Answer Key **Wright State 2012 -- Division B**

1. Agent, host, environment
2. A person or other organism that can be infected by an infectious agent; a) susceptible, b) immune, c) infected
3. Time, place, person
4. Epidemiological or Epi curve
5. Reservoir, portal of exit, mode of transmission, and portal of entry
6. Who has the disease or condition in question
7. Confirmed, Probable, Possible
8. a) Clinical information about the disease or condition; b) characteristics of the people infected; c) location or place of outbreak; d) time sequence during which it occurred
9. a) Point source, b) propogated, c) common source
10. Transmission of an agent carried from reservoir to host by vector, suspended air particles etc.
11. a) Airborne (ex. sneeze, cough); b) vector borne (ex. mosquitoes, fleas, ticks); c) vehicle born (ex. food, water, blood)
12. a) Case report/case series; b) correlative; c) cross-sectional d) co-hort
13. Analytical data/lab results
14. a) Cohort and b) Case Control
15. Starts at the time of exposure in the past and moves forward to outcome
16. Starts at the present exposure and moves toward outcome
17. Control group
18. Bradford-Hill criteria
19. Need 3 of these 7: a) Temporality-cause/exposure must precede effect b) Consistency-observation of association must be repeatable in different populations in different times, c) Coherence/relationship- exposure always associated with outcome; d) Strength of association- the relationship must be clear; e) Biological gradient- there must be a dose-response relationship; f) Specificity of association- occurs in every case of the disease, occurs in no other disease; 6) Strength of association- relationship must be clear.
20. AR^1/AR^2; It is used to measure and test hypothesis in cohort studies

21. ad/bc; used in case control studies to compare people with the disease or condition against those in the control group
22. An infectious disease that is transmissible from animals to humans (ex. mad cow disease, West Nile virus; Rocky Mountain spotted fever, rabies
23. A physical object that serves to transmit an infectious agent from person to person (ex. comb with lice)
24. Agent or pathogen
25. Virus
26. Pandemic
27. Outbreak
28. Risk
29. Epidemic
30. Surveillance
31. Vector
32. Aerobe
33. Carrier
34. Descriptive epidemiology
35. Histamine
36. Parasite
37. Reservoir
38. Salmonella, Clostridium, Streptococcus, Botulinum; Shigella, Listeria, Campylobacter, Staphylococcus
39. Norovirus
40. 40° F or 4.44° C
41. 0° F or -17.8°C
42. Poultry
43. Microwave
44. Salmonella
45. 2 hours
46. 40°F and 140°F

47. 3-4 days
48. 165° F
49. List any of these 4- a) bacteria, b) viruses, c) parasites, d) protozoa, e) natural toxins, and f) other natural pathogenic agents such as prions
50. a) **Cook** meat, poultry and eggs thoroughly; b) **Separate** foods-do not cross-contaminate one food with another; c) **Chill-** refrigerate leftovers promptly; d) **Clean**-wash produce, hands, cooking utensils; and e) **Report** any suspected food borne illness to your local health department
51. A histogram that shows the course of a disease outbreak by plotting the number of cases by time of onset.
52. Measure magnitude, time trends, and period of exposure
53. a) Common source; b) Point Source; c) Propogated
54. The number of reported cases
55. Date and time of symptom onset (may be hours, days or months depending on the illness)
56. Include pre-outbreak period of time on the x-axis to establish a baseline
57. Cohort
58. Cohort
59. Case control
60. Cross-sectional
61. Case control
62. The onset of varied acute gastrointestinal symptoms in a person living in the United States for the period September 1, 2008, through January 16 2009, confirmed by laboratory testing as Salmonella.
63. Retrospective case control study
64. Odds ratio was calculated; people who ate the peanut butter were much more likely to have become sick that those in the control group.
65. It is important enough to investigate because a large number of people attending the same event, who all ate basically the sane food, all became sick at the same time suffering from similar symptoms. Some of those infected required hospitalization. One

would want to determine if a common infectious agent cause the illness, to minimize additional exposure from same source; and for preventative measures to assure safe handling procedures are being used with food.

66. Step 1) Confirm the diagnosis; 2) Confirm that an outbreak really occurred; 3) Define and identify cases of illness; and
67. Cohort and Case Control studies; **Cohort studies** are used for outbreaks in small, well-defined populations where you can identify all of the participants. In this study, groups of people who have been exposed to various risk factors and compared with the control group who have not been exposed. **Case-Control study**- compares people with a disease with a control group that is not exposed; often used when the population is not well-defined
68. a) Wash hands, knives, and cutting boards after each handling of raw food; b) Wash raw produce thoroughly; c) Keep prepared produce in refrigerator until ready to serve; d) keep uncooked meats separate from vegetables and cooked food; e) Cook raw meat thoroughly; f) Cook leftover foods to 165 °
69. Epidemiology
70. Fomite
71. Vector
72. Cluster
73. Surveillance
74. Bacteria
75. Risk
76. Prion
77. Host
78. Pandemic