**AP Biology Winter Break Reading - *The Hot Zone* by Richard Preston**

**You will be reading a book that is “. . . bloodcurdling, and based on truth.” The book is about the Ebola virus.**  As you read the book, *The Hot Zone*, summarize the chapters. Also as you read, list and define new scientific terms.

Read the questions below before you read the book *The Hot Zone*.  **Answer the questions listed below, typed or hand-written.**

Questions

1. Describe Monet’s symptoms. Did they appear all at the same time or little by little?

2. State and then explain what would you have done if you had been a passenger on the plane with Monet?

3.  What did Dr. Musoke do that contributed to the spread of the disease?  If you had been the attending physician when Monet came in, what would you have done?  Explain

4.  Around p. 39 (it probably depends on the type of book you used), the author lists four possible intermediate hosts.  What is an intermediate host? Pick any two of the four he lists and give evidence to support the idea that those are intermediate hosts.

5.  Who was Peter Cardinal? Describe the steps of the experimental protocol that Gene Johnson used to culture the sample of Peter Cardinal’s blood serum.

6.  Describe the experiment that confirmed that Ebola could travel through the air. What happened in the monkey house in Reston that also supported that idea? Explain.

7.  Why do scientists keep diaries of their lab notes? Is this a useful practice? Explain.

8.  How did the scientists in the book culture the Ebola virus?  What does culture mean in the previous sentence?

9. There were at least four different samples of Ebola-like virus cultured, what were the samples?

10.  Write a list of the steps Geisbert uses in preparing a sample for the EM.

11.  Peter thinks Marburg is not easy to catch.  Make a list of evidence to support his hypothesis.

12. Dan thinks that Marburg is an airborne infection. Make a list of evidence to support his hypothesis.

13.  What could Jarhrling do to test to see if the monkey virus reacted in humans?  What did it mean if the cells were glowing?

14.  Summarize Col. Nancy Jaax’s arguments answering General Russell’s questions as to whether there was any evidence that the virus was airborne.  Did she miss anything?

15.  Tom resolves to keep working even if he tests positive for the virus.  How would you have reacted under these same circumstances?  What other plans would you make about your life if you had been in Tom’s shoes?

16.  During the “Decon” chapter, how many samples did they collect?  Why this many?

17.  Ebola and other similar viruses are said to “hide”. How and where does a virus strain “hide” ?

18.  Given what you know about this case and what happened to the people involved, if you were President of the US at the time, who would you have promoted and who would you have gotten fired?  Explain why you would make those decisions?

19.  What factors make Kitum Cave “a nice place for a virus to jump species?”

20.  Based on this true story of Ebola, what is your opinion about viruses – are they living or non living – use facts to support your answer.

22. Based on the information in the book, what type of viral life cycle do Ebola have? What facts from the book support your statement?

Chapter note:

New scientific terms: