Disease Detectives B Answer Key

Name(s): __________________________________________________________

Team Name: ____________________________________________

School Name: ________________________________

Team Number: _______

Rank: _______

Score: _______
Part One: Background and Surveillance
(34 points)

Multiple Choice (1 pt each):
1. B
2. D
3. E
4. C
5A. B
5B. D

6. Short answer (4 points total):
Acceptable answers:
1. Surveillance/Define the problem/Identify problem/Acknowledge problem (1 point for any)
2. Risk factor identification/Analyze problem/Determine causes (1 point for any)
3. Intervention evaluation/intervention/evaluation/ (give 1 point if any are mentioned in last step or before-last step)
4. Implementation/Apply solution (give 1 point if said as last step or before-last step)
(If answer choices are given that are synonyms or wordy elaborations, feel free to give them the point.)

Multiple Choice (1 point each):
7. C
8. B
9. D

Definitions (1 point each):
10. Epidemic
11. Surveillance
12. Cluster
13. Endemic
14. Sporadic
15. Vector
16. Pandemic
17. Outbreak
18. Risk
19. Fomite

Part Two: Outbreak Investigation
(43 points)

True or False (1 point each):
Only give credit if written out, no T/F abbreviations allowed!
20. True
21. True
22. False
23. True
24. False

Multiple Choice (1 point each):
25. D
26. Short answer (2 points):
Answer:
1. Data Collection
2. Data Analysis
3. Data Interpretation
4. Data Dissemination
5. Action
Do not give any points if the steps are not numbered.
Give 2 points for correct order.
Give 1 point if three out of five steps are correct.

Multiple Choice (1 point each):
27. A
28. C

True or False (1 point each):
Only give credit if written out, no T/F abbreviations allowed!
29. False

Short Answer (points vary):
30. 1 point, Prepare for field work
31. Gather supplies/equipment, research the disease, research the situation, make administrative arrangements, make travel arrangements, contact local officials.
Give points for any two they get correct, be generous, 2 points total
32. 4 points total
Give 3 points for mentioning using local records AND/OR determining the usual amount of influenza cases
Give 1 point if any mention is made of factors that could inflate the numbers (ex. differences in reporting, seasonal fluctuations, population changes)

33. 3 points total
Give 1 point for each:
1. Verify procedures used to diagnose problem/check methods
2. Check experimental/lab error
3. Commonality/interview patients to gain insight into cause, source, and spread

34. 4 points total
Give 1 point for each:
1. Clinical information (about disease)
2. Characteristics (of affected people)
3. Location or place (of outbreak)
4. Time (specific time during which outbreak or condition occurred)

35. 3 points total
Give 1 point for each:
Identifying information, demographic information, clinical information, risk factor information, reporter information.

36. 1 point, confirmed
37. 1 point, not a case
38. 1 point, probable
39. 1 point, confirmed
40. 1 point, possible
41. 1 point, confirmed
42. 1 point, not a case
43. 1 point, Line Listing (must be exact)
44. 1 point, either EPI Curve or Epidemic Curve
45. 1 point, No
46. 1 point, continuous common source

47. 3 points total
Give 1 point for each:
Agent, Host, Environment

48. 1 point, Cohort study
49. 1 point, Any percent between 44% and 50%.
50. 1 point, Any percent between 1% and 5%.
51. 1 point, Any number between 14 and 17.
52. 1 point, Yes

53. 4 points
Give 1 point for each:
Temporality
Consistency
Coherence/1-1 relationship
Strength of association
Biological plausibility
Dose/response (biological gradient)

54. 1 point, Lab Verification OR environmental studies

55. 1 point total
Give points for any: Do not allow children to touch swine, do not allow people to touch swine, fence off enclosure, educate people at fair, provide hand sanitizer, provide hand-washing station, educate about flu shot.

56. 1 point, Give points for either communicate findings OR oral briefing OR written report.

Part Three: Patterns, Control, and Prevention
(24) points)

Multiple Choice (1 point):
57. B
58. D
59. 2 points, C
60. D

Short Answer:
61. 4 points total
Give 1 point for each of the following:
Control, Elimination, Eradication, Extinction
62. **5 points total**
**Give 1 point for any of the following:**
- Biological factors
- Behavioral factors
- Environmental factors
- Immunologic factors
- Nutritional Factors
- Genetic Factors
- Services
- Social Factors
- Spiritual Factors

63. **2 points total**
**Give one point for each definition:**
- Morbidity – the condition of being ill, diseased, or unhealthy
- Mortality – the condition of being dead/death

**Multiple Choice (1 point):**
- 64. A
- 65. D
- 66. D
- 67. A
- 68. B
- 69. C

**Short Answer:**
- 70.

**2 points total**
**Give both points for any number between 90% - 93%. No partial credit.**