Name(s): ______________________________

School: ______________________________

Score: __________/ 141

Directions: You will be given 50 minutes to complete the exam.
There is no penalty for guessing.
Work and units are required for any question involving calculation.
Round answers to the hundredth if necessary.
You are allowed one sheet 8.5” x 11” of notes.
                          two non-programming non-graphing calculators
Part 1 - Definitions, Fill In The Blank

1. _______________ : The systematic, ongoing collection, analysis, interpretation, and dissemination of health data.

2. _______________ : A living organism that transmits a pathogen, usually causing disease.

3. _______________ : An epidemic occurring over a very wide area (several countries or continents), affecting a large proportion of the population.

4. _______________ : Any substance foreign to the body that evokes an immune response either alone or after forming a complex with a larger molecule, and that is capable of binding with a product of the immune response.

5. The birth rate can also be referred to as _______________.

6. _______________ : A regularly occurring disease in one location over time, whose appearance can be predicted.

7. _______________ : Period of time between exposure and onset of disease.

8. _______________ : Resistance to an infectious agent, or the low probability of contracting a disease, as a result of the majority of the population being immune.

9. _______________ : An inanimate vehicle for transmission.

10. _______________ : Infectious agent composed solely of protein material; misfolded proteins capable of transmitting disease.

11. _______________ : Immunity from birth.

12. _______________ : Causative microbial organism with the ability to cause disease or illness in a host.

13. _______________ : An estimation of a value based off 2 known values in a sequence of values.

14. _______________ : Disease transmissible from animals to humans.

15. _______________ : A site that harbors pathogenic organisms; a continuous source.

16. _______________ : Sudden increase in the number of occurrences of a disease or illness in time and space.
Part 2 - Classify the following as bacterial, viral, fungal, prion, parasite, or other/unknown.

1. Influenza  
2. Anthrax  
3. Cyclosporiasis  
4. Chlamydia  
5. Hepatitis  
6. Creutzfeldt-Jakob disease  
7. Rubella  
8. Cholera  
9. Listeriosis  
10. Trichinosis  
11. Typhoid Fever

Part 3 - Put these steps of an outbreak in order

1. ___  
2. ___  
3. ___  
4. ___  
5. ___  
6. ___  
7. ___  
8. ___  
9. ___  
10. ___  
11. ___  

   a. Prepare for field work  
   b. Refine hypothesis and carry out additional studies  
   c. Communicate Findings  
   d. Verify the Diagnosis  
   e. Evaluate hypotheses  
   f. Define and Identify Cases  
   g. Establish the existence of an outbreak  
   h. Implement control and prevention measures  
   i. Develop hypotheses  
   j. Describe and Orient the Data

Part 4 -

Chain of Infection -

Fill in the 6 bubbles
1. What set of criteria is used to define and describe a case (form a case definition)?
   a. -
   b. -
   c. -
   d. -
   e. Write an example case definition (fictional or real):

2. What do we call the set of criteria used to establish the existence of a relationship between incidence and consequence: ______________________________
   a. What are the criteria? ______________________________
      Briefly explain each. ______________________________
      ______________________________
      ______________________________
      ______________________________
      ______________________________
      ______________________________
      ______________________________
      ______________________________
      ______________________________

3. Define specificity:

4. Define sensitivity:
Part 6 - Triads

1. What are the components of the epidemiological triad, otherwise known as the infectious disease triad?
   ___________________________
   ___________________________
   ___________________________

2. What are components of the descriptive epidemiology triad?
   ___________________________
   ___________________________
   ___________________________

3. What are components of the chain of infection/transmission triad?
   ___________________________
   ___________________________
   ___________________________

Part 7 - Surveillance

1. Define public health surveillance:
   _________________________________________________________
   _________________________________________________________
   _________________________________________________________

2. Name the Steps of Surveillance:
   a. ___________________________
   b. ___________________________
   c. ___________________________
   d. ___________________________
   e. ___________________________
Part 8 - Epicurves

Plot the following data as an epi-curve/graph on the following grid:

<table>
<thead>
<tr>
<th>Influenza Cases</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>January 1</td>
<td>2</td>
</tr>
<tr>
<td>January 2</td>
<td>1</td>
</tr>
<tr>
<td>January 4</td>
<td>4</td>
</tr>
<tr>
<td>January 6</td>
<td>7</td>
</tr>
<tr>
<td>January 7</td>
<td>4</td>
</tr>
<tr>
<td>January 9</td>
<td>2</td>
</tr>
<tr>
<td>January 10</td>
<td>8</td>
</tr>
<tr>
<td>January 11</td>
<td>15</td>
</tr>
<tr>
<td>January 12</td>
<td>6</td>
</tr>
<tr>
<td>January 15</td>
<td>2</td>
</tr>
<tr>
<td>January 16</td>
<td>1</td>
</tr>
</tbody>
</table>

1. Grid:
2. What type of epi-curve is it? What does this indicate about this outbreak or disease?