



Sambhav

Day 104

Question 1: Solar energy has a very promising future not only as source of abundant energy but also in tackling climate change. Justify the statements. (250 words)

Question 2: India has diversified its military arsenal though it has a large inventory of Russian origin weapons. Discuss the ways India can become Atmanirbhar in its offensive and defensive arsenal? (150 words)

09 Mar 2023 | GS Paper 3 | Science & Technology

Approach / Explanation / Answer

Answer 1

Approach

- Give a brief introduction about Solar energy.
- Discuss that how solar energy has a very promising future as source of abundant energy and in tackling climate change.
- Write an appropriate conclusion.

Introduction

- Solar energy is a **promising renewable energy source** that can play a crucial role in reducing greenhouse gas emissions and tackling climate change.
- The sun is an abundant and free source of energy, and harnessing its power through solar technologies can provide a sustainable and clean energy solution for the future.

Body

There are several reasons why solar energy has a promising future in terms of mitigating climate change:

- **Solar energy is a clean source of energy:** Unlike fossil fuels, solar energy does not produce harmful emissions of pollutants. When compared to traditional energy sources, such as coal and natural gas, solar energy produces significantly fewer greenhouse gas emissions, including carbon dioxide, methane, and nitrous oxide, which contribute to climate change.
- **Solar energy is abundant:** The sun provides an enormous amount of energy, and solar technology has advanced to the point where it can efficiently harness and store that energy. With continued technological advancements and investment, solar energy has the potential to become

the world's most significant source of energy.

- **Solar energy is cost-effective:** The cost of solar technology has decreased dramatically over the past decade, making it more affordable for households, businesses, and governments to adopt. As the demand for solar technology increases, economies of scale will further drive down the cost, making it even more accessible.
- **Solar energy can provide energy security:** Unlike fossil fuels, solar energy is not subject to price volatility or geopolitical risks. It can provide a stable and reliable source of energy, which can help to reduce dependence on imported fossil fuels.

Conclusion

Solar energy has a very promising future in terms of reducing greenhouse gas emissions, providing a sustainable and clean energy solution, and mitigating the impacts of climate change. By investing in solar energy, we can create a more sustainable and resilient energy system that benefits the environment, economy, and society as a whole.

Answer 2

Approach

- Give a brief introduction about India's military arsenal.
- Discuss the ways that India can become Atmanirbhar in its offensive and defensive arsenal.
- Write a holistic and appropriate Conclusion.

Introduction

- India has traditionally relied on Russia for the majority of its defense procurement, but in recent years, it has been working towards diversifying its military arsenal. While India still has a large inventory of Russian origin weapons, there are several ways that India can become self-reliant or Atmanirbhar in its offensive and defensive arsenal.

Body

- **The ways India can become Atmanirbhar in its offensive and defensive arsenal:**
 - **Indigenous Development:** One of the primary ways for India to become Atmanirbhar in defense is through indigenous development. India has made significant strides in recent years in developing its own defense technology, such as the Light Combat Aircraft Tejas, which was designed and developed entirely in India. By investing in research and development, India can reduce its dependence on foreign suppliers and become more self-sufficient in its defense needs.
 - **Technology Transfer:** Another way for India to become Atmanirbhar in defense is through technology transfer from foreign suppliers. India can negotiate technology transfer agreements with foreign suppliers to acquire the knowledge and expertise needed to produce advanced defense equipment and systems. This will enable India to produce its own defense technology and reduce its dependence on foreign suppliers.
 - **Public-Private Partnership:** India can also become Atmanirbhar in defense through public-private partnerships. By collaborating with private sector companies, India can leverage their expertise and capabilities to develop and produce advanced defense equipment and systems. This will enable India to build a robust defense industry that can compete on a global level.
 - **Export Promotion:** Finally, India can become Atmanirbhar in defense by promoting defense exports. By exporting its defense equipment and systems to other countries, India can generate revenue and increase its capacity to produce advanced defense technology. This will enable India to become a global player in the defense industry and reduce its dependence on foreign suppliers.

Conclusion

India has been taking steps towards diversifying its military arsenal, and becoming Atmanirbhar in its offensive and defensive arsenal is an important step towards achieving strategic autonomy. Through indigenous development, technology transfer, public-private partnerships, and export promotion, India can reduce its dependence on foreign suppliers and become more self-reliant in its defense needs.

PDF Refernece URL: <https://www.drishtias.com/sambhav-daily-answer-writing-practice/papers/2023/solar-energy-promising-future-abundant-tackling-climate-diversified-military-arsenal-gspaper3-science/print>