

SECOND MIDTERM EXAMINATION

(60 total points)

1. Which is the principal fish involved in scombroid fish poisoning? (2 pts)
tuna

2. What is the name of a fish poisoning in which large, predatory fish are the greatest risk? (2 pts)
ciguatera

3. Which food is most often the vehicle of emetic *Bacillus cereus* poisoning? (2 pts)
rice (boiled, fried)

4. What other foodborne disease agent causes illness that most resembles diarrheal *Bacillus cereus* poisoning? (2 pts)
Clostridium perfringens

5. Which types of *Clostridium botulinum* toxins are most likely to affect animals, rather than people? (2 pts)
C & D

6. Tell the approximate time and temperature needed to give a 12-log kill of *Clostridium botulinum* spores in a low-acid canned food. (4 pts)
15 minutes, 250°F (121°C)

7. Why is *Staphylococcus aureus* food poisoning seldom associated with raw foods? (2 pts)
Staph competes poorly with indigenous microflora.

8. Name a test that is often used to determine whether a *Staphylococcus aureus* isolate is likely to be an enterotoxin producer. (2 pts)
coagulase, thermonuclease

9. Which mycotoxin has a tolerance limit for its level in milk? (2 pts)
aflatoxin M₁

10. Which mycotoxin is most often found in damaged apples or apple juice? (2 pts)
patulin
11. What is the scientific or common name for a mushroom that is best known for its hallucinogenic effect? (2 pts)
***Psilocybe mexicana*, Mexican mushrooms, magic mushrooms, shrooms**
12. What is the usual food vehicle for ergot? (2 pts)
rye or other grain
13. What are two continents on which large quantities of cassava are grown? (2 pts)
South America, Africa, Asia
14. In addition to cassava, what is another plant that presents a significant threat of cyanide poisoning? (2 pts)
bitter almond
15. What class of compounds cannot legally be used as drugs or intentional food additives in the US? (2 pts)
carcinogens
16. What are two legal sources of ionizing radiation for food processing? (4 pts)
cobalt-60, accelerated electrons, x-rays
17. Which food additive is specifically targeted to prevent botulism? (2 pts)
(sodium or potassium) nitrite
18. Name a food that is made by a spontaneous biological process (no starter culture). (2 pts)
sauerkraut, wine
19. Name two species or groups of bacteria whose presence in foods is considered evidence of fecal contamination. (4 pts)
***Escherichia coli*, thermotolerant (fecal) coliforms, enterococci**
20. What are the first two principles of HACCP? (4 pts)
Identify significant hazards associated with the food
Identify critical control point(s)

21. What was the first item all meat or poultry slaughter or processing establishments were required to develop under the 1996 USDA “MegaReg”? (2 pts)
SSOP
22. What is the purpose of carcass trimming in a slaughter establishment? (2 pts)
removes visible deposits (feces, ingesta, milk)
23. In predictive modeling, what is a parameter that will probably not be affected by the initial level of the pathogen of concern? (2 pts)
lag phase duration, exponential growth rate (slope), generation time, maximum population density
24. When growth curves are plotted, what dimension is usually represented on the Y axis? (2 pts)
log CFU/ml, log CFU/g
25. What are four major factors used in characterizing a food ecosystem? (4 pts)
temperature, redox potential (Eh), water activity (a_w), pH