

Canada's Scientific Edge: Quantum Leaps, Critical Minerals, and Economic Resilience

Science & Economy · Answer Key · 10 Questions

1. Canada's National Quantum Strategy aims to leverage quantum technologies for economic growth. What is a projected economic benefit of this strategy by 2045?

- A) A market of \$139 billion and over 200,000 jobs**
- B) A market of \$50 billion and 50,000 jobs
- C) A market of \$70 trillion and significant job creation
- D) A market of \$6 billion annually and 10,000 jobs

2. The global demand for critical minerals is rapidly increasing due to the transition to cleaner technologies. What is the projected increase in global demand for critical minerals by 2040?

- A) It is expected to increase by 10-20%
- B) It is expected to increase by 400-600%**
- C) It is expected to double only in specific minerals like lithium
- D) It is expected to remain stable due to recycling efforts

3. Canada's space sector is a growing contributor to its GDP. What was the contribution of the Canadian space sector to Canada's GDP in 2022?

- A) \$3.33 billion
- B) \$3.2 billion**
- C) \$5.1 billion
- D) \$6 billion

4. Heightened geopolitical tensions have led to increased defence spending globally. How much did Canada's defence expenditure increase from 2019 to 2023?

- A) From \$17.2 billion to \$20.6 billion**
- B) From \$10 billion to \$15 billion
- C) From \$2.4 billion to \$3.32 billion
- D) From 1.4% to 2% of GDP

5. The shift to clean technologies, such as electric cars and solar power, drives demand for metals. Which of the following metals is highlighted as a good indicator of this increased demand?

- A) Nickel
- B) Graphite
- C) Copper**
- D) Rare Earth Elements

6. Canada has a significant role to play in diversifying global mineral supply chains. What percentage of cumulative global demand for lithium could Canada's reserves potentially supply from 2030 to 2050?

- A) Approximately 10%
- B) Approximately 25%
- C) Approximately 50%**
- D) Approximately 80%

7. The COVID-19 pandemic highlighted vulnerabilities in global supply chains. What is a common strategy being adopted by companies to mitigate risks in the current climate of trade uncertainty?

- A) Increasing reliance on 'just-in-time' inventory
- B) Reducing shipping capacity to lower costs
- C) Stockpiling inventory and diversifying markets**
- D) Focusing solely on domestic supply chains

8. Canada's Artificial Intelligence ecosystem has attracted significant foreign investment and created jobs. How many jobs were created in around 670 AI-focused firms following the Pan-Canadian AI Strategy?

- A) Approximately 10,000 jobs
- B) Approximately 12,592 jobs
- C) Approximately 50,000 jobs**
- D) Approximately 191,000 jobs

9. The Canadian space sector's R&D intensity is significantly higher than the Canadian manufacturing average. How many times higher is it?

- A) 3 times higher
- B) 8 times higher
- C) 12 times higher
- D) 13 times higher**

10. The warming Arctic is a significant global concern with economic implications. What is the estimated potential increase in the long-term economic impact of climate change due to melting permafrost and reduced ice cover, under current national emission pledges?

- A) An additional \$25 trillion
- B) An additional \$34 trillion
- C) Just under \$70 trillion**
- D) \$600 trillion