administration (FDA) - Writes the science-based Food Code that provides recommendations for food safety regulations*
  - *U.S. Department of Agriculture (USDA) - Regulates and inspects meat, poultry and eggs*
  - *Centers for Disease Control and Prevention (CDC) - Conducts research into the causes of foodborne illness outbreaks*
  - *U.S. Public Health Service (PHS) - Conducts research into the causes of foodborne illness outbreaks*
  - *State and local regulatory authorities - Writes or adopts codes that regulate retail and food service operations*
-

**39.**

How long must a shellstock identification tag be kept?

**90 days after sale of the last shellfish**

90 days after sale of the first shellfish

90 days after receiving

---

*Correct answer: 90 days after sale of the last shellfish*

*Shellfish must be received with shellstock identification tags. These indicate when and where the shellfish were harvested. Upon receiving, store shellfish in their original container. Do NOT remove the shellstock tag until the last shellfish is used. Write the date the last shellfish was used on the shellstock tag. Keep the shellstock tag on file for 90 days after the last shellfish is used.*

---

40.

Which of the following is a requirement for the person-in-charge of food safety implementation in the facility?

**Must be a Certified Food Protection Manager**

May be onsite or off-site during operating hours

Must have worked in the establishment for 5 years

Must have a Bachelor's degree in Food Science

---

*Correct answer: Must be a Certified Food Protection Manager*

*The person in charge must be a Certified Food Protection Manager and must be onsite during operating hours.*

*There is no minimum number of years in terms of work experience and no college degree requirement to be a person in charge.*

---

**41.**

Which among the following population groups is not considered to have a compromised immune system:

**Pregnant women**

People who have cancer

People who have HIV/AIDS

Transplant recipient

---

*Correct answer: Pregnant women*

*Certain medical conditions and medications can weaken a person's immune system. These include:*

- *Cancer or chemotherapy*
  - *HIV/AIDS*
  - *Transplants*
-

**42.**

Which among the following government agencies is responsible for approving and reviewing HACCP plans?

**Local regulatory authority**

U.S. Department of Agriculture

Centers for Disease Control

Food and Drug Administration

*Correct answer: Local regulatory authority*

*Local regulatory authority responsibilities include:*

- *Inspecting operations*
- *Enforcing regulations*
- *Investigating complaints and illnesses*
- *Issuing licenses and permits*
- *Approving construction*
- *Reviewing and approving HACCP plans*

*The U.S. Department of Agriculture regulates and inspects meat, poultry, and eggs. The Centers for Disease Control conducts research into the causes of foodborne illness outbreaks. The Food and Drug Administration inspects all food except meat, poultry, and eggs. They also regulate food transported across state lines.*

---

**43.**

What thermometer can be used to monitor both time and temperature abuse during transport and storage of food?

**Time-temperature indicator**

Infrared thermometer

Thermistor with air probe

Maximum registering thermometer

---

*Correct answer: Time-temperature indicator*

*Time-temperature indicators (TTI):*

- *Monitor both time and temperature*
- *Are attached to packages by the supplier*
- *A color change appears on the device when time-temperature abuse has occurred*

*The remaining options only measure temperature.*

---

**44.**

Which among the following foods does not contain one of the Big Eight allergens?

**Broccoli dressed in olive oil, salt, and pepper**

Salmon topped with mayonnaise and cream cheese

Peanut butter and macadamia cookies

Tofu topped with sweet soy sauce and green onions

---

*Correct answer: Broccoli dressed in olive oil, salt, and pepper*

*The Big Eight allergens are:*

- 1. Milk*
- 2. Soy*
- 3. Eggs*
- 4. Wheat*
- 5. Fish, such as bass, flounder, and cod*
- 6. Crustacean shellfish, such as crab, lobster, and shrimp*
- 7. Peanuts*
- 8. Tree nuts, such as walnuts and pecans*

*Green beans dressed in olive oil do not contain any of the allergens, while the other options do.*

- Salmon topped with mayonnaise and cream cheese - contains seafood and milk*
  - Peanut butter cookies - peanuts, milk, wheat, tree nuts*
  - Tofu topped with sweet soy sauce and green onions - tofu, wheat*
-



**45.**

Where is a lighting of 10 foot-candles (108 lux) required?

**Dining rooms**

Restrooms

Preparation areas

Wait stations

*Correct answer: Dining rooms*

*The following are the required lighting in different areas in the operations:*

*50 foot-candles (540 lux)*

- *Preparation areas*

*20 foot-candles (215 lux)*

- *Hand washing and dish washing areas*
- *Buffet areas and salad bars*
- *Displays for produced or packaged food*
- *Wait stations*
- *Restrooms*
- *Equipment storage areas*
- *Inside equipment (e.g., walk-in coolers and freezers)*

*10 foot-candles (108 lux)*

- *Dry storage areas*
  - *Dining rooms*
-

**46.**

What is the first step in preparing the three-compartment sink?

**Clean and sanitize each sink and drain board**

Fill first sink with detergent and water

Fill second sink with clean water

Fill third sink with water and sanitizer

---

*Correct answer: Clean and sanitize each sink and drain board*

*Operations often use a three – compartment sink to clean and sanitize large items. The sink must be set up correctly before use.*

- 1. Clean and sanitize each sink and drain board*
  - 2. Fill first sink with detergent and water*
  - 3. Fill second sink with clean water*
  - 4. Fill third sink with water and sanitizer*
-

**47.**

Which of the following foods is correctly thawed using running water?

**Fish submerged in running water at 70°F (21°C) for two hours**

Turkey half submerged in running water at 70°F (21°C) for four hours

Pork rib rack in running water at 70°F (21°C) for six hours

Ground beef in draining sink for 2 hours

---

*Correct answer: Fish submerged in running water at 70°F (21°C) for two hours*

*General guidelines for thawing food:*

- *Submerge food under running, drinkable water at 70°F (21°C).*
  - *Use a clean and sanitized food-prep sink.*
  - *Use water flow strong enough to wash away food particles.*
  - *Do not let the temperature of the food go above 41°F (5°C) for longer than four hours.*
-

**48.**

What is the minimum amount of time a food handler must scrub their hands with soap during handwashing?

**10 seconds**

15 seconds

20 seconds

25 seconds

---

*Correct answer: 10 seconds*

*The third step in handwashing is scrubbing hands and arms vigorously for 10-15 seconds, while cleaning fingertips, under fingernails, and between fingers.*

---

**49.**

What is the minimum frequency of the temperature checks for food that is on display?

**Every 4 hours**

Every 2 hours

Every 6 hours

---

*Correct answer: Every 4 hours*

*Make sure staff are monitoring holding temperatures regularly. Check temperatures at least every four hours.*

*Dispose of food not at 41°F (5°C) or lower, or 135°F (57°C) or higher. It is optional to check temperatures every two hours to leave time for corrective action.*

---

50.

Which bacteria is best described by the following:

Source: Farm animals, people

Foods linked: Poultry and eggs

Prevention measure: Cook poultry and eggs to minimum internal temperature

**Non-typhoidal *Salmonella***

*Salmonella typhi*

*Shigella spp.*

Shiga toxin-producing *Escherichia coli*

Correct answer: Non-typhoidal *Salmonella*

|              | <i>Salmonella typhi</i> | Non-typhoidal <i>Salmonella</i> | <i>Shigella spp.</i>  | Shiga toxin-producing <i>Escherichia coli</i> | Hepatitis A       | Norovirus         |
|--------------|-------------------------|---------------------------------|---|---|-------------------|-------------------|
| Source       | People                  | Farm animals, people            | Human feces   | Intestines of cattle; infected people         | Human feces       | Human feces       |
| Foods linked | Beverage                | Poultry and eggs                | Food easily contaminated by hands, such as salads containing TCS food | Ground beef (raw and undercooked)             | Ready-to-eat food | Ready-to-eat food |

|                           |  |  |   |   |  |   |
|---------------------------|--|--|---|---|--|---|
| <i>Prevention measure</i> | <i>Cook food to minimum internal temperature</i> | <i>Cook poultry and eggs to minimum internal temperature</i> | <i>Control flies inside and outside the operation</i> | <i>Cook food, especially ground beef, to minimum internal temperature</i> | <i>Exclude from the operation staff who have had jaundice for seven days or less</i> | <i>Exclude from the operation staff who are vomiting or have diarrhea</i> |
|---------------------------|--|--|---|---|--|---|

---

**51.**

All of the following are considered imminent health hazards, except:

**Typhoon**

Power outages

Water supply problems

Sewage backups

---

*Correct answer: Typhoon*

*Imminent health hazards are events that pose a significant threat or danger to health. They require immediate correction or closure to prevent injury.*

*Possible imminent health hazards:*

- *Power outage*
  - *Refrigeration failures*
  - *Security breach*
  - *Fires*
  - *Water supply problems*
  - *Sewage backups*
-



**52.**

Which of the following is acceptable with regard to hair and hair restraints?

**Wearing a beard restraint to cover facial hair**

Wearing a clean hat only when preparing ready-to-eat food

Wearing small hair accessories under the hair restraint

Wearing false eyelashes

---

*Correct answer: Wearing a beard restraint to cover facial hair*

*Food handlers must use hair restraints:*

- *Wear a clean hat or other hair restraint when in a food-prep area.*
  - *Do not wear hair accessories that could become physical contaminants.*
  - *Do not wear false eyelashes.*
  - *Wear a beard restraint to cover facial hair.*
-

**53.**

What must be done to ensure that the sanitizing solution is mixed correctly?

**Use the correct sanitizer test kit to test the solution.**

Use water at 110°F (43°C).

Combine equal parts of sanitizer and water.

Always put water first then sanitizer.

---

*Correct answer: Use the correct sanitizer test kit to test the solution.*

*Chemical sanitizers have specific test kits to measure their concentration.*

*Different manufacturers produce sanitizers in different concentration levels. Therefore, they will have different water to sanitizer dilution ratios, as well as water temperature requirements. The procedure of what to put first will depend on the manufacturers instructions.*

---

**54.**

What is the required minimum internal temperature for chicken noodle soup with previously cooked chicken?

**165°F (74°C) for <1 second (Instantaneous)**

155°F (68°C) for 17 seconds

135°F (57°C) (no minimum time)

145°F (63°C) for 15 seconds

*Correct answer: 165°F (74°C) for <1 second (Instantaneous)*

**165°F (74°C) for <1 second (Instantaneous)**

- *Poultry—whole or ground chicken, turkey or duck*
- *Stuffing made with fish, meat, or poultry*
- *Stuffed meat, seafood, poultry, or pasta*
- *Dishes that include previously cooked TCS ingredients*

*Other minimum internal cooking temperature requirements are:*

**155°F (68°C) for 17 seconds**

- *Ground meat—beef, pork, and other meat*
- *Meat mechanically-tenderized with needles or blades or by injecting it with brine or flavors (e.g., brined ham or flavor-injected roasts)*
- *Meat vacuum-tumbled with marinades or other solutions*
- *Ground meat from game animals commercially raised and inspected*

**145°F (63°C) for 15 seconds**

- *Seafood—including fish, shellfish, and crustaceans*
- *Steaks/chops of pork, beef, veal, and lamb*
- *Commercially raised game*
- *Shell eggs that will be served immediately*

**145°F (63°C) for four minutes**

- *Roasts of pork, beef, veal, and lamb*
- *Alternate cooking times/temperatures*
  - *130°F (54°C) 112 minutes*
  - *131°F (55°C) 89 minutes*

- 133°F (56°C) 56 minutes
- 135°F (57°C) 36 minutes
- 136°F (58°C) 28 minutes
- 138°F (59°C) 18 minutes
- 140°F (60°C) 12 minutes
- 142°F (61°C) 8 minutes
- 144°F (62°C) 5 minutes

**135°F (57°C) (no minimum time)**

- *Food from plants, including fruits, vegetables, grains (e.g., rice, pasta), and legumes (e.g., beans, refried beans) that will be hot-held for service*
-

**55.**

When used to check cooler temperature, a thermometer must be accurate to:

**+/- 3°F or +/- 1.5°C**

+/- 2°F or +/- 1°C

+/- 4°F or +/- 2°C

+/- 5°F or +/- -15°C

---

*Correct answer: +/- 3°F or +/- 1.5°C.*

*When using thermometers, make sure they are accurate:*

- If used to check food, thermometers must be accurate to +/- 2°F or +/- 1°C.*
  - If used to check air temperature, thermometers must be accurate to +/- 3°F or +/- 1.5°C.*
-

**56.**

A box of fish that was delivered was observed to have large ice crystals. Which among the following causes this?

**Time-temperature abuse**

Cross-contamination

Poor personal hygiene

Poor cleaning and sanitizing

---

*Correct answer: Time-temperature abuse*

*Large ice crystals are evidence of thawing and refreezing, which is an example of time-temperature abuse.*

*The other options do not result in having large ice crystals in a packed product: cross-contamination, poor personal hygiene, poor cleaning and sanitizing.*

---

**57.**

Julia is busy in the kitchen today. The tasks below require her to wear single-use gloves, except:

**Slicing pumpkins for pumpkin pie**

Garnishing grilled chicken with chopped parsley

Chopping spinach for salad

Assembling a sandwich

---

*Correct answer: Slicing pumpkins for pumpkin pie*

**Single-use gloves** should be used when handling ready-to-eat food, such as garnishing grilled chicken with chopped parsley, chopping spinach for salad, and assembling a sandwich.

- *Except when washing produce*
  - *Except when handling ready-to-eat ingredients for a dish that will be cooked to the correct internal temperature, which is the case for the pumpkins for pumpkin pie.*
-

58.

Which bacteria is best described by the following:

Source: Intestines of cattle; infected people

Foods linked: Ground beef (raw and undercooked)

Prevention measure: Cook food, especially ground beef, to minimum internal temperature.

**Shiga toxin-producing *Escherichia coli***

*Salmonella typhi*

Non-typhoidal *Salmonella*

*Shigella spp.*

Correct answer: *Shiga toxin-producing Escherichia coli*

|                    | <i>Salmonella typhi</i>                   | Non-typhoidal <i>Salmonella</i>                       | <i>Shigella spp.</i>  | Shiga toxin-producing <i>Escherichia coli</i>                      | Hepatitis A  | Norovirus  |
|--------------------|---|---|---|--|--|--|
| Source             | People                                    | Farm animals, people                                  | Human feces   | Intestines of cattle; infected people                              | Human feces  | Human feces  |
| Foods linked       | Beverage                                  | Poultry and eggs                                      | Food easily contaminated by hands, such as salads containing TCS food | Ground beef (raw and undercooked)                                  | Ready-to-eat food  | Ready-to-eat food  |
| Prevention measure | Cook food to minimum internal temperature | Cook poultry and eggs to minimum internal temperature | Control flies inside and outside the operation                        | Cook food, especially ground beef, to minimum internal temperature | Exclude from the operation staff who have had jaundice for seven | Exclude from the operation staff who are vomiting or have diarrhea |



*days or  
less*



**59.**

What bacteria can reproduce in cold environments, and is a particular concern for pregnant women?

***Listeria monocytogenes***

*Bacillus cereus*

*Clostridium perfringens*

*Campylobacter jejuni*

---

*Correct answer: Listeria monocytogenes*

*Listeria monocytogenes is found in dirt, water, and plants. Unlike other bacteria, it grows in cold and moist environments. The illness is uncommon in healthy people, but high-risk populations are especially vulnerable, particularly pregnant women.*

*Clostridium perfringens is found in dirt, and from spores that allow it to survive. It is also carried in the intestines of both animals and humans. Clostridium perfringens does not grow at refrigerated temperatures. It grows rapidly in food that is in the temperature danger zone. Campylobacter jejuni is commonly associated with poultry. It has been known to contaminate water. The illness often occurs in poultry that is incorrectly cooked and is allowed to cross-contaminate other food and food contact surfaces. Bacillus cereus is a spore-forming bacteria found in dirt. It can produce two different toxins when allowed to go to high levels. The toxins cause different illnesses.*

---

**60.**

There are times that food can be deliberately contaminated. In order to prevent this, what should the manager know?

**Who to contact in cases of observed suspicious activity**

Date of the last FDA inspection

Location of the chemicals' Safety Data Sheets

Who should fill out an incident report?

*Correct answer: Who to contact in cases of observed suspicious activity*

*The FDA defense tool for deliberate contamination of food is ALERT, and it stands for:*

- **Assure** - Make sure products received are from safe sources.
- **Look** - Monitor the security of products in the facility.
- **Employees** - Know who is in your facility.
- **Reports** - Keep information related to food defense accessible.
- **Threat** - Develop a plan for responding to suspicious activity or a threat to the operation.

*The correct answer falls under **Threat** - Develop a plan for responding to suspicious activity or a threat to the operation.*

*The other options are incorrect because they do not prevent deliberate contamination of food, but rather some information or procedures that are done after food contamination has occurred.*

- *Date of the last FDA inspection*
  - *Location of the chemicals' Safety Data Sheets*
  - *Who should fill out an incident report?*
-

**61.**

What is the correct way to use detergent-sanitizer blended chemicals?

**Use it once to clean, then use it a second time to sanitize**

Use with double strength

Double the contact time with the surface

Use it with water that is twice as hot

---

*Correct answer: Use it once to clean, then use it a second time to sanitize.*

*Detergent-sanitizer blends can be used in some cases. To ensure effectivity in cleaning and sanitizing - use it once to clean, then use it a second time to sanitize.*

*Using it with double strength does not ensure that the sanitizing action will take effect. Doubling the contact time does not ensure effectivity as sanitizer as this depends on the amount of soil removed initially during the cleaning process. Using higher temperature water does not make the sanitizing effective, as sanitizers work with a specific water temperature.*

---

**62.**

A coffee machine is delivered in the bar and will be installed. Which of these requirements must be followed:

**It must be sealed to the countertop.**

It must be mounted on legs at least six inches (15 centimeters).

It must be sealed to a masonry base.

---

*Correct answer: It must be sealed to the countertop.*

*In general, stationary equipment should be installed as follows:*

*Floor-mounted equipment must be either:*

- *Mounted on legs at least six inches (15 centimeters), or*
- *Sealed to the floor*

*Tabletop equipment should be either:*

- *Mounted on legs at least four inches (10 centimeters), or*
  - *Sealed to the countertop*
-

**63.**

Which one of the methods below is best for checking the temperature of vacuum-packed food?

**Place the thermometer in between two packs.**

Put the thermometer on top of one pack.

Put the thermometer at the bottom of one pack.

Insert the thermometer through the pack.

---

*Correct answer: Place the thermometer in between two packs.*

*Placing the thermometer in between two packs or folding one pack to cover the stem of the thermometer takes the temperature of the food being delivered. Using only one pack, and putting the thermometer either on top or on bottom exposes the thermometer to external temperatures and will not reflect an accurate reading. Inserting through the pack will puncture the product and increase the risk of cross-contamination.*

---

**64.**

When must a bowl of quinoa salad made on March 16 be discarded?

**March 22**

March 23

March 27

March 28

---

*Correct answer: March 22*

*Food in storage must be marked with dates. Ready-to-eat TCS food must be marked if held for longer than 24 hours. Date mark must indicate when the food must be sold, eaten, or thrown out. Ready-to-eat TCS food can be stored for only seven days if it is held at 41°F (5°C) or lower. Day 1 is the day the food was prepared. Counting seven days with March 16 as day 1, the discard date must be March 22.*

*All other options are incorrect because they are longer than 7 days.*

---

**65.**

All of the following are effective prevention methods for chemical hazards, except:

**Use both industrial and domestic chemicals.**

Do not store chemicals above food or food-contact surfaces.

Store chemicals away from prep areas, food-storage areas, and service areas.

Purchase chemicals from approved, reputable suppliers.

---

*Correct answer: Use both industrial and domestic chemicals.*

*The following are methods of chemical hazard contamination prevention:*

- *Use chemicals approved for use in foodservice operations.*
- *Purchase chemicals from approved, reputable suppliers.*
- *Store chemicals away from prep areas, food-storage areas, and service areas.*
- *Separate chemicals from food and food-contact surfaces by spacing and partitioning.*
- *Do not store chemicals above food or food-contact surfaces.*

*Using domestic chemicals is not approved in restaurant operations as it does not have the strength to eliminate hazards in a restaurant setting.*

---



**66.**

The onset times of foodborne illness caused by biological hazards is:

**30 minutes to six weeks**

24-48 hours

2 days to four weeks

After a few minutes, to one hour

---

*Correct answer: 30 minutes to six weeks*

*Onset time is defined as how quickly foodborne illness symptoms appear in a person. For foodborne illness, it can range from 30 minutes to six weeks.*

---

**67.**

Which of the following food can be re-served?

**Bottle of ketchup with cap on**

Potato salad held without temperature control for five hours

Served but untouched bread basket

Returned slice of cheesecake - customer does not like whipped cream on top

---

*Correct answer: Bottle of ketchup with cap on*

*This can be re-served because the ketchup inside the bottle is not contaminated.*

*The other options must not be re-served because:*

- *Potato salad held without temperature control for five hours - this food was time-temperature abused*
  - *Served but untouched bread basket*
  - *Returned slice of cheesecake - customer does not like whipped cream on top - there is no certainty that the first customer did not contaminate the served food.*
-

**68.**

What must be done to food after it is thawed in the microwave?

**Cook it immediately**

Cool it and freeze immediately

Cool to 41°F (5°C)

Re-freeze it

---

*Correct answer: Cook it immediately*

*Food thawed in a microwave must be cooked immediately because microwave thawing starts the cooking process.*

*Food must not be cooled down or frozen because this is an example of time-temperature abuse. Food that is thawed must not be re-frozen.*

---

**69.**

A guest experienced tingling in their extremities, burning of the mouth, heart palpitations, and reversal of hot and cold sensations, almost immediately after eating seafood. Which of the following has likely caused the illness?

**Biological toxin**

Allergens

Yeast

Virus

*Correct answer: Biological toxin*

*Biological toxins are commonly associated with some plants, mushrooms, and seafood. General symptoms of biological toxins include:*

- *Diarrhea or vomiting*
- *Neurological symptoms*
- *Tingling in extremities*
- *Reversal of hot and cold sensations*
- *Flushing of the face*
- *Difficulty breathing*
- *Burning in the mouth*
- *Heart palpitations*
- *Hives*

*Some symptoms are common with the other options. For example:*

- *Allergens can cause diarrhea, vomiting, and/or hives*
- *Yeast can cause diarrhea or vomiting*
- *Viruses can cause diarrhea or vomiting*

*It is the neurological symptoms that are unique to the biological toxins among these group of hazards.*

---

**70.**

Adelaide is getting ready to wash pots and pans in the three-compartment sink. What should be her first task?

**Clean and sanitize the sinks and drying areas.**

Fill the first sink with water.

Scrape food bits off of the pots and pans.

Check the concentration of the sanitizing solution.

---

*Correct answer: Clean and sanitize the sinks and drying areas.*

*When setting up a three-compartment sink:*

- *Clean and sanitize each sink and drying areas.*
- *Fill the sinks:*
  - *First sink—detergent and water at least 110°F (43°C)*
  - *Second sink—clean water*
  - *Third sink—water and sanitizer*

*Provide a clock with a second hand.*

---

71.

Which bacteria is best described by the following:

- Source: People
- Foods linked: Beverage
- Prevention measure: Cook food to minimum internal temperatures

***Salmonella typhi***

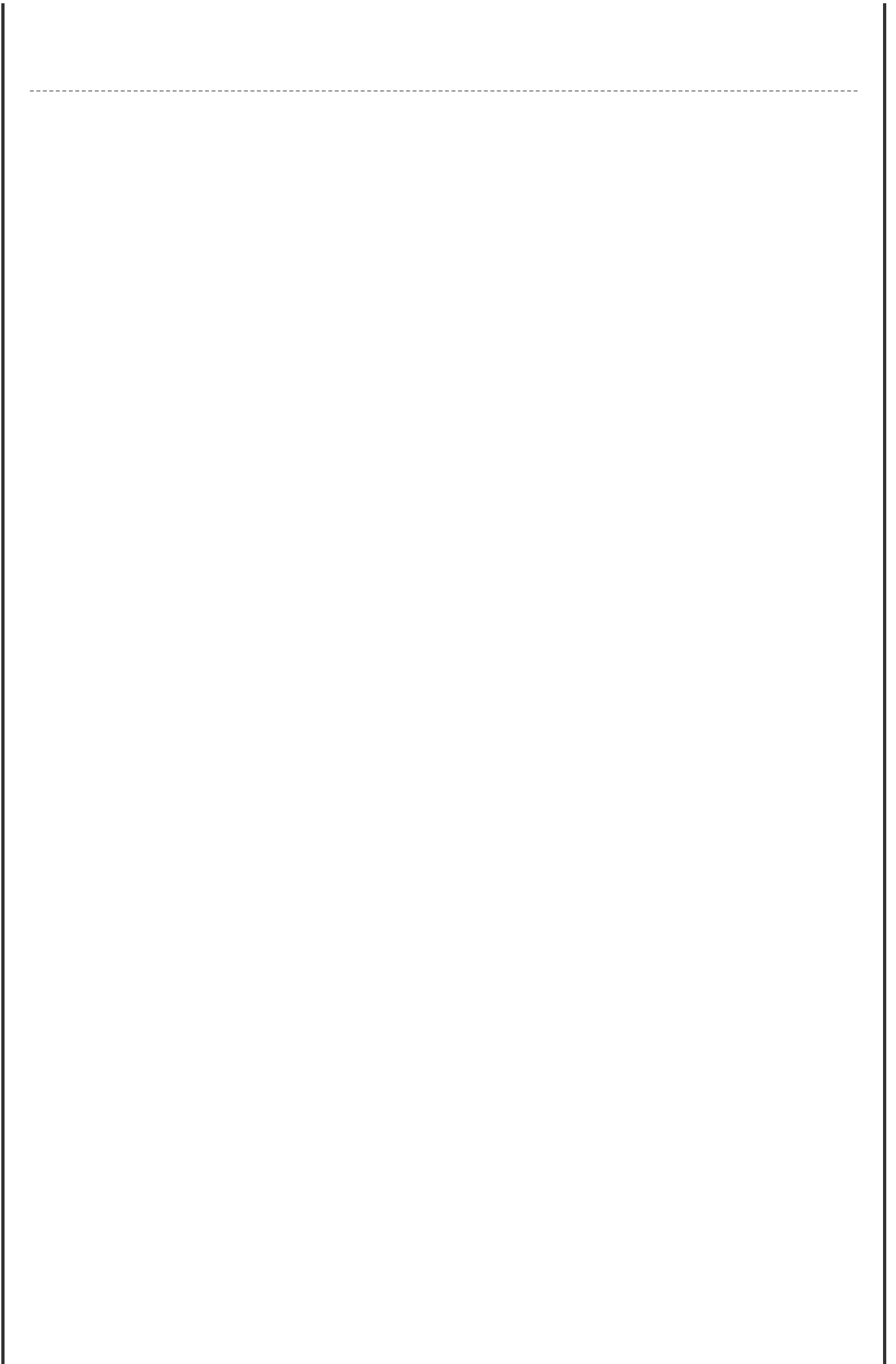
Non-typhoidal *Salmonella*

*Shigella spp.*

Shiga toxin-producing *Escherichia coli*

Correct answer: *Salmonella typhi*

|                    | <i>Salmonella typhi</i>                   | Non-typhoidal <i>Salmonella</i>                       | <i>Shigella spp.</i>  | Shiga toxin-producing <i>Escherichia coli</i>                      | Hepatitis A   | Norovirus  |
|--------------------|---|---|---|--|---|--|
| Source             | People                                    | Farm animals, people                                  | Human feces   | Intestines of cattle; infected people                              | Human feces   | Human feces  |
| Foods linked       | Beverage                                  | Poultry and eggs                                      | Food easily contaminated by hands, such as salads containing TCS food | Ground beef (raw and undercooked)                                  | Ready-to-eat food   | Ready-to-eat food  |
| Prevention measure | Cook food to minimum internal temperature | Cook poultry and eggs to minimum internal temperature | Control flies inside and outside the operation                        | Cook food, especially ground beef, to minimum internal temperature | Exclude from the operation staff who have had jaundice for seven days or less | Exclude from the operation staff who are vomiting or have diarrhea |



**72.**

Who among the following food handlers followed the correct hand washing guidelines?

**Christian, a manager who saw that the cooks were washing their hands in the dishwashing sink. He corrected them immediately and directed them to wash their hands correctly by using the hand wash sink.**

Sophia plated an order and browsed through the order slips, licking her fingers in between the slips for better grip. She soon caught herself and applied hand antiseptic immediately.

Miguel saw the dishwasher cover his nose and mouth with his hands while sneezing, then arrange clean plates on the shelf. He called the dishwasher's attention to the problem so that he could wash his hands properly.

Joice is reporting for her first day of work. Fresh from training, she recalled that the first thing to do before reporting for duty was to wash her hands. She put soap on her hands, wet it with warm water, and scrubbed them for five seconds, then dried them with a clean paper towel.

---

*Correct answer: Christian, a manager who saw that the cooks were washing their hands in the dishwashing sink. He corrected them immediately and directed them to wash their hands correctly by using the hand wash sink.*

- *Hand washing must be done in designated hand wash sinks.*
- *After contaminating her hands with saliva, Sophia washed her hands properly and did not use hand antiseptic in place of hand washing.*
- *Miguel and the dishwasher must have re-washed the plates that they contaminated with their hands that they used to cover their nose and mouth with while sneezing.*
- *Joice did not follow the correct hand washing steps:*
  1. *Wet hands and arms. Use running warm water.*
  2. *Apply soap. Apply enough to build up a good lather.*
  3. *Scrub hands and arms vigorously for 10 to 15 seconds. Clean fingertips, under fingernails, and between fingers.*
  4. *Rinse hands and arms thoroughly. Use running warm water.*



5. *Dry hands and arms. Use a single-use paper towel or hand dryer.*

---

**73.**

The following are correct receiving guidelines, except:

**Any available staff must inspect and receive deliveries.**

Inspect delivery trucks for signs of contamination.

Visually check food items and check temperatures.

Inspect delivery immediately upon receipt.

---

*Correct answer: Any available staff must inspect and receive deliveries.*

*Staff assigned to inspect and receive deliveries must be properly trained on receiving procedures. Upon delivery, the following guidelines must be followed:*

- *Inspect delivery immediately upon receipt.*
  - *Inspect delivery trucks for signs of contamination.*
  - *Visually check food items and check temperatures.*
  - *Store items promptly after receiving them.*
-

**74.**

Which of the following is not a basic characteristic of biological toxins?

**People will experience symptoms from 30 minutes to six weeks**

Naturally occurs in certain plants, mushrooms, and seafood

Occurs in certain fish that eat smaller fish that have consumed a toxin

Produced by pathogens found on certain fish

---

*Correct answer: People will experience illness from 30 minutes to six weeks*

*Origin: Naturally occurs in certain plants, mushrooms, and seafood*

*Seafood toxins: Produced by pathogens found on certain fish. Occurs in certain fish that eat smaller fish that have consumed a toxin.*

*Illness: Symptoms and onset times vary with illness. People will experience illness within minutes.*

*General symptoms:*

- *Diarrhea or vomiting*
- *Neurological symptoms*
- *Tingling in extremities*
- *Reversal of hot and cold sensations*
- *Flushing of the face*
- *Difficulty breathing*
- *Burning in the mouth*
- *Heart palpitations*
- *Hives*

*30 minutes to 6 weeks is the onset time range for foodborne illness.*

---

**75.**

Who used the cleaning tool or chemical correctly?

**Jasmine was about to take a plate out to a table, but she noticed some drips on the edge of the plate. She used a clean, dry, cloth to wipe the plate.**

Bruno was in a rush to put a delivery away. He placed the cleaner sprayer on the top shelf above the canned goods.

Antonio filled two spray bottles with sanitizer. The chemicals are bright pink, so he did not label the spray bottles.

Eric sprayed the table with sanitizer before washing it with detergent.

---

*Correct answer: Jasmine was about to take a plate out to a table, but she noticed some drips on the edge of the plate. She used a clean, dry, cloth to wipe the plate.*

*Dry wiping cloths are used to wipe food spills from tableware. Chemical containers must always be stored away from food and food preparation areas. Chemical containers must always be labeled. Detergents are used first before sanitizers.*

---

**76.**

Where is a lighting of 50 foot-candles (540 lux) required?

**Preparation areas**

Buffets and salad bars

Dry storage areas

Restrooms

*Correct answer: Preparation areas*

*The following are the required lighting in different areas in the operations:*

*50 foot-candles (540 lux)*

- *Preparation areas*

*20 foot-candles (215 lux)*

- *Hand washing and dish washing areas*
- *Buffet areas and salad bars*
- *Displays for produced or packaged food*
- *Wait stations*
- *Restrooms*
- *Equipment storage areas*
- *Inside equipment (e.g., walk-in coolers and freezers)*

*10 foot-candles (108 lux)*

- *Dry storage areas*
  - *Dining rooms*
-

**77.**

Which of the following practices may pose a risk to deliberate contamination of food?

**Buying produce from local organic markets**

Limiting access to food and chemical storage areas

Defining staff access in preparation areas

Accepting deliveries from trucks that are locked during transport

---

*Correct answer: Buying produce from local organic markets*

*All suppliers must be approved and reputable. Hence, sourcing from the local market is not safe in terms of food defense strategy. The following are examples of correct practices in terms of avoiding deliberate contamination of food.*

- *Limiting access to food and chemical storage areas*
  - *Defining staff access in preparation areas*
  - *Accepting deliveries from trucks that are locked during transport*
  - *Having information on delivery personnel allowed to handle key drop deliveries*
-

**78.**

Which among the following practices is allowed in a facility for elderly individuals?

**Using ice in beverages**

Pooling shell eggs for a breakfast of scrambled eggs

Putting raw sprouts on top of soup

Medium-rare mini-burgers

---

*Correct answer: Using ice in beverages*

*Ice can be consumed by the elderly, provided that all ice preparation practices are followed.*

*However, pooling of shell eggs may pose a risk of cross-contamination when one or more eggs are mixed with good ones. Also, raw sprouts are not allowed to be served in high risk populations of elderly people. When serving a high risk population, use pasteurized shell eggs when pooling, or pasteurized eggs in cartons. Sprouts must be cooked at 135°F (57°C) (no minimum time), and there must be no raw or undercooked food.*

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79.

Which bacteria is best described by the following:

Source: Human feces

Foods linked: Food easily contaminated by hands, such as salads containing TCS food

Prevention measure: Control flies inside and outside the operation

***Shigella spp.***

*Salmonella typhi*

Non-typhoidal *Salmonella*

Shiga toxin-producing *Escherichia coli*

Correct answer: *Shigella spp.*

|                    | <i>Salmonella typhi</i>                   | Non-typhoidal <i>Salmonella</i>                       | <i>Shigella spp.</i>  | Shiga toxin-producing <i>Escherichia coli</i>                      | Hepatitis A  | Norovirus   |
|--------------------|---|---|---|--|--|---|
| Source             | People                                    | Farm animals, people                                  | Human feces   | Intestines of cattle; infected people                              | Human feces  | Human feces                                       |
| Foods linked       | Beverage                                  | Poultry and eggs                                      | Food easily contaminated by hands, such as salads containing TCS food | Ground beef (raw and undercooked)                                  | Ready-to-eat food                                      | Ready-to-eat food                                 |
| Prevention measure | Cook food to minimum internal temperature | Cook poultry and eggs to minimum internal temperature | Control flies inside and outside the operation                        | Cook food, especially ground beef, to minimum internal temperature | Exclude from the operation staff who have had jaundice | Exclude from the operation staff who are vomiting |



*for seven or have  
days or diarrhea  
less*



**80.**

Which of the following should be replaced in a safe food facility?

**Cracked floor tiles**

Painted walls

Light-colored ceilings

Light yellow epoxy floor

---

*Correct answer: Cracked floor tiles*

***Floors, walls, and ceilings should be:***

- *Made from smooth and durable materials for ease of cleaning*
- *Light-colored*
- *Maintained consistently*
- *Coved where the floors and walls meet*
- *Promptly cleared of any stagnant water*

*Cracked floor tiles must be replaced, as this may cause dirty water to be stuck, become stagnant water and become a source of cross contamination.*

*Painted walls, light-colored ceilings, and light yellow epoxy floors are acceptable since they meet the above requirements.*

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**81.**

Which of the following is not an acceptable method for thawing food?

**Thawing in stagnant water**

Thawing in cooler

Thawing in microwave

Thawing as part of the cooking process

---

*Correct answer: Thawing in stagnant water*

*The following are acceptable methods of thawing frozen food:*

- 1. Thaw food in a cooler, keeping its temperature at 41°F (5°C) or lower.*
- 2. Thaw food under running, potable water at 70°F (21°C) or lower.*
- 3. Thaw food in a microwave.*
- 4. Thaw food as part of the cooking process.*

*Thawing at room temperature, and thawing in stagnant water are unacceptable methods since they expose food to the temperature danger zone.*

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**82.**

Which of the following is true for the flow of food?

**It is the path that food takes through the operation.**

It starts from the receiving of food to serving food to guests.

All food goes through all the steps.

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*Correct answer: It is the path that food takes through the operation.*

*The flow of food is the path that food takes through the operation.*

- *Purchasing*
- *Receiving*
- *Storing*
- *Preparation*
- *Cooking*
- *Holding*
- *Cooling*
- *Reheating*
- *Service*

*It always starts with purchasing and ends at service. Some food may only go through 4 steps, and some through all the steps. The flow may not necessarily be linear.*

---

**83.**

Which of the following must be done to ensure that both cross-contamination, and time-temperature abuse will not occur in self-service areas?

**Stock displays with the correct utensils.**

Keep raw meat, fish, and poultry together with ready-to-eat food.

Allow customers to refill plates at self-service areas.

Use ice that was used to keep food or beverages cold, as an ingredient.

---

*Correct answer: Stock displays with the correct utensils.*

*Prevent time-temperature abuse and cross-contamination in self-service areas:*

- *Keep raw meat, fish, and poultry separate from ready-to-eat food.*
  - *Do NOT let customers refill plates or use dirty utensils.*
  - *Stock displays with the correct utensils.*
  - *NEVER use ice as an ingredient if it was used to keep food or beverages cold.*
-

**84.**

Which of the following surfaces is correctly sanitized?

**Jamie made a chlorine sanitizer solution with water at 100°F (38°C). The test kit showed the concentration was at 50 ppm. She placed pots and pans in this solution for seven seconds.**

Gem mixed chlorine sanitizer with water at 75°F (24°C). The chlorine test strip showed the concentration was at 25 ppm. She soaked some mixing bowls in the solution for seven seconds.

Josh mixed iodine sanitizer with water at 68°F (20°C). The iodine test kit showed that the concentration was at 8 PM. He put some tongs and ladles in the solution for 30 seconds.

Rose filled the sink with 165°F (74°C) water. He then put the parts of a slicer in this water to soak for 30 seconds.

---

*Correct answer: Jamie made a chlorine sanitizer solution with water at 100° F (38°C). The test kit showed the concentration was at 50 ppm. She placed pots and pans in this solution for seven seconds.*

*The following are the correct sanitizing concentration and water temperature requirements:*

- *Chlorine -  $\geq 100^{\circ}\text{F}$  (38°C) or  $\geq 75^{\circ}\text{F}$  (24°C) for seven seconds*
  - *Iodine - 68°F (20°C) for  $\geq 30$  seconds*
  - *Quats - 75°F (24°C) for  $\geq 30$  seconds*
  - *Heat sanitizing 171°F (77°C) for  $\geq 30$  seconds*
-

**85.**

Which of the following is true regarding lighting in the operations:

**Lights can be a source of physical hazard.**

Only lights in preparation areas should have shatter-resistant lightbulbs or protective covers.

Areas of the facility have the same lighting intensity requirements.

Replace light bulbs when three to five bulbs burn out.

---

*Correct answer: Lights can be a source of physical hazard.*

*Consider the following when installing and maintaining lighting:*

- *Different areas of the facility have different lighting intensity requirements.*
  - *All lights should have shatter-resistant lightbulbs or protective covers.*
  - *Replace burned out bulbs immediately.*
-

**86.**

Which of the following is not correct in terms of equipment maintenance?

**All staff on duty can maintain it.**

It must be maintained consistently.

Check the equipment to make sure it is working.

Set up a maintenance schedule with your supplier or manufacturer.

---

*Correct answer: All staff on duty can maintain it.*

*When the equipment has been correctly installed:*

- *It must be maintained consistently.*
  - *Only qualified people should conduct maintenance. Not all staff can maintain the equipment since it requires training to fix any specific equipment.*
  - *Set up a maintenance schedule with your supplier or manufacturer.*
  - *Check the equipment to make sure it is working.*
-



**87.**

Who among the following group has a higher risk of getting a foodborne illness?

**Transplant recipients**

School teachers

College students

Health care providers

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*Correct answer: Transplant recipients*

*These people have a higher risk of getting a foodborne illness because of their weak immune systems:*

- *Elderly people*
  - *Preschool-age children*
  - *People with compromised immune systems, such as transplant recipients*
-

88.

Which of the following must be considered in choosing an indoor garbage bin?

**Pest-proof**

Light-colored

Lightweight

Slim design

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*Correct answer: Pest-proof*

*Garbage attracts pests, therefore it is important that the garbage bins are pest-proof.*

*The color, weight, and design of the garbage bin does not bear significance to food safety.*

---

**89.**

When applying for a variance, which of the following is not required by the local regulatory authority?

**Operations must rely on the local authority to verify the effectiveness of the procedures or process.**

The HACCP plan must include all food safety risks of the chosen preparation practice.

The operations must comply with the plan and procedures on a regular basis.

All documents and records must be maintained and provided upon request of the local authorities.

---

*Correct answer: Operations must rely on the local authority to verify the effectiveness of the procedures or process.*

***A HACCP plan may be required when applying for a variance:***

- *The plan must include all food safety risks.*
- *The operations must comply with the plan and procedures on a regular basis.*
- *All documents and records must be maintained and provided upon request.*

***Documents and records must demonstrate that the operations have:***

- *Procedures for monitoring Critical Control Points (CCP)*
  - *Regular monitoring of the Critical Control Points (CCP)*
  - *The corrective actions if there is a breach of Critical Control Points (CCP)*
  - *Verification of the effectiveness of the procedures or process*
-

**90.**

What parasite has been linked with produce such as berries, lettuce, or basil?

***Cyclospora cayetanensis***

*Cryptosporidium parvum*

*Giardia duodenalis*

*Anisakis simplex*

---

*Correct answer: Cyclospora cayetanensis*

*Cyclospora cayetanensis is a parasite that has been found in contaminated water and has been associated with produce irrigated or washed with the contaminated water. It can also be found in the feces of infected people. Food handlers can transfer it to the perfect food when they touch it with fingers containing feces. For this reason, food handlers with diarrhea must be excluded from working. It is also critical to purchase produce from approved reputable suppliers.*

*Cryptosporidium parvum and Giardia duodenalis are commonly associated with contaminated water and produce. Anisakis simplex is commonly associated with seafood.*

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