

## **2012 Iowa FFA Food Science CDE**

### **Food Safety and Sanitation Section**

In this segment of the contest, you will be given pictures/graphics to view in reference to common problems that exist within the food industry. Your task for each set of pictures and/or graphics are to: (a) identify the problem and (b) select the most appropriate solution to the problem. There will be five (5) sets of food safety and/or sanitation concerns with each question valued at 5 points for a total of 50 possible points.

When done, return this document with your answer sheet to the test proctor.

**DO NOT MARK ON THIS DOCUMENT**

Set #1:



Question 1: These pictures most represent which of the following food industry concerns:

- Listeria
- Botulism
- Salmonella
- Staphylococcus
- Campylobacter

Question 2: In reference to the above pictures, what would be the solution to this food industry concern/problem?

- Thoroughly cook raw food from animal sources, such as beef, pork, or poultry.; Wash raw vegetables thoroughly before eating; and Keep uncooked meats separate from vegetables and from cooked foods and ready-to-eat foods.
- Carefully wash fruits and vegetables, and steam oysters before eating them; Frequently wash your hands, especially after toilet visits and changing diapers and before eating or preparing food; and Thoroughly clean and disinfect contaminated surfaces immediately after an episode of illness.
- Handle poultry carefully to prevent cross-contamination; utilize proper wrapping; and most egg products should be pasteurized.
- Always wash hands with warm, soapy water; if your hands have any kind of skin abrasion or infection, always use clean disposable gloves; and keep cutting boards clean
- Do not eat raw or undercooked eggs, poultry, or meat.; avoid Cross-contamination of foods; and wash hands after contact with animal feces and/or reptiles.

Set #2:



Question 3: These pictures most represent which of the following food industry concerns:

- a. Cross contamination
- b. Listeria
- c. Botulism
- d. E coli
- e. Salmonella

Question 4: In reference to the above pictures, what would be the solution to this food industry concern/problem?

- a. Drink only pasteurized milk, juice, or cider; wash fruits and vegetables under running water, especially those that will not be cooked; and cook all ground beef and hamburger thoroughly.
- b. Home canned products need to use higher level acids, follow strict hygienic procedures, and prepare foods using high temperatures.
- c. Sterilize raw foods at the plants, pasteurization of milk, and improving safe food handling practices in kitchens
- d. Thoroughly cook raw food from animal sources, such as beef, pork, or poultry.; Wash raw vegetables thoroughly before eating; and Keep uncooked meats separate from vegetables and from cooked foods and ready-to-eat foods.
- e. Do not eat raw or undercooked eggs, poultry, or meat.; avoid Cross-contamination of foods; and wash hands after contact with animal feces and/or reptiles.

Set 3:



Question 5: These pictures most represent which of the following food industry concerns:

- a. Staphylococcus
- b. Listeria
- c. E coli
- d. Botulism
- e. Metal contamination in ground beef

Question 6: In reference to the above pictures, what would be the solution to this food industry concern/problem?

- a. Do not eat raw or undercooked eggs, poultry, or meat; avoid Cross-contamination of foods; and wash hands after contact with animal feces and/or reptiles.
- b. Sterilize raw foods at the plants, pasteurization of milk, and improving safe food handling practices in kitchens
- c. Thoroughly cook raw food from animal sources, such as beef, pork, or poultry.; Wash raw vegetables thoroughly before eating; and Keep uncooked meats separate from vegetables and from cooked foods and ready-to-eat foods. (
- d. Drink only pasteurized milk, juice, or cider; wash fruits and vegetables under running water, especially those that will not be cooked; and cook all ground beef and hamburger thoroughly.
- e. Home canned products need to use higher level acids, follow strict hygienic procedures, and prepare foods using high temperatures.

Set #4:



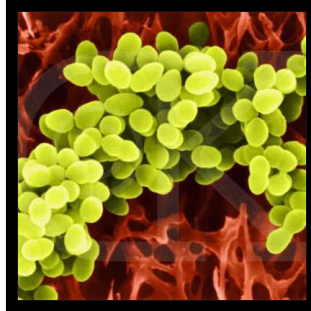
Question 7: These pictures most represent which of the following food industry concerns:

- a. Campylobacter
- b. Norovirus
- c. Listeria
- d. Salmonella
- e. E. coli

Question 8: In reference to the above pictures, what would be the solution to this food industry concern/problem?

- a. Sterilize raw foods at the plants, pasteurization, and improving safe food handling practices in kitchens
- b. Home canned products need to use higher level acids, follow strict hygienic procedures, and prepare foods using high temperatures.
- c. Increased regulations; over-use promotes emergence of resistant bacteria; and regulated usages to minimize residues in the human food chain.
- d. Carefully wash fruits and vegetables, and steam oysters before eating them; Frequently wash your hands, especially after toilet visits and changing diapers and before eating or preparing food; and Thoroughly clean and disinfect contaminated surfaces immediately after an episode of illness.
- e. Thoroughly cook raw food from animal sources, such as beef, pork, or poultry.; Wash raw vegetables thoroughly before eating; and Keep uncooked meats separate from vegetables and from cooked foods and ready-to-eat foods.

Set 5:



Question 9: These pictures most represent which of the following food industry concerns:

- a. E coli
- b. Botulism
- c. parasites
- d. Norovirus
- e. Staphylococcus

Question 10: In reference to the above pictures, what would be the solution to this food industry concern/problem?

- a. Handle poultry carefully to prevent cross-contamination; utilize proper wrapping; and most egg products should be pasteurized.
- b. Carefully wash fruits and vegetables, and steam oysters before eating them; Frequently wash your hands, especially after toilet visits and changing diapers and before eating or preparing food; and Thoroughly clean and disinfect contaminated surfaces immediately after an episode of illness.
- c. Drink only pasteurized milk, juice, or cider; wash fruits and vegetables under running water, especially those that will not be cooked; and cook all ground beef and hamburger thoroughly.
- d. Do not eat raw or undercooked eggs, poultry, or meat; avoid Cross-contamination of foods; and wash hands after contact with animal feces and/or reptiles.
- e. Home made or processed foods need to be properly stored; when preparing foods, remember to prepare foods under sanitary conditions; if food is to be stored longer than two hours, keep hot foods hot (over 140°F) and cold foods cold (40°F or under).

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**Answer Key**

1. C
2. E
3. C
4. B
5. C
6. D
7. A
8. A
9. E
10. E