



Read the passage carefully. Then answer the questions using clues and evidence from the text.

### ARPANET's Origins: Inferences About the Internet's Birth



In the late 1960s, a new kind of communication began to take shape, connecting computers rather than just telephones. The U.S.

Department of Defense, through its Advanced Research Projects Agency (ARPA), funded ARPANET. Its goal was to create a network for sharing information and resources among research institutions and universities. Imagine scientists across the country instantly accessing data from a distant supercomputer. This was the vision.

A key concern for ARPA was the network's ability to withstand disruptions. During the Cold War, ensuring communication could continue even if parts of the network were damaged was crucial. This led to a decentralized design, meaning no single central hub could bring the entire system down. Data packets would find multiple paths to their destination, rerouting if one became unavailable.



The first message was sent in October 1969 from UCLA to Stanford Research Institute. It was intended to be "LOGIN," but only "L" and "O" were transmitted before the system crashed. Still, the connection was made. By December, four host computers were linked, forming a basic network. These early connections were primarily for researchers to collaborate on complex projects.

Development continued, and in 1971, Ray Tomlinson introduced email, allowing users to send messages to specific addresses. This innovation quickly became one of ARPANET's most popular applications. It showed that beyond sharing large data files, the network could facilitate direct person-to-person interaction across distances.



Though initially for government and academic use, ARPANET's foundational principles—packet switching, decentralized design, and connecting diverse computer systems—created the blueprint for today's global network. The early engineers built a system for resilience and information exchange, perhaps not fully realizing the immense societal shift it would bring.



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### COMPREHENSION QUESTIONS

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- (1) **Based on the passage, what can you conclude about the early purpose of ARPANET?**
- (A) It was primarily built for the general public to send personal messages.
  - (B) It aimed to create a secure, reliable way for researchers to share data and collaborate.
  - (C) Its main goal was to replace all existing telephone systems with computer networks.
  - (D) It was an experimental project with no clear purpose beyond connecting a few computers.
- (2) **What does the passage suggest about why ARPANET was designed to be 'decentralized'?**
- (A) ARPA wanted to save money by not building a single large server.
  - (B) It was easier to connect many small computers than one big one.
  - (C) The designers wanted to make it difficult for anyone to control the whole network.



**(D)** To allow communication to continue even if some sections of the network were disrupted.

**(3) The author mentions Ray Tomlinson's introduction of email most likely to show that...**

**(A)** email was the only reason ARPANET became popular.

**(B)** ARPANET was originally built for personal communication.

**(C)** the network could also facilitate direct person-to-person interaction.

**(D)** Ray Tomlinson was the most important person in ARPANET's development.

**(4) Which statement is NOT well-supported by evidence from the passage?**

**(A)** ARPANET was designed with resilience against damage in mind.

**(B)** The initial connections of ARPANET were primarily for academic and government research.

**(C)** The first attempt to send a message on ARPANET was only partially successful.

**(D)** The public quickly adopted ARPANET for daily personal use.

**(5) What clues in the passage helped you infer that the early creators of ARPANET might not have fully predicted its future global impact? Use at least two details from the passage to explain your reasoning.**

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