

Logical (Critical) Reasoning Questions for CLAT | QB Set 69

A nuclear weapon detonation triggers a catastrophic sequence of events that results in widespread destruction, human suffering, and long-term environmental damage. The most immediate and terrifying aspect is the blast itself, which can obliterate entire cities and vaporize anything near the explosion's epicentre. Temperatures at the centre of the blast can reach millions of degrees Celsius, hotter than the Sun's core, leading to a massive fireball that can extend up to two kilometres in diameter for a one-megaton explosion. The thermal radiation causes severe burns to those even tens of kilometres away, while the blast wave levels buildings and throws debris at lethal speeds. The aftermath of the explosion is equally devastating. The radioactive fallout from the nuclear reaction creates highly unstable materials that release dangerous radiation over time. This fallout contaminates the environment and leads to long-term health impacts for survivors.

Radiation poisoning, cancers, and genetic mutations become prevalent, with effects that can span decades or even generations. Studies show that millions of people could eventually die from cancers caused by atmospheric nuclear tests conducted between 1945 and 1980. The environmental impact of a nuclear detonation is also profound. Large-scale nuclear exchanges could lead to "nuclear winter," where the Earth becomes enveloped in clouds of smoke and ash, drastically cooling the planet, disrupting agriculture, and causing widespread famine. These long-term environmental changes could alter the global climate permanently, making nuclear weapons not just a threat to immediate human survival, but also to the planet's future. The destructive potential of nuclear weapons has been central to the argument for disarmament. Organizations like Nihon Hidankyo, composed of survivors of the Hiroshima and Nagasaki bombings, have long advocated for a world free of nuclear weapons, emphasizing the ghastly consequences of their use. Their work, now recognized by the Nobel Peace Prize, serves as a stark reminder of the ongoing global struggle to prevent nuclear catastrophe.

Questions:

1. What is the primary focus of the passage?

- A) The geopolitical implications of nuclear warfare.
- B) The immediate and long-term consequences of a nuclear weapon detonation.

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- C) The technological advancements in nuclear weaponry.
- D) The importance of nuclear disarmament treaties.

2. Which of the following can be considered an assumption underlying the advocacy for nuclear disarmament?

- A) Nuclear weapons are necessary to maintain global peace.
- B) The risks of nuclear weapons outweigh any strategic benefits they may offer.
- C) Environmental degradation is a result of human negligence rather than nuclear fallout.
- D) Technological advancements will eventually render nuclear weapons obsolete.

3. Which of the following statements, if true, would strengthen the argument that "nuclear winter" could have a lasting impact on the global climate?

- A) Several studies show that nuclear detonations have only short-term impacts on the climate.
- B) Past large-scale volcanic eruptions have caused global cooling that lasted for several years.
- C) Advances in climate control technology could mitigate the effects of nuclear explosions.
- D) Current weather patterns are resilient to significant atmospheric disruptions caused by smoke and ash.

4. What is the primary implication of the studies mentioned in the passage regarding the health impacts of atmospheric nuclear tests conducted between 1945 and 1980?

- A) Immediate deaths from nuclear explosions are more significant than long-term health consequences.
- B) Radiation from past nuclear tests continues to affect human populations decades later.
- C) The long-term health impacts of nuclear tests are negligible compared to natural disasters.
- D) The environmental impact of nuclear tests has been exaggerated by advocacy groups.

5. Which of the following is the best inference from the mention of organizations like Nihon Hidankyo advocating for nuclear disarmament?

- A) Advocacy groups have had little success in influencing global nuclear policies.
- B) Survivors of nuclear bombings are the only credible voices in the nuclear disarmament debate.
- C) The destructive power of nuclear weapons serves as a rallying point for global disarmament efforts.
- D) Legal frameworks are sufficient to ensure the prevention of nuclear catastrophes.

Answers and Explanations:

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- 1. Answer: B) The immediate and long-term consequences of a nuclear weapon detonation. The passage primarily focuses on describing the wide-ranging effects of a nuclear explosion, including immediate destruction, radiation fallout, and long-term environmental impacts.
- 2. Answer: B) The risks of nuclear weapons outweigh any strategic benefits they may offer. Advocates for nuclear disarmament often assume that the catastrophic consequences of nuclear weapons make them too dangerous to be justifiable, which is the core assumption behind disarmament arguments.
- Answer: B) Past large-scale volcanic eruptions have caused global cooling that lasted for several years. This supports the idea that similar atmospheric disruptions caused by nuclear explosions could lead to lasting climatic changes, similar to "nuclear winter."
- 4. Answer: B) Radiation from past nuclear tests continues to affect human populations decades later. The passage discusses how radiation poisoning, cancers, and genetic mutations can persist for generations, emphasizing the long-term health impacts.
- 5. Answer: C) The destructive power of nuclear weapons serves as a rallying point for global disarmament efforts. Nihon Hidankyo, representing survivors of Hiroshima and Nagasaki, uses the memory of the bombings to advocate for disarmament, which is a significant force in the global movement against nuclear weapons.



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