Dr. Scott Beyer at Kansas State University decided to take his class on a tour of a modern poultry processing facility. This was a company that made many chicken products, including meat patties, cut-up parts, luncheon meat, as well as whole carcasses. The tour started at the outside part of the plant where the birds were on trucks ready to enter the plant. Dr. Beyer pointed out that these type of birds being grown for meat were a breed call the Broad Breasted White. The birds then entered the plant held on shackles where they were first scalded to help lower the amount of harmful bacteria that could be on the carcass. Dr. Beyer pointed out that the scaler was set at 65 degrees F. After the birds were terminated, they were ready for processing. They then entered a picking machine in which lots of people were employed to pull all the feathers off the carcasses.

The students then toured the area where the internal contents of the carcasses were removed. Dr. Beyer pointed out that this was a process called evisceration. After the birds were eviscerated, they were then chilled. The carcasses must be chilled below 40 degrees F within a specified amount of time. After the birds left the chiller they were then graded. Some birds had missing wings since one of the machines were set incorrectly and an improper cut was made. The plant graded these birds USDA B. Other birds that had 4” cuts down the back looked bad so they graded them USDA C. Others that were missing the wing tips were graded USDA A. The graders also removed the oil or preen gland from each bird. In other parts of the plant, workers prepared bags of giblets to put with the carcasses. The plant was using the heart, gizzard, and gall bladder for the giblet packets. Many of the whole carcasses were packed for the local retail store with a warning label to remind the store to keep the carcasses below 55 degrees F, otherwise, the birds would be tough after cooking.

The group then went into the part of the plant where they made chicken patties. The patties were being made out of both white and dark poultry parts. All the patties were made completely by machine. The person who was in charge of quality control said that the biggest problems seemed to be that there were a lot of broken patties, but these were graded as a minor defect so that wasn’t too big a deal. They said that they were more concerned that the timer on the baking machine kept breaking causing some of the patties to burn on the edges, which resulted in a major defect when grading the patties. After the patties were made, they were boxed and passed through a metal detector to be sure that no metal parts had broken off during processing and ended up in the product which would result in a critical defect.

1. On the tour, Dr. Beyer said that the birds were scalded to help lower the amount of bacteria on the carcass before they were processed. This was:
   A. The wrong thing to do since scalding is meant to help loosen the feathers for the pickers.
   B. The wrong thing to do since this increases bacteria growth
   C. The right thing to do, since research shows that hot water kills bacteria.
   D. The wrong thing to do since birds should never be placed in hot water during processing
   E. None of these
2. The breed of birds that this plant was growing for meat was:
   A. Correct   B. Incorrect

3. Any patties that had been found with metal parts or pieces that had accidentally gotten into the patty were graded by the plant as having a critical defect. This was:
   A. The right grade for that type of patty   B. It should have been graded a major defect
   C. It should have been graded a minor defect.   D. They should have been USDA grade B
   E. They should have been graded USDA No Grade

4. The patties with the burned spots should have been graded:
   A. Exactly the way the plant was grading them.
   B. They should have been graded with minor defects
   C. They should have been graded with critical defects.
   D. They should have been graded USDA C grade
   E. None of these

5. The way this plant removed the feathers was:
   A. The best way to do it.
   B. Birds are usually exposed to a small electrical current which causes the feathers to fall out.
   C. Today, plants use special laser cutters to remove the feathers.
   D. The best way to remove large feathers is to use a natural gas flame tunnel
   E. They should have been using automated pickers.

6. Dr. Beyer said that evisceration is when the internal contents of the birds are removed during processing. This is:
   A. Incorrect, since evisceration means to cut the abdominal area off the bird.
   B. Incorrect, since evisceration means to remove the feet
   C. Incorrect, since evisceration means to remove the skin
   D. Incorrect, since evisceration means to remove the head and neck
   E. Correct

7. The carcasses were chilled to 40 degrees F immediately after processing. This temperature was:
   A. Incorrect, should have been 70 degrees F.
   B. Incorrect, they should never be chilled
   C. Incorrect, should have been 80 degrees F
   D. Correct
   E. Incorrect, they should have been frozen to 0 degrees F

8. The birds were scalded at 65 degrees F. This was:
   A. Wrong, since birds are never scalded
   B. Wrong, since it should have been near 140 degrees F
   C. Wrong, since it should have been at least 240 degrees F
   D. Correct
   E. Wrong, since it should have been 360 degrees F

9. The plant removed the oil glands from the carcasses. This was:
   A. The wrong thing to do.   B. The right thing to do.   C. None of these
10. The carcasses with missing wings should have been what USDA grade?
   A. C       B. AB      C. B       D. A       E. No grade

11. The carcasses that had 4 inch cuts on the backs should have been USDA Grade:
   A. No grade   B. C   C. A   D. B   E. AB

12. The plant packaged the hearts, gizzard and gall bladder in the giblet packets. This was:
   A. The correct thing to do.
   B. The wrong way to do it since giblets are the heart, gizzard, and liver.
   C. The wrong way to do it since giblets are the neck, gizzard, and gall bladder.
   D. The wrong way to do it since giblets are the heart, gizzard, and small intestine.
   E. The wrong way to do it since giblets are the magnum, gizzard, and liver.

13. The label telling the stores to keep the carcasses at 55 degrees F was:
   A. Correct   B. Wrong, the temperature should be near 40 degrees F
   C. Wrong, they should all be kept frozen at all times
   D. Wrong, the temperature should be 160 degrees to eliminate all bacteria
   E. Wrong, the temperature should be near -32 degrees F

14. The purpose of keeping the carcasses at a certain temperature in the store is to:
   A. Keep the carcasses from drying out   B. Keep the carcasses from being tough after cooking
   C. Limit the growth of pathogenic bacteria   D. Improve the skin color
   E. Eliminate the need to add water to prevent the carcasses from spoiling.

15. About how many chickens are still sold as whole birds today in the supermarket, and not further processed?
   A. about 0-2%   B. about 30-33%   C. about 10-13%   D. about 70-75 percent
   E. Near 100%