

**Lesson 21 Study Guide: Bioweapons**

**18. What are the naturally occurring organisms which may be used as bioweapons? There is a so-called Sentinel Six Infectious Agents that are considered Category A bioweapons which do not include:**

- (A) H1N5 avian flu virus**
- (B) Anthrax and Small Pox**
- (C) Plague and Tularemia**
- (D) Botulism**
- (E) Ebola: Hemorrhagic Fever**

**19. In the year 2001 just after the 9/11 attacks, a bioweapons threat emerged. Bruce Ivans:**

- (A) won the Nobel prize in medicine for research on bioweapons**
- (B) was the highly suspected perpetrator of 2001 Anthrax attacks in the US**
- (C) conducted research on Iraqi bioweapons with Saddam Hussein's regime at the Al-Shazam Institute that led to the Iraq war**
- (D) was a senator for Rhode Island during the first Gulf War leading policies against bioweapons research**
- (E) won the Nobel Peace prize for his stance against bioweapons**

**20. Bioweapons have been produced by many countries over many years. The United States:**

- (A) has conducted significant research on the use of bioweapons over many decades**
- (B) has experienced several bioweapons attacks from outside sources on its own soil**
- (C) has effectively prevented all bioweapons attacks in the US**
- (D) secretly attacked the former Soviet Union because of their research on bioweapons in 2005**
- (E) has no known research on bioweapons and does not conduct research on other countries with interest in bioweapons**

**21. The possibility to create new and novel biochemical pathways is represented in the science of synthetic biology. As with the Dual Use Dilemma, this offers both great uses for biology and medical science, but also the possibility for nefarious uses. Synthetic Biology:**

- (A) will most likely never be used on bioweapons**
- (B) can never be applied to bioweapons research**
- (C) is a problem considered in the Dual Use Dilemma**
- (D) is not a large threat to the deployment of future Bioweapons because it has not yet been applied.**
- (E) was used to develop weaponized bioweapons to produce the Anthrax used in the 2001 US attack by Saddam Hussein's regime**

**22. During the historical development of bioweapons it is known that:**

- (A) in 1942-73: US program of offensive and defensive BW, including human "volunteer" exposures with Ebola virus**
- (B) in 1942-73: US program of offensive and defensive BW, including human "volunteer" exposures**
- (C) in 1992-73: US program of offensive and defensive BW, including human "prisoner" exposures to Yersinia pestis and syphilis**
- (D) in 1998-03: US program of offensive and defensive BW, including human "military" exposures genetically**
- (E) anthrax was developed and weaponized by a cult in Oregon to secure land during a controversial election**

**23. The reasons that small pox is considered such a dangerous threat as a bioweapon include: its stability in aerosol form; infective dose low ~10-100 organisms; and, efficient person-to-person spread. The fact that a transmissible person can infect many other persons has created what possible threat since 9/11 that was not previously seriously considered. Why?**

- (A) a reliable vaccine against small pox cannot be constructed**
- (B) suicide terrorists could inject themselves with a virulent strain to spread it through an unsuspecting population**
- (C) that the ultimate suicide mission would be to unleash a bioweapon that would kill everyone on the planet**
- (D) that a strain of small pox could be fused with portions of the bird flu virus to be deployed as a bioweapon**
- (E) it is not important enough**

**24. In a bioweapons attack, there are the unique challenges with first response because:**

- (A) the release of biological agents is not likely to be immediately discernible**
- (B) casualties will immediately overwhelm medical attention in the first 24 hours**
- (C) firefighters, police and paramedics would most likely desert immediately**
- (D) physicians, specifically ID specialists, are likely to be out of town**
- (E) there are no known treatments for any of the sentinel six bioweapons agents**

**25. A notorious attack that used bioweapons in Oregon in 1984 was perpetrated by a cult in an attempt to sway an upcoming election. Cult members were found to have contaminated commercial salad bars with what organism?**

- (A) Ebola Virus**
- (B) Salmonella**
- (C) Yersinia Pestis**
- (D) Small Pox**
- (E) Anthrax**

**26. Since the Anthrax attacks in 2001, if a large scale biological weapons attack were to occur in New York, Boston or Providence, I feel informed for proper evacuation and response procedures... Pick one:\***

- (A) well informed**
- (B) somewhat informed**
- (C) unchanged**
- (D) confused**
- (E) totally unprepared**

**\* There is no right answer**

**27. Since the Anthrax attacks in 2001, I feel that the threat of a major bioweapons attack as addressed by Homeland Security... Pick one:\***

- (A) has been eliminated**
- (B) is greatly reduced**
- (C) is unchanged**
- (D) has worsened**
- (E) has significantly increased**

**\* There is no right answer**