

The Demon in the Freezer Study Guide Questions

Chapter 1 - Something in the Air

1. Describe Robert Stevens
2. How were the bacteria from the spinal tap tested?
3. Where does anthrax (*Bacillus anthracis*) grow best?
4. Describe the appearance of anthrax
5. How many cases of inhalation anthrax have occurred in the last 100 years?
6. Who was called on Friday, October 5, 2001?
7. What is a post?
8. Why are wet spores less dangerous than dry?
9. What safety gear was used during the autopsy?
10. What is the purpose for each item?
11. Describe what happened in the Soviet Union in 1979.
12. What is a lymph node?
13. Compare a healthy lymph node to the diseased lymph node.
14. In what medium did they culture the anthrax?
15. Describe the appearance of the anthrax colonies.
16. Name the 7 locations that received anthrax after 9-11.

Comunique from Nowhere

17. What does HMRU stand for?
18. What is the purpose of USAMRIID?
19. What are the different classifications of bio-safety?
20. What are "HOT" agents?
21. What safety measures did the microbiologist John Ezzell use when observing the suspected anthrax form the letter?

National Security

22. What is Dr. Jahrling's scientific interest?
23. What does SIOC stand for?
24. What words did Jahrling and Ezzell use to replace the word weapon?
25. When was smallpox officially eradicated?
26. How many people were believed to have died from smallpox during its last 100 years on earth?
27. Officially where does the smallpox virus exist today?
28. Name to additional location thought to illegally possess smallpox?
29. Why was there a greater concern about smallpox than there was about anthrax? Use data from your SIR model or the It's Catching model to support your answer.

in a biological sense it was hotter than the sun." What does the author mean by this?

Stripper

31. Describe what is happening to Peter's body....How do you feel as this is being read?
32. What indicated that Peter Los did not become immune after receiving the smallpox vaccine?

Microscope

33. Describe what Dr. Richter saw when looking at Peter Los's pus under the electron microscope.
34. What is the primary use for the 187,000 letter genome contained in the smallpox virus?
35. What is different between smallpox and AIDS?
36. What is the smallest virus?
37. Why did the WHO (World Health Organization) have a rule to keep smallpox patients out of hospitals?
38. What term was used to describe the mass immunization effort around the city of Meschede?
39. When does immunity begin and long does immunity produced from the vaccine last?
40. What is the incubation period for smallpox?

Student Nurse

41. Describe the 3 types of smallpox
42. Barbara Birke died _____ days after the first signs of the rash.
43. What is the significance of the fact that most of the people who broke out with smallpox at St. Walberga were on the 2nd and 3rd floor and had never seen Peter Los's face?
44. What was the importance of the "Visitor" to bio-emergency planners?
45. Describe the scientific experiment that was performed with the smoke machine.
46. What lessons were learned from Meschede Hospital regarding smallpox and biodefense?
47. Assume that you came down with smallpox...the initial case... What do you think the multiplier would be? (think about how many people you directly contact, SIR model)
48. Based on previous labs, SIR, It's Catching, and Home Range, could an outbreak be contained? IF not, where would it spread? (Be specific!)

Chapter 2 – The Dreaming Demon

The Man in Room 151

30. The author uses a metaphor when making the statement, "The inflamed area in the back of his throat was no bigger than a postage stamp, but

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CH 3 To Bhola Island

Jumper- Thousands of years ago

1. What is a virus's most important means of survival?
2. What often happens when a virus jumps species?
3. Pox viruses infect species that gather in _____ and _____.
4. The 2 principle kinds of pox viruses are _____ and _____.
5. List 5 known kinds of pox:
6. List the 3 types of insect pox:
7. Since insects don't have skin to postulate, how does the pox virus affect them?
8. What is the "soup" known as?
9. What is the ecological benefit of viruses?
10. What does the smallpox virus need to proliferate?
11. The genes of the smallpox virus suggest that it was once a _____ virus.
12. Which pharaoh is suspected of dieing of smallpox?
13. In which war was the first bio-weapon used?

Vision

1. Who was believed to be immune from smallpox?
2. What related virus provided the immunity?
3. Describe the experiment that Dr. Jenner performed using the cowpox.
4. (Homework) Doctors take the Hippocratic Oath to help and not harm. Was the challenge ethical? Explain why or why not.
5. Explain the lesser known reason for the eradication of smallpox.
6. How did Dr. William H. Foege pioneer the ring vaccination effort?
7. (homework) Given what you know about the transmission requirements of smallpox, why did the ring vaccination work?

Strange Trip

1. Describe Dr. Brilliant's quest for a job with the WHO.

Rahima

1. By 1974 smallpox was nearly gone from _____.
2. It is a seasonal virus. It spreads more easily when the weather is _____.
3. In 1975 Variola major roared up in more than _____ places across Bangladesh.
4. What was special about the boy in Chittagong?
5. How many people were vaccinated around the last natural case of smallpox?
6. (Homework) What is the significance in the statement, "One by one the laboratories keeping smallpox sent their samples to America or Russia or destroyed them or said they had destroyed them."

Vault

1. Describe the CDC'S smallpox collection

CH 4 The Other Side of the Moon

A Flash of Darkness

1. What and where is Biopreparat?
2. Describe is plague.
3. Define "Heating Up".

Forbidden Planet

1. What strain of Small Pox was designated for Soviet Warheads? Why?
2. When did Iraq begin their biowarfare program?

Battle In Geneva

1. What is Ebola?
2. Why would we not revaccinate everyone in the USA?
3. How long would it take to spread Small Pox around the world today?
4. How did Jahrling describe small pox, and how did he compare it to nuclear war?

CH 5 A Woman With a Peaceful Life

Lisa Hensley

1. Describe Lisa Hensley
2. What college degrees does she hold?
3. Describe a "Crash and Bleed out".
4. How are viruses grown in culture?
5. What is unique about HeLa cells?

Panic in the Gray Zone

1. How many Ebola virus particles are required to produce a fatal infection?
2. Where is the gray room?
3. Describe the slammer.

A Failure in Atlanta

1. Explain the experiment performed on the monkeys.

Nuclear Pox

1. Explain the significance of the Mouse pox experiment
2. What was one impulse for publishing the paper?

A Slight Argument

1. Who was arguing and why?

Chaos in Level 4

1. Describe the chaos

The Awakening

1. Describe a smallpox seed
2. What strains of smallpox did they use and how did they infect the monkeys?

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Ch 6 The Demon's Eyes

Down

1. What was detected in the blood of monkeys on day 2?
2. Describe the appearance of the dead monkeys.
3. To what strain were they exposed?
4. What do animal-use laws prohibit?
5. Explain why smallpox was scarier than Ebola.
6. How many monkeys died?

Harper

1. Describe the smallpox that Harper broke out with.
2. What were the results of the 3 trials?
3. Explain the "next step".
4. What percent of the population cannot be vaccinated? Why?

WTC

1. Describe what just occurred.

CH 7 The Anthrax Skulls

Henderson

1. Henderson was the director of _____
2. How old was he?
3. What occurred on September 17th or 18th?

Into the Submarine

1. What is the Submarine?
2. Describe what Geisbert saw through the electron microscope.
3. Explain the life cycle of Anthrax.
4. Why is this, "Not your mother's Anthrax"?

Emergency Operations

1. What did Leroy Richmond, Joseph Curseen and Thomas Morris Jr. have in common?
2. Define "Hatbox"
3. How did the FBI lab results regarding the Anthrax compare to the Army's results?
4. Describe the "Key Element" in the design of a military bioweapon.
5. What do public health officials think about biological warfare?
6. What info did USAMRIID's data provide about the Daschle Anthrax?
7. Compare the size of an Anthrax spore to the pores of a piece of paper.

Skulls And Bones

1. What was the effect of the black tape?
2. What realization occurred?
3. What was the Anthrax Designed to do in the air?
4. How many postal workers were infected at the Hamilton Mail-sorting facility?
5. How many samples did the USAMRIID scientists analyze?

CH 8 Super Pox

Dr Chen's Viruses

1. Describe the essence of the scientific method.
2. Describe Mark Buller.
3. Explain a recombinant virus.
4. Compare the pox virus genome to the human genome.
5. Explain the importance of the IL-4 gene.

A Child

1. How many people were dying per year from small pox prior to the eradication program?
2. Describe the contents of the bucket.

Personal Reflection – Extension

1. Do you agree with the author's perspective in that there is a threat for small pox to be used as a weapon of terror? Support your viewpoint.
2. Are you for or against vaccines? Support your stance with data from the book or other sources.
3. Do you agree with the choice to not destroy the small pox virus? Defend your position.